



Department
for Education

Teachers in England's Secondary Schools: Evidence from TALIS 2013

Research report

June 2014

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Acknowledgements

The report was produced by a team at the Department of Quantitative Social Science at the Institute of Education (IOE) comprised of: Rebecca Allen, Fabian Barrera, Elodie Bellarbre, Christopher Hein, Sonia Ilie, Andrew Jenkins, John Jerrim, John Micklewright, and Anna Vignoles. Sonia Ilie and Anna Vignoles are in the Faculty of Education, University of Cambridge. The team was led by John Micklewright.

We are very grateful to colleagues at RM Education (RM), our partner in the National Study Centre for TALIS 2013 in England, who implemented the survey and successfully collected the data: the successive National Project Managers – Kathy Brooks, Helen Robinson, and Dawn Pollard – and Laura James, who played a particularly important role in RM's achievement of a satisfactory response rate for the survey. Dave Thomson was responsible for the sample design and Mark Johannesen was the Data Manager for the main survey. Our RM colleagues would like in turn to thank other staff at RM for their contributions: John Dallimore, Patrick Davey and the RM school support team.

We and RM thank staff at the Department for Education (DfE) who worked with us on TALIS for their help throughout the project: Jude Belsham, Lorna Betrand, Natasha Calvert, Sam Forster, Caroline Halls, Teresa Harper, Emily Knowles, Tanya McCormack, Michele Weatherburn and members of the project Steering Group.

We, RM and DfE thank members of an Advisory Group drawn from external bodies representing schools, teachers, and governors in both the independent and state-funded sectors. The group played an important role advising on the implementation of TALIS in England and ensuring awareness of the survey and endorsing participation in it, thereby encouraging response.

We are grateful to the TALIS International Consortium for its leadership of the survey and for providing clean and documented data for us to use. We are also grateful for early access to draft material from the OECD's international report for the survey (OECD, 2014).

Helpful comments on parts or all of drafts of the report were made by staff at DfE, in particular Natasha Calvert and Emily Knowles, and by David Budge and Robin Griffiths.

At IOE, we also thank Dick Wiggins for advice on sample design, Alexandria Horton and Pamela Gilmore for assistance with the final layout of the report, Helen Casey and colleagues for help setting up the project, and Peter Earley for carrying out the focus group research which formed the pilot study for the survey.

Last but not least, we thank the respondents to TALIS – the headteachers and teachers – for taking part in the survey, whether the main survey in 2013, the field trial in 2012, or the pilot study in 2011, and for thereby providing the data that has made this report possible.

Executive summary

Introduction

The Teaching and Learning International Survey (TALIS), led by the Organisation for Economic Co-operation and Development (OECD), provides new information on the views and practices of lower secondary teachers and their headteachers and on how these vary across countries. England participated in TALIS for the first time in 2013 – the only part of the UK to do so. The survey included over 30 other countries or parts of countries.

This national report for England is published simultaneously with the OECD's first international report on TALIS 2013. It complements the OECD's report by (i) providing a more focused comparison of England with other countries and (ii) analysing differences within England across school and teacher characteristics.

International comparisons of England made in the national report include contrasts with a group of nine countries or parts of countries with high performing educational systems: Japan, Korea, Singapore, Finland, Estonia, The Netherlands, Flanders (Belgium), Alberta (Canada) and Australia. The report reveals that teacher views and practices often vary widely among these high performers.

Analysis of differences within England is enhanced by using the answers to additional TALIS questions not asked in other countries and by linking the survey data to contextual information for each school such as its Ofsted rating and the percentage of pupils receiving free school meals.

TALIS 2013 in England had response rates of 75% for schools and 83% for teachers, leading to samples of 154 headteachers and 2,496 teachers. These are good response rates by the standards of previous school and teacher surveys in England. The survey includes roughly equal numbers of local authority maintained schools and academies and a small number of independent schools. The modest sized sample of schools means that some findings (especially those concerning headteachers) that relate to the variation between schools need to be treated with caution.

The results refer to the Spring of 2013 and should not be taken as necessarily giving a good indication of the situation in the Summer of 2014 when this report is published.

The analysis in each chapter uncovers correlations but it does not establish causal relationships.

Lower secondary teachers and their schools

Chapter 2 documents the profile of lower secondary (Key Stage 3) teachers in England and the schools in which they work. Compared to the average for other countries,

England has younger teachers and headteachers, fewer modern language teachers, more autonomous schools, significantly greater numbers of teaching assistants and administrative and managerial staff in schools, and teachers reporting longer total working hours on average but not face-to-face teaching hours.

Differences within England include higher teacher age and experience in independent schools and poorer pupil achievement where headteachers report that shortages of teaching staff restrict the quality of instruction.

- 25% of teachers in state-funded schools in the lowest average ability quarter of pupil intake teach three or more subjects at Key Stage 3 compared to only 13% of teachers in schools in the top ability quarter.
- Almost all headteachers in England report that responsibility for determining teacher pay (both starting salary and pay increases) is at least shared at the school level but, on average, only 32% do so in high performing countries.
- Teachers in England report, on average, working 46 hours a week on all tasks (48 hours for full-time teachers), one of the highest figures in TALIS and 9 hours more than the median for all countries. But average face-to-face teaching time in England (20 hours) is close to the international average.

School leadership and headteachers' management styles

Chapter 3 focuses on the leadership of schools. Headship is increasingly a postgraduate-level job in England, with a very high proportion of school heads with higher degrees and/or the National Professional Qualification for Headship (NPQH). A high proportion of headteachers in England share important decision-making with others. In general, this 'distributed' leadership is less common in high performing TALIS countries.

Headteachers in more deprived schools in England have higher levels of distributed leadership and are less likely to find a lack of resources to be a barrier to their effectiveness. Both findings may reflect the large investment during recent decades in the more deprived urban schools in England.

- 86% of school heads in England disagreed that they make the important decisions in their schools on their own, compared to medians of 65% for all countries in TALIS and 66% for the nine high performing countries.
- The top three issues cited by headteachers in England as creating barriers to their effectiveness are: (i) government regulation and policy (79% of heads), (ii) inadequate school budget and resources (78%), and (iii) high workload and level of responsibilities in their job (68%). The averages for all TALIS countries are 69%, 80% and 72%.

- In all countries, including England (94%), a very large majority of headteachers report being satisfied with their jobs. Within England, headteachers in schools rated by Ofsted as 'outstanding' or 'good' are more satisfied on average than heads of schools rated as 'satisfactory' or 'inadequate'.

Professional development

Chapter 4 looks at the continuing professional development (CPD) of teachers. The quantity of CPD undertaken by teachers in England is relatively high by international standards, when measured by the existence and use of induction programmes, by mentoring, and by participation in some (but not all) forms of training.

But time spent in training is lower on average in England. And the extent of 'effective' training – CPD felt to have a significant impact on teaching – is lower for a number of important areas of activity. Teachers in England also feel less need for CPD across a range of different areas than teachers elsewhere.

- 92% of teachers in England report having undertaken some CPD in the last 12 months. Finland and Japan have the lowest figures among high performing countries (79% and 83%).
- 50% of teachers in England report 'effective' training over the previous year in their subject fields compared to an average of 71% for high performing countries.
- About two thirds of teachers in England with children aged 0-4 report lack of time due to family responsibilities as a barrier to CPD. Induction, participation in CPD, and 'effective' training is lower for teachers in independent schools. Among teachers in the state-funded sector, 'effective' training is higher, on average, in schools with lower ability intakes and higher percentages of pupils receiving Free School Meals.

Appraisal and feedback

Chapter 5 considers the feedback that teachers receive about their work, both through formal appraisal and informal channels. England has near universal systems of teacher appraisal, reported by headteachers, and the great majority of teachers report receiving feedback: England is a high appraisal/feedback country compared both to the average TALIS country and to some, but not all, of the high performers. The high performing countries display considerable variation.

But teachers in England tend to be rather less positive about the effect of feedback on their teaching than teachers in many other countries. There are various competing explanations for this.

- 99% of teachers in England report receiving feedback from one or more sources in their current school, compared to an average of 88% for all countries in TALIS and 89% for high performing countries. But about a half of teachers in England – the same

as on average in other countries – believe that appraisal and feedback are largely done to fulfil administrative requirements.

- A half of teachers in England say that feedback had a moderate or large positive impact on their confidence, on their teaching practices, and on their job satisfaction.
- The average number of different sources of feedback reported by teachers and the average number of moderate/large positive changes as a result of feedback are lower in independent schools but there is no statistically significant variation in either measure by Ofsted rating.

Teachers' views of their jobs

Chapter 6 explores teachers' views of their pay and working conditions and their beliefs on how society sees their profession. Half of the chapter analyses answers to questions posed only to teachers in England.

The views expressed are mixed and need careful interpretation. For example, fewer teachers in England express overall satisfaction with their jobs than in any other country in TALIS. This may be seen as disappointing if a crude 'league table' view is taken. But the large majority of teachers in England – four fifths – do say that they are satisfied with their jobs.

- Most teachers in England (73%) feel that teachers are underpaid compared to other similarly qualified professionals. But half (53%) agree that their own pay is fair given their level of performance. Teachers who work long hours are less satisfied with their pay.
- 1 in 3 teachers in England (35%) believe that their profession is valued by society. The majority of countries in TALIS record even lower figures. But teachers in most high performing countries are more positive, including in Singapore and Korea where two thirds hold this view, although they are not in Japan.
- There is a strong negative association in England between teacher age and whether the teacher believes that the teaching profession is valued in society – younger teachers hold more positive views. England is one of the few countries where this is the case.

Teaching practices

Chapter 7 investigates teachers' beliefs about teaching and their practices in and out of the classroom. Part of the analysis relates to a particular class that each teacher takes. Its average size is 24 students in England but the average varies widely across other countries in TALIS – including among the high performing countries e.g. 18 students in Finland and 36 in Singapore.

There are clear differences between England and other countries in some views held by teachers and in several practices.

- Teachers in England report, on average, spending 7% of their time in the classroom on administrative duties, 11% on maintaining discipline, and 82% on teaching. This situation is near the median for the high performing countries.
- 74% of teachers in England agree that ‘Thinking and reasoning processes are more important than specific curriculum content’, fewer than in most other TALIS countries (the average is 84%). The percentage in England does not vary significantly with measured characteristics of schools such as school type or Key Stage 4 test scores.
- 58% of teachers in England report often getting students to work in small groups, compared to only 40%, on average, in high performing countries. Again, there is no significant variation within England with measured school characteristics, but women and younger teachers use this technique more. Teachers in England are also much more likely than teachers in most countries to give different work to students with different abilities (‘differentiation’). 63% report doing so often compared to 32%, on average, in high performing countries.

School and classroom disciplinary environment

Chapter 8 examines school and classroom climate including pupil behaviour, as perceived by teachers and school heads. On school climate, the evidence from TALIS suggests that serious disciplinary problems in England are unusual. For example, in all schools, headteachers report use or possession of drugs or alcohol as rare or absent.

On classroom climate, the situation in England again does not stand out as bad by international standards. On the evidence of teachers’ reports, it is at the average for countries in TALIS or, in some respects, better.

- Late arrival of students and absences are reported by headteachers to occur on a weekly or daily basis in England in 56% and 41% respectively of schools – close to the medians for all countries and below the levels of several high performing countries. But headteachers report unjustified absenteeism by teachers as occurring at least weekly in 11% of schools, more than in many other countries.
- 21% of teachers in England agree that they have to wait quite a long time at the start of their class for students to quieten down – but this figure is less than the median for all countries (27%) and less than in most high performing countries.
- Classroom climate is notably better, on average, in independent schools than in state-funded schools and, among the latter, where Key Stage 2 intake scores are higher. But less than a fifth of the variation in classroom climate is accounted for at the school level: typically, schools do not have uniformly good or bad classroom climate.

Teachers' self-efficacy

Chapter 9 analyses the 'self-efficacy' of teachers – the beliefs they hold about their capability to influence learning. International comparison of self-efficacy must be treated with some caution as cultural differences may influence the way in which questions are answered. But the results from TALIS suggest that teachers in England are confident in their abilities – their self-efficacy is quite high compared to teachers in other countries.

Self-efficacy tends to be higher when teachers report good relations with others in the school. The direction of causality is unclear. Teachers with high self-efficacy may build good relations. Or by working in schools with good relations, teachers may become more confident.

- 56% of teachers in England believe that they are very capable of calming a disruptive student, 49% that they can craft good questions for their students, and 29% that they can motivate students who show low interest – compared to median values for high performing countries of 30%, 31% and 21% respectively.
- Only a tenth of the variation in teachers' self-efficacy in England occurs at the school level. The bulk of the variation is within schools rather than between schools. There is no evidence that self-efficacy is higher in independent schools than in state-funded schools, nor, among the latter, that it varies according to the proportion of pupils from poor backgrounds in the school or between maintained schools and academies.
- Less experienced teachers in England – those with five years or less in the profession – tend to have lower self-efficacy. But beyond five years of experience there is no significant variation in self-efficacy levels.

Chapter 1 Introduction

1. Good teaching matters a great deal for pupil learning. The importance of good teaching makes it vital to find out more about teachers' attitudes, their teaching practices, and their professional development.¹
2. Part of what teachers do both in and out of the classroom is determined by the organisation and leadership of the schools in which they work. Moreover, these aspects of schools have a direct impact on pupil learning too, beyond that coming through teachers. So we also need to know more about headteachers' views on a range of critical issues.
3. The OECD Teaching and Learning International Survey (TALIS), in which England participated for the first time in 2013, provides new information on these matters for England and other countries.² TALIS focuses on teachers and headteachers of lower secondary pupils. The survey covers all types of secondary school in England with pupils in Key Stage 3, except those devoted solely to children with special needs, including independent (private) schools.
4. TALIS 2013 collected information on a range of topics in over 30 countries, including:
 - school staffing;
 - school leadership;
 - teacher training, especially professional development;
 - appraisal of teachers' work and the feedback they receive;
 - teachers' pedagogical beliefs, attitudes to teaching and teaching practices;
 - job satisfaction of both teachers and headteachers;
 - teaching staff's views of school and classroom climate;
 - teachers' self-confidence in their abilities to teach.

These topics all relate to key issues today in teaching and learning in England's secondary schools.

5. This chapter introduces TALIS and our analysis of the data for England by addressing six questions:

¹ One recent study for England found that being taught by a high quality teacher adds about a half of a GCSE point per subject compared to being taught by a low quality one. This estimate comes from Slater et al. (2011) who allow for many of the methodological problems confronting research in this area. The estimate is a little higher than implied by evidence from leading US studies. See also the review for the Sutton Trust by Murphy and Machin (2011).

² The OECD is the Organisation for Economic Co-operation and Development. England did not participate in an earlier round of TALIS conducted in 2008 (OECD 2009). Wales, Scotland and Northern Ireland have not yet taken part in the survey.

What is the policy background for TALIS in England?

What is the existing evidence for England?

What data were collected for England by TALIS in 2013?

What can TALIS tell us – and what can it not tell us?

Which countries should we compare England with?

What does the report cover?

1.1 What is the policy background for TALIS in England?

6. The last 25 years have seen the creation of a ‘quasi-market’ in education in England. This contrasts with many of the other countries included in TALIS 2013. Parents have been given much more opportunity than before to choose schools for their children within the state system. At the same time, schools have been given more autonomy, particularly in recent years. Notably, large numbers of schools have converted to academies, removed from local authority control but still publicly funded. By January 2013, almost half of all state funded secondary schools were academies and their number has continued to rise.³
7. The quasi-market in English secondary schooling is an important part of the background when comparing teacher and headteacher views in England with those in other countries. But we are also interested in the situation in England per se. How do teaching staff in our secondary schools view their jobs and their careers following the major changes that have taken place already and other important changes now in train? (We comment below on the precise timing of TALIS 2013 in relation to recent policy initiatives.)
8. Many of the changes currently taking place are intended to raise the quality of teaching. There are new or much expanded policies enabling schools to train teachers themselves (e.g. School Direct) and to encourage people into teaching (e.g. Teach First). These changes have been introduced to incentivise people from different backgrounds and with different talents and career plans to enter the profession. There has been a more concerted effort in England to ensure that schools hold teachers accountable for the quality of their practice, as measured in a variety of ways. The view that teaching quality can be raised also sees teachers needing continued professional training during their careers. High teacher turnover is cited as evidence of the need for better preparation – over 1 in 10 secondary school teachers changes jobs or leaves the profession each year.⁴ The recent introduction of

³ Department for Education (2013) and Ofsted (2013: 6).

⁴ Passy and Golden (2010).

performance related pay in England's schools is another change aimed at raising teaching quality, in this case through financial rewards to encourage retention of the best teachers. The jury is still out on the impact but it can be expected to be one more development that has affected how teachers and headteachers view their careers.⁵

9. All these changes underline why we want to look at how teachers and headteachers feel about their jobs and what their views may reveal about their job satisfaction and the barriers to their effectiveness. We elaborate more on some of the policy background when introducing each part of the report in the final section of this chapter.
10. We are not just interested in the average views of teaching staff in England's schools on the topics surveyed by TALIS. We also want to know how these views vary across the individual characteristics of the teachers and headteachers, such as their gender, age and experience. And we want to uncover the variation across the characteristics of the schools in which they teach: the type of school (maintained school, academy, independent school), the family backgrounds of the pupils, pupil performance in national tests and public exams, and the most recent Ofsted rating. Is there widespread agreement on the different issues covered by TALIS or do teacher and headteacher views vary substantially across these and other dimensions?

1.2 What is the existing evidence for England?

11. For several of the subjects it covers, TALIS 2013 does not provide the first quantitative evidence for lower secondary school teaching in England. We need to recognise the existing sources of information.
12. At the national level, the new School Workforce Census documents the organisation of schools e.g. their numbers of different types of staff – teachers, teaching assistants, administrative and other staff. The Department for Education (DfE) Teachers' Workload Diary Surveys, the most recent held in 2013, contain information on the hours worked by a sample of teachers and how that time is spent during the day.⁶ The Teacher Resignation and Recruitment Surveys, conducted annually by the National Foundation for Educational Research, reveal the characteristics of teachers leaving schools.⁷
13. Besides these regular data sources, there have also been important one-off collections of quantitative data. These include the VITAE (Variations in Teachers' Work, Lives and their Effects on Pupils) research commissioned by the Department

⁵ See Atkinson et al. (2009) on the impact of early moves towards performance-related pay for teachers in England and for a review of literature on the impact elsewhere.

⁶ TNS BMRB (2014); the previous report in the series is Deakin et al. (2010).

⁷ Passy and Golden (2010).

for Education and Skills (DfES) and conducted during 2001-5.⁸ Among topics addressed by VITAE were school leadership, teacher practice, and continuing professional development, all of which were considered by TALIS in 2013. VITAE also valuably combined quantitative with qualitative data collection, using a mixed-methods approach.

14. At the international level, there are existing sources of data that allow comparison of secondary schools and their teachers in England or the UK as a whole with those in other countries. These include the OECD's annual publication *Education at a Glance*, its triennial Programme of International Student Assessment (PISA), which focuses on 15 year olds, and the IEA's Trends in International Mathematics and Science Study (TIMSS), which measures achievement of 13-14 year olds.⁹ PISA includes a questionnaire to schools, typically answered by the headteacher, and TIMSS includes one for class teachers. The Varkey GEMS Foundation has recently sponsored the creation of a Global Teacher Status Index for 21 countries, including the UK.¹⁰
15. But none of these existing sources is a substitute for the new, cross-national data on teachers and headteachers provided by TALIS. The existing sources do not cover many subjects that TALIS allows insight into. The school and teacher questionnaires in PISA and TIMSS are designed to add context to explanations of pupil outcomes. But TALIS is designed primarily to provide a set of comparative indicators on teachers, their working conditions and their teaching. The Global Teacher Status Index is based on surveys of the general public's view of teachers rather than teachers' own views of their profession. Inevitably, the national sources provide information that is often hard to compare with that from other countries.
16. Several of the national sources are small in size or suffered from low response rates. Just 25 secondary schools and 150 secondary teachers took part in VITAE. The 2013 Teachers' Workload Diary Survey had a response rate among secondary teachers of only 17% and did not include teachers in independent schools. As we make clear below, the TALIS 2013 sample sizes in England, especially of headteachers, are not huge – about 150 heads and 2,500 teachers. But they should be considered reasonable (heads) or quite good (teachers) by existing standards. And when judged by the yardstick of many efforts to survey schools and teachers in England in recent years, the response rates of around 75-80% (more details are given in the next section) must be seen as very good.¹¹ TALIS's coverage of all teachers in all school types, independent schools included, is also very welcome.

⁸ Sammons et al. (2007).

⁹ The IEA is the International Association for the Evaluation of Educational Achievement.

¹⁰ Dolton and Marcenaro-Gutierrez (2013).

¹¹ Following the exclusion of the UK from the OECD's reports on the PISA 2003 round due to the level of response in England, Sturgis et al. (2006) considered evidence on the difficulties in surveying English schools. The authors reviewed response rates in 73 school surveys in England over 1995-2004. The median school response rate in 2004 was about 40%.

1.3 What data were collected for England by TALIS in 2013?

17. TALIS was conducted in England in the Spring of 2013. The survey collected information from 154 schools and 2,496 lower secondary teachers, an average of just over 16 teachers for each school in the sample. These numbers of schools and teachers who agreed to take part in the survey reflect official response rates of 75% for schools and 83% for teachers (20 teachers per school were invited to participate). As noted above, these response rates are very good by the standards of many existing surveys of schools and their teachers in the UK. Weights provided by the OECD adjust for the level and pattern of school response and for the level of teacher response within each school. Unless otherwise indicated, we apply these weights. Further details of the sample design and of the response to the survey are given in Appendix A to this report.
18. The data come from answers to the questions on the standard international questionnaires for the school heads and their teachers, augmented in two ways.¹² First, several questions for the survey in England had additional elements to capture more information in the area concerned. And a small number of questions were added at the end of the questionnaires to collect more information on job satisfaction, co-operation between schools, and, in the case of teachers, on their family circumstances (to provide information on the context within which teacher attitudes and behaviour are formed). The resulting data are analysed in Chapters 2, 3, 6 and 8 for example.
19. Second, we linked the data files with selected information on schools taken from the School Performance Tables (for 2012) and from Ofsted records: the type of school (e.g. community school, academy, independent school), the percentage of pupils eligible for Free School Meals, the average Key Stage 2 points score of the school's pupil intake, the percentage of pupils obtaining 5 or more GCSEs at grades A*-C (or equivalents) including English and maths, and the most recent Ofsted rating of the school at the time of the survey (or very soon afterwards). The inclusion of this information allows for a substantially richer analysis of differences in teacher attitudes and practices across English schools than would be possible using the TALIS data alone.
20. Table 1.1 draws on the linked School Performance Tables data to show the numbers of each type of secondary school that took part in TALIS and the number of teachers in the sample in each of these school types. Summary statistics for the percentage of pupils in each school with Free School Meals (FSM), the percentage achieving good GCSE results, and the percentage of schools with a 'outstanding' or 'good' Ofsted report are also given. The table illustrates the variety of types of school now present

¹² The international questionnaires were also very lightly adapted in places within OECD guidelines in order to improve the fit with the institutions of the English school system.

in England.¹³ These different school types are associated with different degrees of autonomy and, in some cases, different funding.

Table 1.1 The TALIS sample for England

school type	number of schools	number of teachers	% free school meals (av.)	% 5+ good GCSEs (av.)	% Ofsted outstanding or good
<i>Maintained</i>	(76)	(1,208)	(20)	(58)	(76)
Community	34	533	19	61	73
Foundation	26	418	24	50	56
Voluntary aided	14	225	14	69	84
Voluntary controlled	2	32	22	58	37
<i>Academies</i>	(68)	(1,127)	(14)	(62)	(74)
Conversion	55	926	12	65	81
Sponsored	13	201	22	51	47
<i>Independent (private)</i>	10	161	...	75	77
<i>All schools</i>	154	2,496	17	64	72

Source: TALIS database

Note: The numbers of schools and teachers in the first two columns are based on unweighted data. The unit of analysis in the last three columns is the school and results here are based on weighted data; 'good' GCSEs (or equivalents) means grades A*-C including English and maths. There are no data for free school meals for independent schools. There is no information on GCSEs for 6 schools.

21. The first four types are 'maintained' schools, which are schools funded by a Local Authority (LA). Community schools have staff employed by an LA, which also has primary responsibility for admissions. Foundation schools have a governing body that employs the staff and that has the main responsibility for admissions. The same is true for 'voluntary aided' schools, which are often church schools. Finally, there are two 'voluntary controlled' schools where, like a community school, the LA employs the staff and has primary responsibility for admissions. Taken together, the different types of maintained school and the teachers in them make up about half of the sample.
22. Academies and their teachers form about 45% of the sample. Most of these schools are 'converter' academies, created under the 2010 Academies Act – their large presence in the TALIS sample reflecting recent policy to give schools more autonomy. These are schools that have converted from a different type, e.g. a community school, and are typically schools with higher achieving pupils – as reflected in above average GCSE performance and Ofsted ratings. Fewer than 1 in 10 of all schools in the TALIS sample are 'sponsor-led' academies, created under the 1997-2009 Labour government's legislation – typically schools with pupils with lower achievement on average and with higher than average FSM receipt. Academies are outside LA control and are directly funded by the Department for Education, providing further autonomy.
23. Finally, the 'independent' (private) schools have full autonomy with no direct public funding. There are only 10 independent schools in the sample and 161 teachers, representing less than 7% of the unweighted sample. Their representation in the

¹³ There are no Free Schools in the responding TALIS sample.

weighted sample is much higher (21% of schools and 15% of teachers), in part due to the weights compensating for the lower response rates of independent schools (see Appendix A).

24. There are fewer than 30 schools in all but the academy-conversion and community school categories. This limits our ability to find statistically significant differences in respondents' answers to TALIS between the disaggregated school types. The limitation is particularly severe for the answers given by headteachers, where by definition we have only one response per school. Our strategy is therefore to pool all the maintained schools and the two types of academy to arrive at three basic school types that differ in terms of public control and funding: maintained schools, academies, and independent schools. However, this still leaves the sample of independent schools at the same small size.
25. Appendix B discusses sampling error in TALIS – the impact on estimates that can be obtained with the data from the chance process of drawing a sample for a survey – and the calculation of 'margins of error'. Sample size is key here.
26. Precision in estimating differences between school types is also limited by the heterogeneity within each category.¹⁴ For example, leaving aside the independent schools, only 19% of the variation in the percentage of pupils achieving 'good' GCSEs is accounted for by the differences across the six different categories of maintained schools and academies in Table 1.1, and only 13% of the variation in the percentage receiving FSM. The great bulk of the variation in average pupil performance and family background is within these different categories of school.
27. The percentage of schools with an 'outstanding' or 'good' Ofsted rating – the final column in Table 1.1 – does not vary between the three basic school types, maintained, academy and independent. Very few schools have an 'inadequate' rating – just six schools containing 85 teachers. This greatly restricts our ability to say much about how the answers given by the teachers and, especially, the headteachers in this category of school differ from those given by respondents in schools with other Ofsted ratings.
28. The OECD report on TALIS 2013 classifies schools as 'private' or 'public' in terms of their management according to the headteachers' answers to the question 'Is this school publicly or privately managed?' On this basis, the TALIS data imply that only 51% of teachers in England are working in publicly managed schools – one of the lowest values for any country (the average for all countries is 82%). This figure reflects the instruction in the questionnaire in England to heads of academies as well as independent schools to respond that they were privately managed – although in fact 1 in 7 did not follow the request and responded that they were publicly managed. The questionnaire also asks about the source of the school's funding. Just under 1 in

¹⁴ This has the effect of increasing estimated standard errors and hence widening the confidence interval associated with any estimate.

5 heads of both academies and maintained schools reported that teaching staff are not funded by central or local government, despite the opposite clearly being the case. These responses may reflect the state of flux in secondary school organisation in England and the different views that heads have of the state's role – and the difficulty in capturing this complexity with a standard international survey instrument.

1.4 What can TALIS tell us – and what can it not tell us?

29. TALIS can show how teacher and headteacher attitudes and beliefs in England in 2013 vary across observed school and individual characteristics and how they compare with those in other countries. However, we need to underline the limits to what can be said.¹⁵
30. TALIS is an 'observational study', providing a cross-section of information at a single point in time. It cannot reveal causal relationships with any certainty. Imagine we find that teachers in schools with high performing pupils, as measured by results in GCSE exams, tend to have particular views on classroom discipline. We cannot say whether (i) the teachers' views help cause high performance in their schools, or (ii) this high performance helps form the teachers' views about discipline, or (iii) some third factor is responsible for both teacher views and pupil performance, or (iv) the observed pattern is due to a combination of all three possible explanations. As ever, correlation does not imply causation.
31. Even more specifically, we cannot link teacher attitudes to the performance of the pupils that they themselves actually teach. Even in the few countries participating in the optional TALIS-PISA link study, where this link can be made, the same problem identified in the paragraph above remains. As the OECD puts it 'the intention of TALIS is not to measure the effects of teaching on student outcomes'.¹⁶
32. Care is needed when interpreting patterns of association between average teacher views in each country, e.g. classroom discipline again, and some other average characteristic of teachers, such as their age. The over-interpretation of the patterns of the national averages is an example of the so-called 'ecological fallacy'.¹⁷ The correlation of aggregate quantities at the national level is not the same as the correlation of individual quantities within a country, which is typically the subject of real interest. That is, the relationship between teacher views and age within any one country, e.g. England, may differ from the pattern of the country averages.

¹⁵ See also the clear warnings on some of the same issues made in the OECD's own analysis of TALIS 2013 in the first chapter of the international report (OECD, 2014).

¹⁶ OECD (2014), chapter 1 para 23.

¹⁷ For further discussion in the context of cross-national surveys of education, see May et al. (2003).

33. The information collected by TALIS is self-reports from the teachers and headteachers. In this sense it is 'subjective' information. It is not objectively observed information on what the respondents actually do or how they behave in practice. That behaviour could be at variance with the pattern implied by the self-reported information collected in the survey.
34. In any cross-national survey, there is always the concern that questions cannot be framed and interpreted in the same way in every country, given problems of language (including but not only translation) and culture. The international organisers of TALIS put a great deal of effort into resolving such concerns. And we ourselves worked with the Department for Education and our partners at RM Education, who collected the survey data, in refining the questionnaires for England within the limits allowed by the OECD. Nevertheless, it would be naive to assume that all problems were either identified or resolved if found.
35. Finally, it needs to be emphasised that the TALIS data for England were collected in the Spring of 2013. The information obtained may or may not be a good guide to teacher and headteacher attitudes and beliefs at the time that this report is published in the Summer of 2014. For example, a further year of pay restraint since the time that the survey was conducted may have altered teachers' views of their pay (analysed in Chapter 6). The same may be true of the revised teachers' pay and conditions that came into force from September 2013 (actual performance related pay decisions for teachers do not take place until September 2014). Other important changes include the reformed national curriculum published in September 2013 which applies from September 2014.

1.5 Which countries should we compare England with?

36. Part of this report considers differences in teacher and headteacher views within England – we look at the variation in the reported information across individual and school characteristics. But we also want to compare results in England with those for other countries in TALIS. This complements the analysis made by the OECD in their international report for the survey as a whole. In doing so we can place England in clearer context than is possible in a report that has no focus on any one country. The issue arises of which countries to use in the comparison. Possibilities include:
- All countries or 'sub-national entities' that took part in TALIS 2013. England is classified as a sub-national entity, like the province of Alberta or the region of Flanders, which are the parts of Canada and Belgium respectively that took part in the survey. If one is looking for general patterns across countries against which to place England then arguably the more countries the better.

- Just the OECD or European Union (EU) members that took part in the survey. (Germany is the one large EU country that is conspicuous by its absence from TALIS.) These have the advantage of being familiar geo-political and economic groupings. But they have the disadvantage of excluding countries that we might like to see retained in the comparison, as well as reducing the pool of countries on which general patterns can be based.
- All countries, but with subsets of them defined as ‘low performers’ and ‘high performers’ on the basis of the achievement of their secondary school children recorded in other international surveys. The high performers are of obvious interest. But so too are the low performers. If teacher attitudes or school organisation in England are similar to that in a group of low performers then this seems worth knowing (even if those low performers are, typically, at lower levels of national income). It is also useful to know if low performers and high performers differ notably from each other.

37. We adopt the third of these possibilities. Table 1.2 classifies the 33 countries (we include sub-national entities in this term from now on) in TALIS 2013 into three groups.¹⁸ There are nine ‘high performers’ and eight ‘low performers’, leaving 16 other countries in a group that includes England. Appendix C describes in detail how we define the high and low performing countries. The essentials are that (i) we use results from PISA, augmented by information from TIMSS and PIAAC (Programme for the International Assessment of Adult Competencies); (ii) the high performers are defined as those with average scores that are higher than in England and where the size of the margin is statistically significant; (iii) the low performers are the countries with average scores in PISA below a given threshold in all subjects covered by the survey (reading, maths, and science). This threshold is far below the average scores achieved in England.

38. The low performing group contains two of the three poorest OECD countries, Chile and Mexico, and the two poorest EU countries, Bulgaria and Romania.

39. The high performing group has a considerable geographical and cultural mix: there are three East Asian countries, four European countries (of which two are Baltic), and two English-speaking countries. The group also includes a mix of large and small countries, with all the differences in terms of organisation of schools and social cohesion that this may imply. The reasons for their success have been the subject of much discussion.¹⁹ The relative contributions of schools and families are debated for the East Asian members – Japan, Korea, and Singapore – including the roles of

¹⁸ We do not include Cyprus in our analysis. In addition to the 33 countries and sub-national entities participating in TALIS 2013 through the OECD, Cyprus conducted the survey directly through a contract with the international contractor, the IEA. However, the figure for Cyprus does enter any average for all countries in TALIS that we take from OECD summary tables in OECD (2014). (This average, on the other hand, excludes the figure for the USA.)

¹⁹ See, for example, the various chapters in Meyer and Benavot (2013) and the series of videos produced by the Pearson Foundation and the OECD <http://www.pearsonfoundation.org/oecd/>.

school discipline, on the one hand, and of extensive use of private tutoring outside schools on the other.²⁰ Finland is cited by some commentators as an example of a country that has bucked an international trend in terms of school inspections and pupil testing with comparatively little of either. The variation in the explanations for success that are offered across this diverse group of countries means that it will not be a surprise to see the teacher views and behaviour recorded in TALIS differing substantially among them.

Table 1.2 Countries in TALIS 2013 – and performance of secondary school pupils

Performance	Countries
High Performers	Japan, Korea, Singapore Estonia, Finland, Flanders (Belgium), The Netherlands, Alberta (Canada), Australia
Low Performers	Abu Dhabi (UAE), Brazil, Bulgaria, Chile, Malaysia, Mexico, Romania, Serbia
Other countries	Croatia, Czech Republic, Denmark, England (UK), France, Iceland, Israel, Italy, Latvia, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, USA

Notes: See Appendix C for definitions of high and low performance.

40. In some tables in the report we give averages to compare with England for the high performing and low performing countries under the headings 'H9' and 'L8', together with examples of the individual figures for a few of the high performers. In graphs with scatterplots that compare England with other countries, we plot the nine high performing and eight low performing countries with different symbols. An Excel workbook with a spreadsheet providing the data for each graph is available on the Department for Education research publication website. All countries are separately identified in these spreadsheets.

1.6 What does the report cover?

41. In terms of the chapter order and broad content, much of the structure of this report is similar to the OECD's international report on the first results of TALIS 2013 as a whole.²¹ We add two further chapters to those included by the OECD (our Chapters 6-9 cover ground dealt with in two chapters in the international report). However, our approach to the issues and the detailed content of each chapter are typically quite different. Each chapter, like this introductory one, is organised around a series of questions. These questions are listed at the start of the chapter and then form the

²⁰ For example, on Japan, see Watanabe (2013), summarised briefly at <http://schoolsImprovement.net/guest-post-the-real-reason-behind-asian-education-success-a-perspective-from-japan/> and OECD (2012). TALIS does not include China-Shanghai, an East Asian 'sub-national entity' that has recently attracted a lot of attention for its PISA results.

²¹ OECD (2014).

headings for each section. Each of Chapters 2-9 finishes with a brief section of summary that brings together the analysis. A box at the start of each chapter gives some key findings.

42. Chapter 2 considers the profile of lower secondary teachers in England and the schools in which they work. We begin by showing who are the teachers and headteachers who took part in TALIS. We look at the gender balance of teachers and heads, their ages and their years of experience. The chapter then addresses three issues of topical interest by way of further introducing the TALIS data. The first is school autonomy, argued by the OECD as being a key to high performance and a subject emphasised in policy initiatives from successive UK governments. The second is school staffing, where our analysis includes discussion of the use of teaching assistants, a subject that has been hotly debated.²² The third is teachers' weekly hours of work. We distinguish total time both inside and outside school on all tasks and time spent in face-to-face teaching. How do the results from TALIS compare with those from the 2013 Teachers' Workload Diary Survey with its low response rate? And how do the number of hours worked by teachers in England compare with those in other countries? We also show how teachers' hours of work vary with their family circumstances.
43. Chapter 3 focuses on the leadership of schools. This is a factor that is often argued to be a key to pupil achievement, including in the 2010 Schools White Paper.²³ We start by considering the formal qualifications of headteachers in what we demonstrate is increasingly becoming a postgraduate-level segment of the teaching profession. We then show what TALIS uncovers about the leadership styles of heads. We analyse headteachers' reports on how they divide their working year between different tasks. The chapter then turns to document the issues that school heads view as barriers to their effectiveness, before finishing by asking how satisfied they are with their jobs.
44. Chapter 4 analyses the continuing professional development (CPD) of teachers. CPD is an important issue in any school system and government policy continues to try to encourage worthwhile activity. The National College for Teaching and Leadership, formed in 2013 from the National College for School Leadership and the Teaching Agency, is one plank in a policy aimed at improving the quality of the teacher workforce, including through better CPD. The chapter starts by documenting the prevalence of induction and mentoring schemes in secondary schools. We then analyse how much CPD is undertaken by teachers and of what types – before addressing the question as to whether this CPD is seen by teachers as effective. The last two sections of the chapter investigate whether teachers see much need for more CPD and the barriers they perceive to undertaking more training.

²² See, for example, Blatchford et al. (2012) and Russell et al. (2013) and <http://www.teachingassistantresearch.co.uk/>.

²³ Department for Education (2010).

45. Chapter 5 considers the feedback that teachers receive about their work, both through formal appraisal and more informal channels. Who provides feedback to teachers and on what basis? And what do teachers think about the feedback they receive – do they perceive it as useful? After addressing these questions we focus on systems of formal appraisal as reported by headteachers, together with the different outcomes that school heads report as resulting from these systems. Finally, we report on teachers' views of appraisal and feedback. What are their views of the outcomes, as opposed to the heads' views? Do they see formal appraisal and informal feedback as a well-grounded system that serves an important purpose or do they see it largely as merely ticking an administrative box?
46. Chapter 6 focuses on teachers' views of their jobs and their profession. The status of teaching and the satisfaction of teachers are vital to attracting and retaining high quality teachers and to sustaining teacher self-confidence. Teaching has often been seen as a high status profession in the UK and one providing a high degree of job satisfaction in comparison with many other occupations.²⁴ The chapter addresses four questions relevant to the current status of the profession and efforts to recruit and retain staff. First, do teachers believe that their pay is fair? Second, are they satisfied with their working conditions and scope for progression? Third, do they believe that their profession is valued in society? Fourth, are teachers happy in their careers, believing that they made the right choice? The first two questions can only be addressed for England as the data necessary were not collected in the other countries participating in TALIS. But in answering the third and fourth questions, we can show not only the variation in opinions within England but – as in other chapters – how teachers' views in England compare with those in other countries.
47. Chapter 7 deals with several important issues concerning teachers' practices in the classroom and their beliefs. First, we document teachers' reports on how much time they actually spend teaching in the classroom, rather than dealing with administrative issues or keeping control. Second, we investigate whether teachers see thinking and reasoning processes as more important than specific curriculum content. Curriculum issues are much debated in England. The national curriculum has been in force since 1988 but it does not apply to independent schools and academies may deviate from it to a substantial degree. Third, we analyse how widespread are the practices of organising pupils into small groups to work together on a problem – another issue of topical debate²⁵ – and of giving different work to students of different abilities ('differentiation'). Finally, we analyse the methods that teachers report using to assess pupil learning – including tests, getting pupils to answer questions in front of class, and providing written comment on work.
48. Chapters 8 and 9 address two issues critical to teacher success. Chapter 8 considers school and classroom climate including pupil behaviour, as perceived by teachers and

²⁴ See, for example, the analysis of the 2004 Workplace Employment Relations Survey in Rose (2007).

²⁵ For example, the 2015 PISA survey will include an investigation of 'collaborative problem solving'.

school heads. This issue is of much current interest. It was highlighted by the head of Ofsted, Sir Michael Wilshaw, in his presentation of the agency's annual report on schools in December 2013.²⁶ The 2010 White Paper on schools also gives it emphasis. How much student – and teacher – absenteeism is there in English schools and how does this compare with the situation in other countries? Is there much noise and disruption in classrooms in England?

49. Chapter 9 then considers the 'self-efficacy' of teachers – the beliefs that teachers hold about their capability to influence student learning. Good teachers believe in their abilities. The chapter tackles six questions. First, just how confident are teachers in England? Second, how is self-efficacy related to years of experience and other teacher characteristics? Third, do school-level factors account for much variation in self-efficacy? Fourth, is the feedback that teachers receive associated with their self-efficacy? Fifth, how do working relationships with colleagues affect teachers' self-efficacy? And, finally, does self-efficacy vary with the strength of teacher-student relations?

50. The tables and graphs in the report all refer to England only unless otherwise indicated by the inclusion of 'international comparison' at the end of the title. (See paragraph 40 for information on where to find the exact values of data shown in graphs.) Where the source is given as 'TALIS database', the results are based on our own analysis of the survey data.²⁷ Many of our tables and graphs comparing England with other countries draw on the OECD's analysis of the data in the first international report on TALIS 2013, published simultaneously with this national report for England. Here the source is given as 'OECD (2014)' with the appropriate table number.

²⁶ Wilshaw (2013).

²⁷ We did not have access to data from the USA and we excluded Cyprus from our analysis – see footnote 18.

Chapter 2 Lower secondary teachers and their schools

- Fewer lower secondary teachers in England are women than the international average in TALIS, 63% compared to 68%. Given the relationship between the female shares of teachers and headteachers across all countries, one would expect the percentage of school heads who are women in England, 38%, to be about 5 points higher.
- Teachers in England are on average 4 years younger than the average across all countries in TALIS and headteachers 2 years younger.
- Only 9% of lower secondary teachers in England teach modern foreign languages, compared to an average of 19% for all countries in TALIS.
- 25% of teachers in state-funded schools in the lowest quarter of average ability of pupil intake teach three or more subjects at Key Stage 3 compared to only 13% of teachers in schools in the top quarter.
- Schools in England are very autonomous by international standards – including Local Authority maintained schools. Almost all headteachers in England report that responsibility for determining teacher pay (both starting salary and pay increases) is at least shared at the school level but, on average, only 32% of heads do so in other countries.
- Given the average number of pupils in secondary schools in England, the average number of teachers is what one would expect given the relationship between the two variables across all countries. But schools in England have unusually high numbers of staff who are not teachers – the average ratios of the number of teachers to the number of teaching assistants and to the number of administrative/management staff (4.1 and 3.3 respectively) are among the lowest in TALIS.
- Lower secondary teachers in England report working 46 hours a week on all tasks, on average, one of the highest figures in TALIS and 9 hours more than the median for all countries. But average face-to-face teaching time in England (20 hours) is close to the international average.

1. We begin in this chapter by using the TALIS data to investigate some of the characteristics of lower secondary teachers and headteachers in England. We look in turn at gender, age and experience, home circumstances, and the subjects taught by teachers.
2. We then underline the degree of autonomy now held by secondary schools in England, as summarised by information reported by headteachers. We go on to consider the size and staffing of schools, including teaching assistants and administrative/managerial staff as well as teachers. Finally, we investigate hours worked by teachers, a key aspect of staff resources from the point of view of the school and a major feature of working life from a teacher's perspective. We deal with all these issues by addressing four questions:

Who are the teachers and headteachers in TALIS schools?

How autonomous are schools in England?

How well are schools staffed?

What are teachers' hours of work?

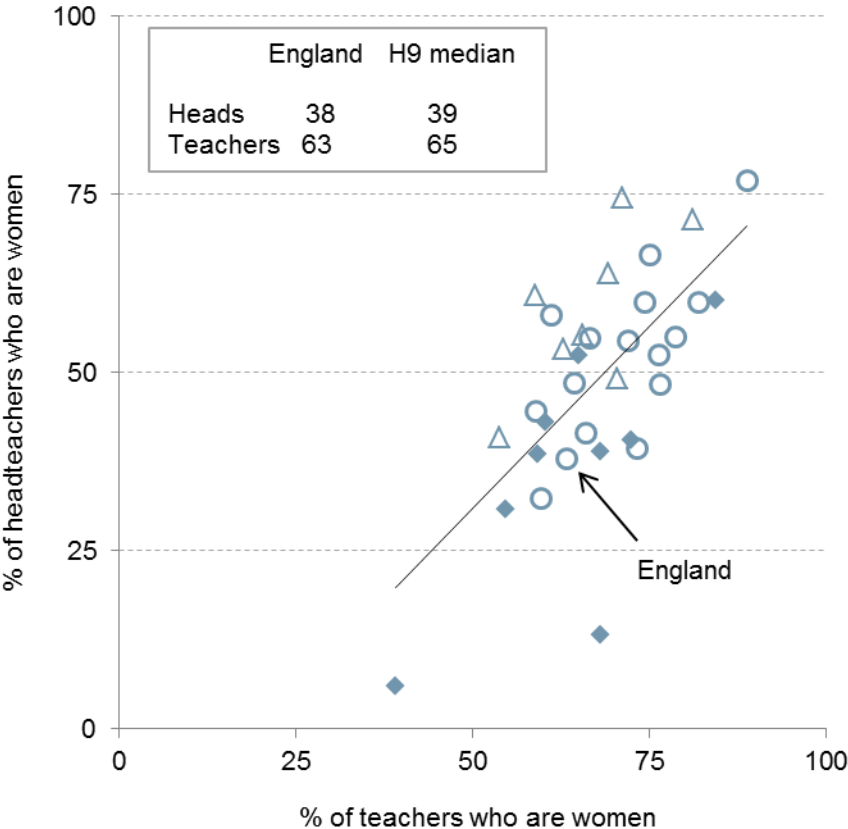
2.1 Who are the teachers and headteachers in TALIS schools?

3. Figure 2.1 plots the percentage of lower secondary teachers in each country who are women on the horizontal axis and the percentage of headteachers who are women on the vertical axis. Graphs of this type in the rest of the report use the same design: high performing countries identified in Chapter 1 are indicated with a solid diamond, low performing countries with an open triangle, and other countries – including England – with an open circle.²⁸
4. Secondary school teaching in England, as in almost all other countries in TALIS, is a profession with more women than men. But the female share of teachers in England, 63%, is a bit lower than the international average of 68% (measured here by the median). In only one country, Japan, are there more men than women – this is the country at the bottom left of the graph where 39% of teachers and just 6% of headteachers are female. Korea is the other high performing outlier with a low percentage of female headteachers, 13%, whereas 68% of Korean teachers are women.
5. England reflects the general pattern of women being under-represented among headteachers in the sense that the percentage of school heads who are female, 38%, is below the female share of all lower secondary teachers. This underrepresentation

²⁸ On the identification of individual countries, see paragraph 40 in Chapter 1.

holds in almost every country. The regression line in the graph shows the average relationship between the female share of headteachers and the female share of teachers. England sits below this line: given the percentage of lower secondary teachers in England who are women, one would expect the percentage of heads who are women to be about 5 points higher. It is striking that all but one of the low performing countries comes above the regression line, with a higher share of school heads who are female than one would expect given the pattern across all countries. In 6 of the 8 low performers, the majority of headteachers are women, compared to only 2 out of 9 high performers.

Figure 2.1 Percentage of teachers and headteachers who are women: international comparison



Source: OECD (2014) Tables 2.1 and 3.8

Note: The line fitted to the data is from the OLS regression of the percentage of heads who are women on the percentage of teachers who are women. The nine high performing countries and eight low performing countries (see Table 1.2) are indicated by solid diamonds and open triangles respectively.

6. The female shares of the total numbers of teachers and headteachers do not vary significantly in England with school type (maintained, academy or independent), pupil background in terms of percentage Free School Meals receipt, or average pupil GCSE performance.
7. 11% of the headteachers in England report that they have an executive headteacher over them while 15% report that they themselves are the headteacher of two or more

schools. But the margins of error around these figures are quite large, about ± 8 percentage points.

8. Table 2.1 summarises the ages and years of experience of the teachers and school heads. Teachers in England are on average 4 years younger than the average for all countries in TALIS and headteachers 3 years younger. These younger ages are reflected in the lower than average percentages with more than 10 years of experience in teaching or in working as a headteacher. About a half of teachers in England have that amount of experience compared to nearly two thirds on average for all countries; a quarter of headteachers in England have worked as a head for more than 10 years compared to a third on average for all countries. The figure for heads in England is not far below the average for the high performers but this group displays great variation: for example, no heads in Korea have over 10 years of experience and only 3% in Japan, but 49% do in Finland.

Table 2.1 Age and years of experience of teachers and headteachers: international comparison

	age (mean)			% with 11+ years of experience		
	England	H9	All	England	H9	All
Teachers	39	42	43	47	59	63
Heads	49	52	52	25	28	34

OECD (2014) Tables 2.1, 2.6web, 3.8 and 3.12web

Note: 'H9' is the mean for the nine high performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. The years of experience refer to teaching at any school (teachers) and time as a headteacher at any school (heads).

Table 2.2 Family circumstances of teachers, by age

age	% of teachers living with:			(% of sample)
	partner	child aged 0-4	child aged 5-15	
below 25	29	0	0	(4)
25 – 29	60	9	3	(17)
30 – 39	79	40	30	(34)
40 – 49	82	24	56	(25)
50 – 59	80	1	18	(18)
60+	71	2	7	(2)
All	75	22	28	(100)

Source: TALIS database

Note: Teachers were asked 'Are you living with someone as a couple (whether married or not)?' and 'Are you (or your spouse/partner if you live with him or her) the parent or guardian of any children living with you?' with the question distinguishing the two age groups of children.

9. Average teacher age and time as a teacher is about 2½ years higher in independent schools in England. Otherwise there are no obvious differences across school types.
10. Family circumstances may help determine hours of work – see later in this chapter – and they may also affect a teacher's attitudes towards teaching as a career and even his or her practice as a teacher. Table 2.2 reports on the results of the additional questions we added to the questionnaire in England for teachers. Three-quarters of

teachers are living with a partner. (In 85% of cases this partner is employed – not shown in the table.) Just over 20% have a child of pre-school age and just under 30% a child of compulsory school age (36% have one and/or the other – not shown).

11. Finally in this section we report on the subjects that teachers say they teach at the lower secondary level. Table 2.3 shows the percentage of teachers teaching in each of 12 broad categories of subject (the figures sum to more than 100% as many teachers teach more than one subject). The design of the table is repeated in subsequent chapters: the figures given are those for England, the averages for the nine high performing ('H9') and eight low performing countries ('L8') identified in Chapter 1, the (unweighted) average across all countries in TALIS ('All'), and figures for four examples of the high performers: Finland, Flanders, Japan and Singapore.

Table 2.3 Percentage of teachers who teach different subjects to lower secondary pupils: international comparison

Subject	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Reading, writing, literature	28	29	23	25	17	43	30	29
Science	16	21	29	16	16	18	20	21
Mathematics	19	22	29	17	22	20	19	21
Humanities/social studies	20	20	23	18	15	10	19	20
Modern foreign languages	9	16	28	18	19	1	15	19
Arts	14	15	17	11	11	9	15	15
Other	15	18	12	13	35	18	12	15
Physical education	13	14	13	8	14	9	13	14
Religion and/or ethics	11	15	13	11	58	8	14	13
Technology	13	15	8	14	7	15	15	13
Practical/vocational skills	13	13	13	15	7	12	11	11
Classical Greek/Latin	1	1	0	4	n.a.	0	2	1

Source: TALIS database

Note: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the average across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore. There is no information for Japan on Classical Greek and/or Latin and the H9 average here has been calculated across the other eight countries.

12. In most cases, the figures for England are reasonably similar to those elsewhere. For example, 28% of teachers in England teach reading, writing, and literature compared to 29%, on average, in the high performing countries and also in all TALIS countries. The exception is modern foreign languages where the figure of only 9% in England contrasts with that of 16% for the high performers, on average, and 19% for all countries.
13. Within England, there are some differences between publicly-funded schools (maintained schools and academies) and independent schools. Only 20% of teachers in independent schools teach reading, writing and literature while 12% teach foreign languages and 19% say they teach physical education (which might include coaching sports teams). Among the publicly-funded schools there are also marked differences

by average pupil ability as measured by Key Stage 2 scores of the school's intake. More teachers report teaching reading, writing and literature and teaching maths in schools with lower average KS2 scores. The figures are 36% for reading, writing and literature for teachers in schools in the lowest quarter of KS2 intake, falling to 24% for teachers in the top quarter, and 24% and 15% respectively for maths. Associated with this, while 25% of teachers in schools in the bottom KS2 quartile report teaching three or more subjects, this is true for only 13% of teachers in schools in the top quartile. Where average ability of a school's intake is lower, teachers teach more subjects.

2.2 How great is school autonomy?

14. The 2010 Schools White Paper was unequivocal on the advantages of greater school autonomy: 'across the world, the case for the benefits of school autonomy has been established beyond doubt'.²⁹ The belief in the importance of school autonomy in England is the key driver behind the mass conversion of maintained schools to academies. The OECD's report on TALIS 2013 is more guarded, noting that research evidence indicates the impact of autonomy on student achievement to vary across countries. While concluding that the evidence is in favour of greater autonomy, the OECD observes that the kind of decision devolved to the school level also makes a difference.³⁰

15. Just how autonomous are England's secondary schools by international standards? TALIS questioned school heads about 11 areas of activity, asking in each case that the headteacher indicate who has a 'significant responsibility' for the area concerned. The responsibility could be shared and heads were asked to tick as many of the following options as appropriate:

- the headteacher
- other members of the school management team
- teachers in the school
- the school governing board
- a local or national authority

16. For five of the 11 areas of activity, the top half of Table 2.4 shows the percentage of teachers working in schools with heads who indicated that responsibility was held at the school level, meaning at least one of the first four options listed above was selected. The bottom half of the table shows the percentage of teachers in schools where the head says that a local or national authority has 'significant responsibility', possibly shared (as with the school level ownership in the top half of the table).

²⁹ Department for Education (2010, para 5.1).

³⁰ OECD (2014), chapter 2.

17. The five activities are chosen to represent key aspects in a school's organisation and conduct: hiring teachers, establishing their starting salaries, determining their pay increases, allocating the school's budget, and deciding the content of courses taught in the school. (The others, not shown in the table, are firing/suspending teachers, establishing student disciplinary policies and procedures, determining student assessment policies, approving students for admission, choosing which materials are used, and deciding which courses are offered.)

Table 2.4 Percentage of teachers working in schools where the head reports that (i) the school (ii) a local or national authority has 'significant responsibility' for the task concerned: international comparison

	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
<i>School level</i>								
Hiring teachers	100	74	80	100	18	40	59	75
Starting pay for teachers	94	32	24	6	7	10	33	36
Pay increases for teachers	97	32	29	4	16	18	35	37
Allocating the budget	100	92	96	95	60	97	64	83
Course content	97	71	76	34	53	86	48	65
<i>Local or national level</i>								
Hiring teachers	1	38	49	0	86	91	51	36
Starting pay for teachers	16	72	81	94	90	92	71	70
Pay increases for teachers	8	77	86	96	88	92	68	70
Allocating the budget	3	19	16	7	45	13	50	32
Course content	8	57	62	86	65	60	71	59

Source: OECD (2014) Tables 2.24 and 2.24.Web

Note: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the average across all TALIS countries; Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore. Authority at the school level includes either the school head, other members of the school management team, teachers, or the school governing board. Authority at the local or national level includes local, municipality/regional, state, or national/federal authority. The five tasks are a subset of the 11 covered by TALIS; 'hiring teachers' refers to appointing or hiring teachers, 'teacher pay' refers to establishing teachers' starting salaries, including setting pay scales, 'allocating the budget' refers to deciding on budget allocations within the school, and 'course content' refers to determining course content, including national/regional curricula.

18. The table presents a graphic picture of a high degree of school autonomy in England, both in absolute terms and relative to many other countries, including those with high performing pupils. The figures for school level responsibility for England in the top half of the table are all at or near 100%. This means that the great majority of or, in some cases, all heads of local authority maintained schools, as well as heads of academies and independent schools, are answering that the school at least shares responsibility for the activity concerned. And the figures in the bottom half of the table show that the great majority of heads in England do not report that a local or national authority has 'significant responsibility' in any of the five areas.

19. Some of the figures for England might be debated – the existence of a national curriculum that maintained schools must follow suggests that the figure of 8% for local or national authority responsibility for 'course content' is questionably low (nearly half of the teachers in the TALIS sample work in maintained schools). Similarly, the

existence of a national pay scale for teachers in maintained schools would lead one to expect a higher figure for 'starting pay for teachers' than 16%.³¹

20. Notwithstanding these caveats, the position of England is striking. For example, on average only a third of teachers in high performing countries are in schools where the head reports significant school level responsibility for determining teacher starting pay or for deciding on pay increases. Schools have almost no involvement in teacher salaries in Flanders (and, not shown, Alberta) and only about a quarter of teachers in Finland work in schools where significant school level responsibility is reported. Japan and Singapore (and, not shown, Korea) also exhibit very low school involvement in pay setting. And while heads in several high performing countries report universal or near universal involvement of the school in hiring teachers, as heads in England do, this is not true of Finland and is not even the norm in Japan or Singapore (or, not shown, Korea). The bottom half of Table 2.4 shows local or national authorities often bearing significant responsibility for most of the five areas. Only for allocation of the school budget is the involvement of local or national authorities at a low level among most of the high performers (Japan is an exception).

21. In most cases, the low performers average a lower level of school involvement than the high performers (equal for teacher pay) and a higher level of local or national authority involvement.

22. Schools in England are clearly very autonomous by international standards, or at least are viewed as such by their headteachers. The levels of school responsibility that are reported are so high and the levels of local and national authority responsibility so low that there is little room for much analysis of differences among English schools. Unsurprisingly, the reporting of local or national authority involvement is strongly concentrated among the maintained schools, although we have already noted that it is not nearly as high as might be expected. Within the group of maintained schools, we can find no clear significant differences in level of average GCSE performance, the distribution of Ofsted ratings, or average Free School Meals receipt between schools with heads reporting significant local or national authority involvement in any of the 5 areas of activity considered in Table 2.4 and those with heads who did not.

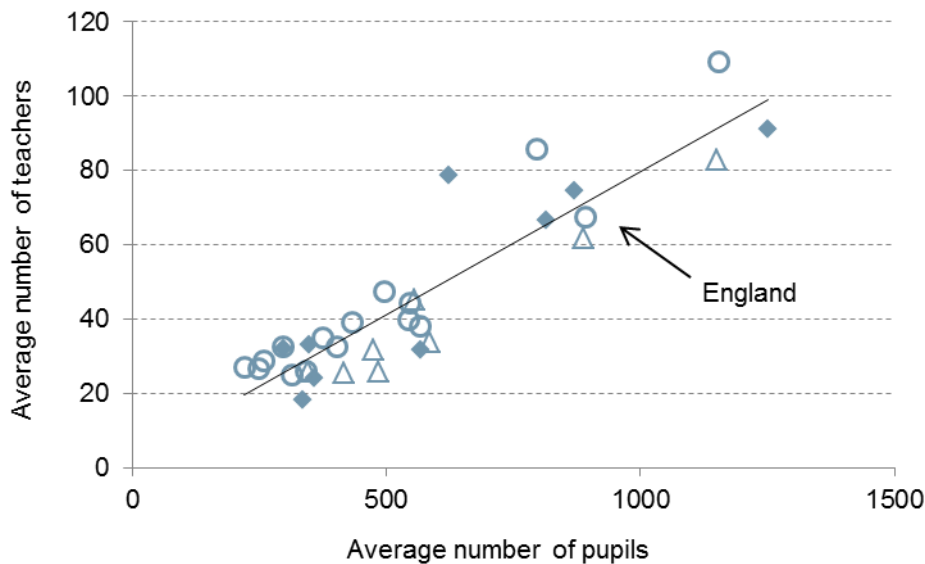
2.3 How well are schools staffed?

23. Figure 2.2 plots the average number of teachers in TALIS schools for each country (irrespective of the grades or ages they teach) against the average number of pupils. Average school size in England, whether measured by the number of pupils or the number of teachers, is high by international standards. The figures for England of 890 pupils and 67 teachers compare with the averages for all countries of 546 and 45

³¹ Department for Education (2013a) describes arrangements for pay in maintained schools and the changes in the period covered by TALIS 2013.

respectively.³² The six countries with an average number of pupils that, as in England, exceeds 800 include three high performers – Australia, the Netherlands, and Singapore – and two low performers – Abu Dhabi and Malaysia. The sixth country is Portugal. Singapore has the highest average number of pupils (1,251) and Portugal the highest average number of teachers (110).

Figure 2.2 Average number of teachers and average number of pupils per school: international comparison



Source: OECD (2014) Table 2.18

Note: The line fitted to the data is from the OLS regression of the number of teachers on the number of pupils. The nine high performing countries and the eight low performing countries (see Table 1.2) are indicated by solid diamonds and open triangles respectively.

24. The diagonal line in Figure 2.2 describes the relationship that holds across countries in TALIS between the average number of teachers and the average number of pupils. England sits just below the line: given the average number of pupils in schools in England, the average number of teachers is almost exactly what one would expect given the relationship between the two variables across all countries. Viewed in this way, England is not exceptional in terms of teacher numbers. The graph also shows that all of the low performing countries (open triangle symbols) lie below the line, with somewhat lower average teacher numbers than the relationship between two variables would lead one to expect. It is also notable that the high performers (solid diamond symbols) are found everywhere in the diagram, from bottom left to top right. Some have large schools as measured with either variable, as in the examples noted above. But some have small schools, such as Estonia, Finland, Japan, and Alberta (Canada).

³² If in the calculation of the averages, the schools are weighted by their number of teachers – thus showing the average numbers of pupils and teachers that a lower secondary teacher has in his or her school – the figures rise substantially: to averages of 1,060 pupils and 80 teachers in England compared to 676 and 54 respectively on average across all countries.

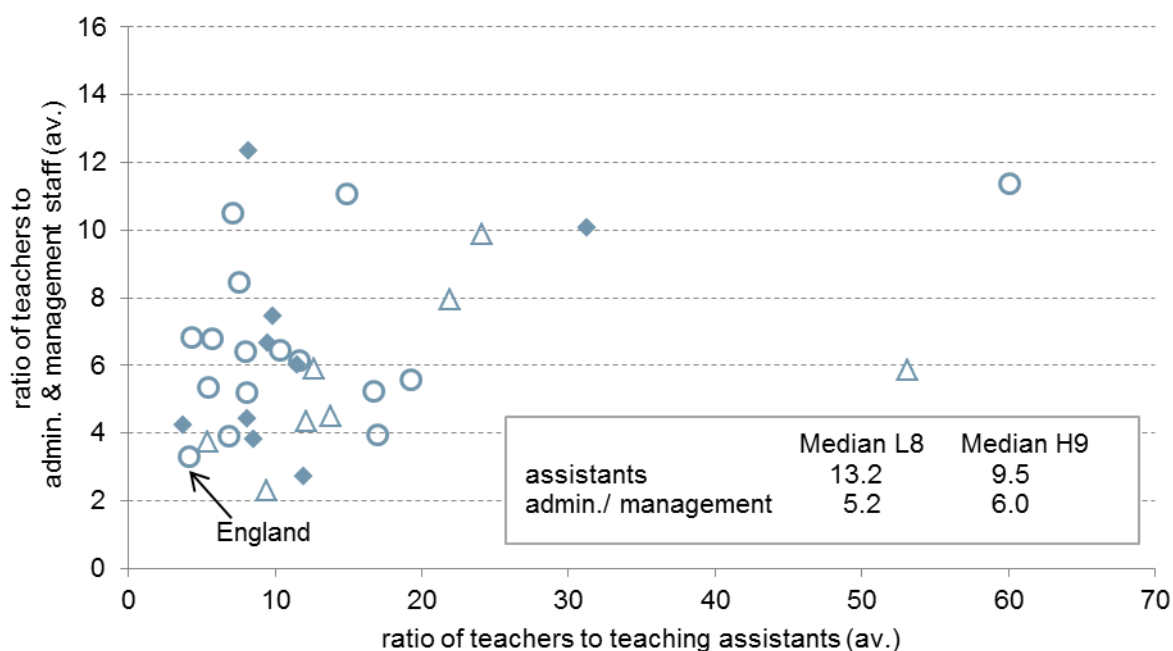
25. The TALIS schools in England vary modestly in average size across the different school types. The only marked difference is for the independent schools, which are notably smaller in terms of pupil numbers (537 on average compared to 988 for academies and maintained schools taken together) but not significantly smaller in terms of teacher numbers (64 compared to 68).³³
26. A school's teaching resources include teaching assistants as well as teachers. There has been a large rise in the use by schools of teaching assistants in England in the last 10-15 years. School Workforce Census (SWC) figures show a near three-fold increase in their full-time equivalent (FTE) number between 2002 and 2012 in publicly-funded secondary schools (maintained schools and academies) while the number of teachers rose by less than 5%.³⁴ The result is that the ratio of teachers to teaching assistants has fallen from 10.7 in 2002 to 4.0 in 2012. How does the current situation compare with that in other countries?
27. Figure 2.3 shows that England does indeed appear to be exceptional in the use of teaching assistants. (As in Figure 2.2, the unit of analysis is the school.) The average ratio of assistants to teachers is plotted on the horizontal axis. The definitions of staff categories differ somewhat between TALIS and the SWC but not enough to invalidate the comparison. The ratio of the number of teachers to the number of 'personnel for pedagogical support' – teaching assistants and any other 'non-teaching professionals who provide instruction or support teachers in providing instruction' – averages 4.1 in England, measured in TALIS. Only two other countries have a value under 5.0 (Alberta and Iceland) and the median across all countries is 9.8. The box in the graph shows that the median for the high performers is only a little below that for all countries. But it is notable that the nine high performers include countries towards both extremes: Flanders (Belgium) at 31.3 and, as already noted, Alberta (Canada) at 3.8.
28. Compared to other countries, on average schools in England have unusually large numbers of teaching assistants and other teaching support staff. There are several caveats to this conclusion. The TALIS figures refer to head counts and not FTEs. The full-time/part-time ratio of all types of staff may vary across countries. (TALIS shows 86% of lower secondary teachers in England to be full-time, slightly more than the average for all countries, but there is no breakdown for other types of staff.) The functions of teaching assistants and other support staff may vary across countries. Their high numbers in England could mask the fact that they are performing a role that a teacher would carry out in some other countries (although we have noted that the average number of teachers in England is in line with average number of pupils.) Systems in which pupils with severe special needs are included into mainstream

³³ There is substantial variation around the average for both the pupil and teacher numbers in England. The 10th and 90th percentiles are 340 and 1,410 for the number of pupils and 32 and 105 for the number of teachers. Excluding the independent schools the figures are 522 and 1,462 and 33 and 105 respectively.

³⁴ Department for Education (2013b, Table 2).

schools, as is often the case in England, will also have larger numbers of teaching support staff.

Figure 2.3 Ratio of average number of (i) teachers to teaching assistants and (ii) teachers to administrative and management staff: international comparison



Source: OECD (2014) Table 2.18

Note: 'H9' and 'L8' refer to the nine high performing countries (closed diamonds) and eight low performing countries (open triangles) – see Table 1.2.

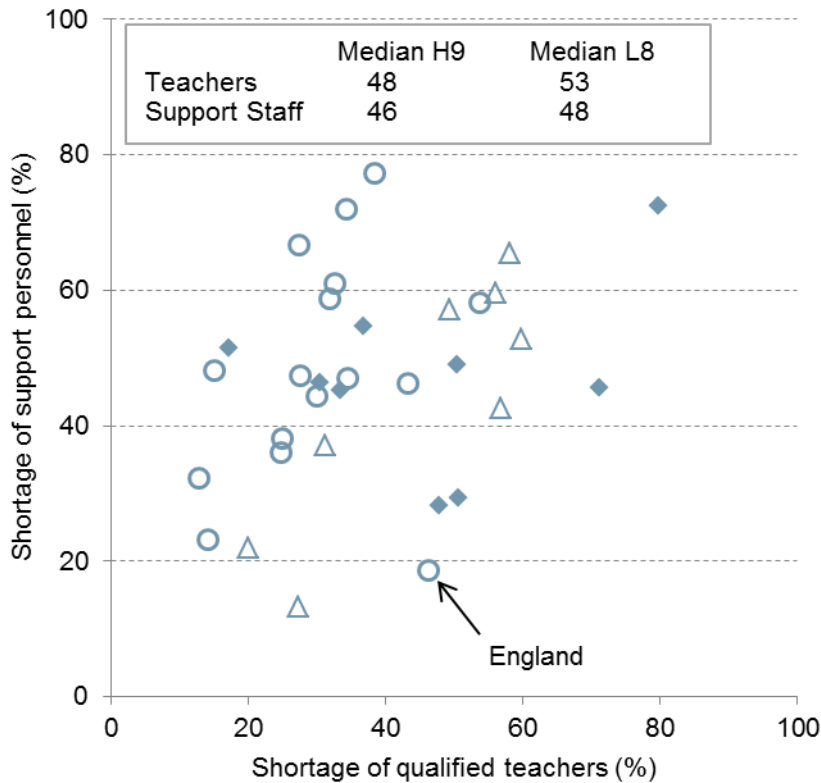
29. Figure 2.3 also shows the average ratio of teachers to school administrative or management staff – the figures on the vertical axis. The value of 3.3 in England is again unusually low. The median for high performing countries, 6.0, is much higher, although there is again considerable variation among them, with Singapore below England at 2.7 and Flanders and Finland in double figures (10.0 and 12.4 respectively). Note that the different categories of staff are not intended to be mutually exclusive in TALIS – in particular, teachers may also be counted as managers if their main activity is management (in the SWC they are counted as teachers). The ratio of total FTE teachers to 'administrative staff' in the SWC (a category which includes managers who are not teachers) in publicly-funded secondary schools in 2012 was 5.6. This represents a substantial fall from the level in 2002 of 8.9, the number of administrative staff having risen by two-thirds over this period.³⁵

30. The ratios in England of teachers to teaching support staff and teachers to administrative and managerial staff display some variation around the average levels just cited – schools do differ in the combinations of staff they employ. But the values

³⁵ Department for Education (2013, Table 2).

of the 90th percentiles – 4.9 and 6.6 respectively – are still well below the medians for the high performing countries.

Figure 2.4 Percentage of lower secondary teachers working in schools where the headteacher considers that quality of instruction is hindered by (i) shortages of teachers and (ii) shortages of support personnel: international comparison



Source: OECD (2014) Table 2.19

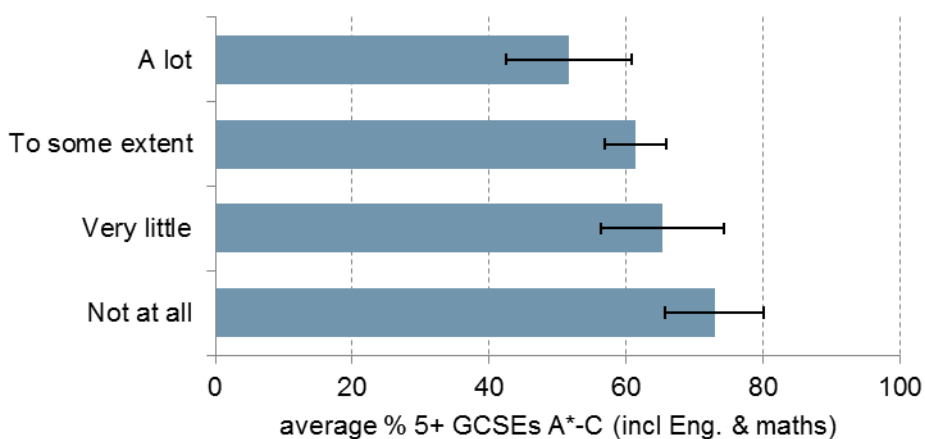
Note: The unit of analysis is the teacher. 'H9' and 'L8' refer to the nine high performing countries (closed diamonds) and eight low performing countries (open triangles) – see Table 1.2.

31. Given their staff and other resources, do headteachers see their schools as adequately equipped? Figure 2.4 shows the percentages of lower secondary teachers working in schools where the headteacher believes that the school's capacity 'to provide quality instruction is hindered' (either 'a lot' or 'to some extent') by a shortage of qualified and/or well-performing teachers (horizontal axis) and a shortage of support personnel (vertical axis). (The type of support staff is not specified in the questionnaire.) The figures for England for teachers, 46%, is very close to the median for the high performing countries, although once again the high performers display considerable variation – from a low of 17% in Finland on the left of the diagram to a high of 80% in Japan on the right. Not surprisingly perhaps in view of the data on teaching assistants and administrative and managerial resources in Figure 2.3, England has a low figure by international standards for the percentage of teachers in schools with heads who perceive a shortage of support personnel – just 19% compared to 46% in the median high performing country.

32. Headteachers are also asked about a range of other resources e.g. special needs teachers, IT hardware and software for instruction, textbooks, and library materials. In almost all cases, fewer headteachers in England reported shortages hindering instruction than the average value (measured by the median) among the high performers. Viewed in this way, headteachers in England tend to see their schools as well resourced by the standards of heads' views in other countries.

33. How do heads' views vary across schools in England about the core resource, 'qualified and/or well-performing teachers'? Figure 2.5 shows that a greater perception of shortage is associated with lower pupil performance in GCSEs. In schools where headteachers think that shortages do not hinder instruction 'at all', on average 73% of pupils achieve 5 or more good GCSEs, compared to only 52% where headteachers think shortages affect the quality of instruction 'a lot'. (There is no such association with headteachers' views of shortages of support personnel.)

Figure 2.5 Average percentage of pupils achieving 5+ GCSEs A*-C (incl. English and maths), by headteacher's view of whether shortages of teachers hinder quality of instruction



Source: TALIS database

Note: The (unweighted) number of headteachers (and the average % 5+ GCSEs) in each category are: 24 'not at all' (73%), 53 'very little' (65%), 60 'to some extent' (61%), 13 'a lot' (52%). The black lines in the centre of the bars represent 95% confidence intervals.

2.4 What are teachers' hours of work?

34. Besides numbers of teaching staff, we need also to consider the hours that teachers work – an important aspect of school resources. (We consider hours of work from the perspective of the teachers later in this section.) TALIS collects information on hours of work in the most recent complete calendar week in two ways. The first is to ask teachers a single question about their total hours of work on all activity 'related to your job at this school': teaching, planning, marking, staff meetings etc – whether inside or outside the school, including time at evenings and weekends. The second is to ask

about time spent on each of ten tasks (including a residual 'other'), starting with face-to-face teaching.

35. The average working week reported by teachers in response to the single question about total hours is 46 hours, and 48 hours for full-time teachers. Adding up the time reported on each of the ten separate tasks results in higher figures, 49 hours for all teachers and 52 for full-timers.³⁶
36. How do these figures compare with those from the 2013 Teachers' Workload Diary Survey, funded by the Department for Education? We noted in Chapter 1 that this important survey had a response rate of only 17% among secondary school teachers. That level of response is far lower than in TALIS, leading one to doubt the representativeness of the survey sample.³⁷ The achieved TALIS sample of secondary school teachers is also about four times larger. On the other hand, teachers in the Workload Diary Survey were asked to fill in a time use diary over two days, which is likely to be a more accurate method of data collection than the questions in TALIS asking respondents to recall figures about the entire previous week.
37. The Teachers' Workload Diary figures refer only to full-time teachers and exclude independent schools. The definition of total hours on all activities seems very similar to that in TALIS. The Workload Diary figure for average hours is 55 hours.³⁸ This compares with figures for full-time teachers in TALIS when excluding the independent schools of 48 hours on the basis of the single question on total hours and 51 hours using the measure based on summing up time spent on different activities. There are several possible explanations for the differences. It may be that teachers who work longer hours are more willing to respond to the Workload Diary Survey to record that fact. Or it may be that the simple questions in TALIS involving recall over the previous week result in under-reporting. Or the focus of TALIS on lower secondary teachers rather than all secondary teachers might be a contributory factor. However, despite the apparent discrepancy in results, it is clear that both surveys show that secondary school teachers in England work long hours on average.
38. Figure 2.6 shows how these average hours recorded in TALIS compare with those in other countries. At the same time it gives information on average total hours spent in face-to-face teaching. Face-to-face hours are shown on the vertical axis with average total hours on all tasks shown on the horizontal axis. The figures refer to all teachers, both full-time and part-time. The measure of total hours is the response given to the

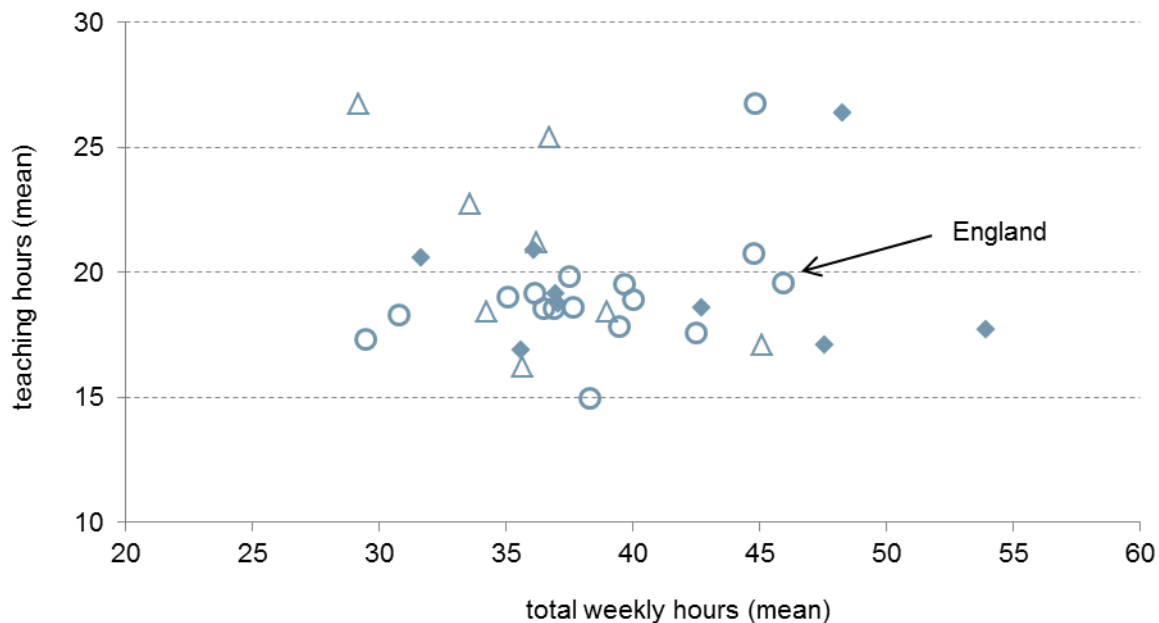
³⁶ When summing hours on all ten tasks, we treat missing values as zeros unless figures for all ten tasks are missing, in which case the resulting variable is set to missing. Restricting analysis to teachers with non-missing figures (including zeros) for all ten tasks results in average hours of 50 for all teachers and 53 for full-time teachers.

³⁷ The survey organisers attempted to compensate for the observed pattern of response by re-weighting the data for known characteristics recorded on the sampling frame, which was the School Workforce Census.

³⁸ See TNS BMRB (2014), Figure 6.

single question on time spent on all activities, i.e. an average of 46 hours in England.³⁹

Figure 2.6 Teachers' average total weekly hours of work and total teaching hours: international comparison



Source: OECD (2014) Table 6.12

Note: The values for England are 45.9 and 19.6. The medians for all countries are 37.0 and 18.8. The nine high performing countries and eight low performing countries (see Table 1.2) are indicated by solid diamonds and open triangles respectively.

39. Lower secondary teachers in England work total hours on all tasks that on average are high by international standards. The figure of 46 hours is 9 hours more than the median for all countries of 37 hours – nearly two hours extra per working day. Only in three high performing countries are average teacher hours longer: in Singapore (48 hours), in Alberta (Canada) (48 hours), and in Japan (54 hours). (The USA, Portugal, and Malaysia are all at a similar level to England, on 45 hours.) But in five of the other six high performers, average hours are below 40 with Finland having one of the lowest values of any country (32 hours). (Italy and Chile record the lowest average figures, 29 hours). Teachers in England are slightly more likely to be full-time than on average for other countries – 86% versus an average of 82% – but this explains only a little of their higher average hours.

40. But average face-to-face teaching time in England is not high by international standards – at just under 20 hours it is only a little above the median for high

³⁹ We find that the average of total hours obtained by summing the figures for the ten separate tasks exceeds the average given in response to the single question on total hours in every country in TALIS.

performers of 19 hours.⁴⁰ Finland actually has slightly higher average time spent on face-to-face teaching, nearly 21 hours, despite much lower average total hours. (Alberta is the outlier among the high performers with an average of 26 face-to-face hours.) It is notable that the variation across countries for face-to-face teaching hours is much less than for total hours. The ranges are 12 hours and 25 hours respectively.

41. Teachers in England, on average, spend more time per week on things other than face-to-face teaching than the average teacher in many other countries. There is no one area that accounts for the difference, but on each of the three most time-consuming activities, teachers in England are spending more time on average preparing lessons (7.8 hours compared to a median of 7.1 hours for the high performers), marking and correcting students' work (6.1 hours compared to 4.5 hours), and general administrative work (4.0 hours compared to 3.2 hours).
42. Average total hours vary little across teachers in England working in different types of schools. The average is 2 hours lower in community schools – a subset of maintained schools – than in other school types taken together, but the difference is only just statistically significant. The difference appears to lie in the hours other than those spent on face-to-face teaching. (It is not the case that a greater percentage of teachers in community schools work part-time.)
43. We now consider the hours worked from the perspective of the teachers. Table 2.5 summarises the distribution of hours spent on all activities by teachers in England, both in and out of school (we again use the answers to the question on total hours rather than the total obtained from summing hours across different activities). Half of full-time teachers work more than 50 hours and 1 in 10 more than 65 hours. Even among the minority of teachers who work part-time (1 in 7), a quarter work more than 38 hours. Men average two hours more than women. This is because one in five women work part-time while virtually all men work full-time.
44. The small percentage of the sample aged under 25 work an average of 51 hours and the even smaller percentage aged 60 or over average 38 hours. Otherwise there is not much variation in average hours by age – all other age groups shown earlier in Table 2.2 average between 45 and 47 hours. (The differences between the figures for the youngest and oldest age groups and between these and the average for the rest of the sample are statistically significant – they are very unlikely to be due to chance.)

⁴⁰ The figure for average face-to-face hours for full-time secondary teachers in state-funded schools in the Teachers' Workload Diary survey for 2013 was 20 hours (TNS BMRB, 2014, Figure 10), exactly the same as for full-timers in state-funded schools in TALIS. This indicates that the discrepancy in average total hours between the two sources lies in the other activities that teachers spend their time on.

Table 2.5 Teachers' total weekly hours of work

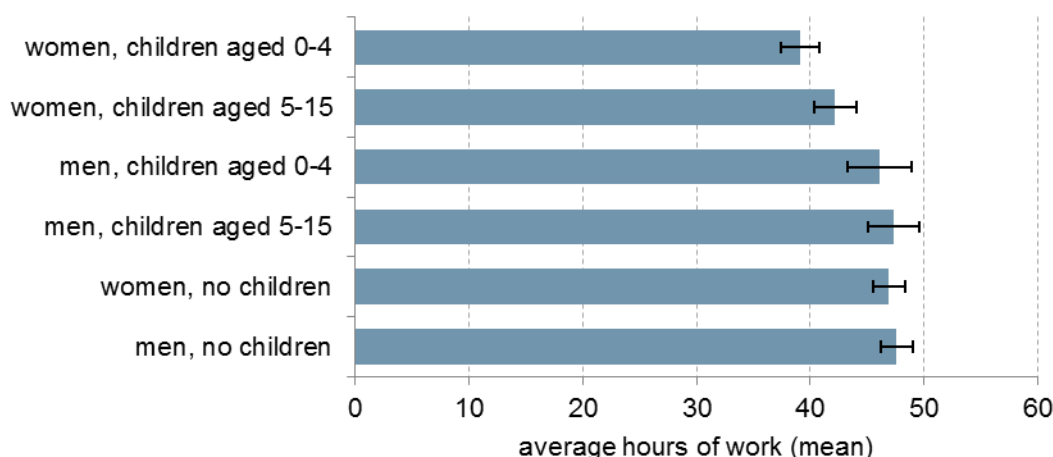
	full-time	part-time	men	women	all
10 th percentile	30	15	26	25	25
25 th percentile	40	23	40	36	37
Median	50	30	50	46	48
75 th percentile	58	38	56	55	55
90 th percentile	65	47	64	63	64
Mean	48	31	47	45	46

Source: TALIS database

Note: 86% of teachers work full-time (80% of women and 97% of men). The measure of total hours is the response given to the single question on time spent on all activities.

45. Average hours in England do vary with the presence of children, especially young children, although only for women – see Figure 2.7. But even women with pre-school children (aged 0-4), a group that makes up 1 in 10 of the TALIS sample, work 39 hours a week on average. (60% of this group work full-time as do 68% of the women with children in the home aged 5-15). Put another way, all the bars in the graph stretch across to the right-hand side, underlining the long average hours that are worked by all groups.

Figure 2.7 Average total weekly hours of work for men and women, by children in the home



Source: TALIS database

Note: The composition of the groups overlaps (people may have children aged 0-4 and children aged 5-15). The black lines in the centre of the bars represent 95% confidence intervals. The measure of total hours is the response given to the single question on time spent on all activities.

2.5 Summary

46. This chapter has started to use the TALIS data to compare England with other countries and to investigate differences within England across types of school and characteristics of teachers.

47. Compared to the average for other countries, England has younger teachers and headteachers, fewer modern language teachers, more autonomous schools, greater numbers of teaching assistants and of administrative and managerial staff, and teachers with longer average total working hours but not face-to-face teaching hours.
48. Our comparisons with other countries include a focus on nine high performing countries. There is considerable diversity within this group, a finding that will be repeated in later chapters.
49. Differences within England include higher teacher age and experience in independent schools and poorer pupil achievement where headteachers report that shortages of teaching staff restrict the quality of instruction. Average total working hours vary only modestly with the presence of young children in the household.

Chapter 3 School leadership and headteachers' management styles

- Headship is increasingly a postgraduate-level job in England, with a very high proportion of school heads with higher degrees, the National Professional Qualification for Headship (NPQH), postgraduate qualifications in educational leadership and undertaking leadership training as part of their qualifications.
- 86% of school heads in England disagreed or strongly disagreed that they make the important decisions in their schools on their own, compared to the median for all countries of 65% – heads in England are above the international average in terms of their shared decision-making. The link between this style of leadership and country performance is not clear.
- Headteachers of more deprived state-funded schools in England scored higher on average on an index of distributed leadership than heads of less deprived schools. Heads of schools rated as 'outstanding' by Ofsted also exhibited the highest degree of distributed leadership.
- Headteachers' working patterns in England – the division of their time – are similar to the average for all countries in TALIS. In England, heads' working patterns are not related to the pupil intake of the school as measured by Key Stage 2 results, nor to the performance of the school in terms of Key Stage 4 outcomes.
- There are several aspects of the school environment and features of the job which headteachers in England highlight as creating barriers to their effectiveness. The top three issues are: (i) government regulation and policy (79% of heads), (ii) inadequate school budget and resources (78%), (iii) high workload and level of responsibilities in their job (68%). The averages for all TALIS countries are 69%, 80% and 72%.
- In all countries in TALIS, including England (94%), a very large majority of headteachers report being satisfied with their jobs. Heads in England take a more positive view of society's valuation of the teaching profession than the average for all countries.
- Average values of a headteacher job satisfaction index unsurprisingly varies by the Ofsted rating of the school. While heads in 'outstanding' and 'good' schools tend to be similarly satisfied with their job, those in 'satisfactory' or 'inadequate' schools are significantly less satisfied on average.

1. There is widespread agreement that effective leadership is essential for school effectiveness, and research has shown that better leadership is associated with better pupil achievement. As a consequence there has been increasing academic and policy focus on the development of effective leaders for schools, and interest in the most effective styles of leadership.⁴¹
2. Alongside this recognition of the importance of headteachers, there have been well-documented difficulties in England in recruiting school heads, particularly to primary schools. More recently, however, recruitment difficulties have been easing, with fewer advertised positions remaining unfilled.⁴² Problems in the recruitment of school leaders generally, and headteachers specifically, have also occurred in a number of other OECD countries, including Australia and the USA, to name but two.⁴³ Such problems appear to be less acute in many Asian countries.
3. Reasons that have been given for the difficulty in recruiting headteachers in England include the burden of bureaucracy and high workload.⁴⁴ Further, there is a higher level of accountability for school heads, accountability that may not be mirrored further down the school amongst middle leaders and teachers themselves, providing a particularly challenging management environment. Certainly, some evidence has indicated that headteachers of poorly performing schools have a higher probability of being replaced.⁴⁵
4. More positively, and partly in response to these problems, there has been a trend towards the professionalisation of headteachers in England, with new professional qualifications being developed specifically for school heads, new standards articulated and the establishment of professional bodies such as the National College for School Leadership (now the National College for Teaching and Leadership).
5. Headteachers in England have had an increase in responsibility, particularly as many schools have become more autonomous and now carry out a range of tasks that were previously undertaken by local authorities (see Chapters 1 and 2). At the same time, headteacher pay has increased. Research evidence also indicates that headteacher pay is linked to the performance of their school and there is increasing variability in their pay.⁴⁶
6. Against this policy background and the significant challenges facing school leaders, we analyse TALIS 2013 with the aim of identifying the characteristics of current headteachers in England, their leadership styles, the barriers they face to their

⁴¹ Crowther et al. (2002) Day et al. (2011), Sammons et al. (2011), Barber et al. (2010), Brundrett and Crawford (2008), Muijs and Harris (2003).

⁴² Sprigade and Johnson (2012). On earlier recruiting difficulties, see National College for School Leadership (2008).

⁴³ Gronn and Rawlings-Sanaei (2003), Thomson et al. (2003).

⁴⁴ Hargreaves and Goodson (2006).

⁴⁵ Besley and Machin (2008).

⁴⁶ Besley and Machin (2008).

effectiveness and how these vary across the different types of schools found in England and described in Chapter 1. We also consider the extent of the professional development that headteachers are provided with to help them overcome the challenges they face. We largely focus on differences within England across different school types, though in places we also make international comparisons to provide context to the situation we are describing in England.

7. Our main questions are:

What are the qualifications of headteachers?

What are the leadership styles of headteachers?

How do school heads spend their working time?

What issues do heads view as barriers to their effectiveness?

How satisfied are headteachers with their jobs?

8. As noted already in Chapter 1, the sample size of 154 English schools and the corresponding number of headteachers is a modest one and caution is needed when investigating headteachers' responses to the survey. Specifically, trying to compare heads' responses across different school types within England is problematic due to small sample sizes. Despite this, we present data by school type, focusing on the distinction between maintained schools which report to the local authority, academies that are more autonomous and that are accountable directly to the Department for Education, and independent (private) schools. The latter are very few in number (just 10) in the TALIS sample and so particular caution is required when interpreting any analysis using this category.

3.1 What are the qualifications of headteachers?

9. The demographic characteristics of headteachers are discussed in more detail in Chapter 2. In summary, heads are more likely in England to be male (62% are men), and on average are slightly younger and have fewer years of experience than headteachers in other TALIS countries.

10. We also noted that that 11% of heads in the sample report having an executive headteacher above them and that 15% of heads say they lead two or more schools.

11. Headteachers in England are highly educated and headship is increasingly becoming a postgraduate profession. A very large majority of school heads in England (99%) have completed at least a Bachelor's degree, 48% have also achieved a qualification at Master's level and a further 2% have a PhD at the time of the survey – see Table 3.1. Given the small number of headteachers with qualifications at either of the

extremes of the education spectrum, for our analysis heads are grouped into two categories: those with a Bachelor's degree or below, and those with a higher degree (either a Master's degree or a PhD).

Table 3.1 Headteacher education by school type (percentage)

school type	highest level of formal education completed			
	no degree	Bachelor's	Master's	PhD
Maintained	0	55	45	1
Academy	2	49	44	5
Independent	0	38	62	0
All	1	49	48	2

Source: TALIS database

Note: figures do not always sum to 100 due to rounding.

12. There is no association between school type and headteachers' prior educational qualifications. The age of the head is also not associated with the level of educational qualifications that they have.
13. A lower proportion of headteachers in independent schools have completed teacher training qualifications (there is no legal requirement for them to do so). Consequently there is a modest association between completing teacher training prior to headship and school type. Only 60% of the heads of independent schools have qualified teacher status, compared to over 95% of heads of both academies and the maintained schools. The sample of independent schools is too small, however, to make any strong claims about heads' teacher training status.
14. A very high proportion (91%) of heads completed their initial teacher training before they became headteachers, with a further 5% completing it after they had started in their position or taking up their post while they were completing their teacher training.
15. A very high proportion of headteachers have postgraduate qualifications, obtaining higher degrees, the National Professional Qualification for Headship (NPQH), postgraduate qualifications in educational leadership and undertaking leadership training as part of their official qualifications.
16. The NPQH is a work-based qualification available for persons wishing to become school heads, although it is not a prerequisite for obtaining such a post. It can vary in duration from between 6 and 18 months, it comprises several mandatory and elective modules and always includes placements in schools. The mandatory modules include 'Leading and improving teaching', 'Leading an effective school', and 'Succeeding in headship', while the elective modules are chosen from a set of nine, all covering issues of strategic leadership, educational excellence and operational management. Completion of a Master's degree in educational leadership would exempt participants from certain non-mandatory aspects of the qualification.

17. 76% of all headteachers in the TALIS sample have achieved the NPQH, 87% of whom acquired it prior to beginning their current headship position, 10% acquired it after commencing their headship role and 3% started their current job while they were completing the NPQH.
18. There is an association between the type of school that headteachers are leading and their NPQH status, with significantly fewer independent school heads having achieved the qualification. Less than half (43%) of independent school headteachers in the sample have the NPQH, compared to 75% of academy heads and 93% of maintained school heads. This is not surprising given the fact that the NPQH used to be a mandatory prerequisite for accessing a headship position in maintained schools, which is no longer the case. Again we need to be cautious about low sample sizes when considering independent schools. Male and female heads are equally likely to have completed the NPQH. The likelihood of having the NPQH qualification also does not vary by the age of the headteacher.
19. A large proportion of headteachers have also completed either postgraduate degrees in education leadership or management, or leadership training programmes as part of their formal education. Close to half (46%) of heads have a postgraduate degree in education leadership or management. Two-thirds (66%) have undertaken instructional leadership or management training. These figures do not vary significantly across the three school types of maintained school, academy, and independent school.
20. Almost all heads (97%) report having participated in some form of professional development in the 12 months prior to the survey. Approximately 94% participated in professional development activities that consisted of courses, conferences or observational visits, while 79% also took part in programmes that were associated with a professional network, with mentoring or research activities. For the headteachers who had participated, the mean reported duration of training course and observation-based professional development activities is around 5 days; the mean duration for activities associated with network or research activities is 6½ days.
21. 26% of headteachers report engaging in other types of professional development activities, with a mean duration of 4 days.
22. Participation in continuing professional development (CPD) does not vary by school type or by the level of deprivation of the school. However, there are some differences in the extent of professional development of headteachers with respect to the schools' performance at Key Stage 4. Schools in the second quartile of GCSE attainment have heads that take part in fewer professional development programmes as compared to any other quartile. However, generally there is no clear relationship between participating in CPD and higher pupil achievement.
23. Across all schools, heads report a conflict between finding time for CPD and normal work commitments. Headteachers who feel more strongly that there is little incentive

to participate in professional development activities tend to dedicate less time to them, perhaps unsurprisingly.

24. School heads in England appear to engage in CPD to a much larger extent than those in many other countries. Across all the TALIS countries, 84% of heads had participated in a course or conference (a minimum of 54% in France and maximum of 99% in Singapore), which compares with 94% in England. And only 52% had engaged in professional network-based activities (ranging from 11% in Portugal to 90% in Singapore), England again comparing favourably at 79%.

3.2 What are the leadership styles of headteachers?

25. TALIS collected data on headteachers' leadership styles, an issue which we have noted earlier is of interest to academics and policymakers alike.⁴⁷ In particular, heads were asked about the extent to which responsibility in their school for specific named issues is shared among different individuals or bodies. Robust empirical evidence suggests that the impact of distributed leadership on schools' capacity to improve, as well as on student learning, is positive. More generally, however, the evidence on the effectiveness of leadership for improving students' academic outcomes is less definitive and would suggest relatively small, indirect effects.⁴⁸ In this section we analyse heads' responses to the questions concerned (the same information forms the basis for our analysis of school autonomy in Chapter 2).

26. Distributed leadership is a set of leadership practices that centre on interactions with other leaders, teachers, parents and students in the school. These practices are characterised by collaborative decision making patterns, an emphasis on school governance that empowers staff and students and a notion of shared accountability.⁴⁹ Headteachers in TALIS were asked to respond to questions regarding the manner in which responsibilities for a variety of issues (from teacher hiring to determining course content) were allocated within their school. They were also asked about the composition of their senior management team. We analyse these data to determine the extent of distributed leadership in the school.

27. We consider responses of heads in England to the individual items asked in relation to distributed leadership, as compared to high and low performing countries defined in Chapter 1 – see Table 3.2. It is striking that a much higher proportion of school leaders in England claim a shared responsibility for establishing teachers' salaries, 51%, compared to the averages for high performer and low performer countries (11 and 12% respectively), and none in Flanders and only 1% in Korea and Alberta (not shown in the table). A very similar situation is found in relation to sharing the

⁴⁷ See also Gronn (2000), Woods et al. (2004).

⁴⁸ Heck and Hallinger (2010), Day and Sammons (2013).

⁴⁹ OECD (2013).

responsibility for increasing teachers' salaries: 61% of heads claim they do this in England, compared to 18% on average in high performing countries and 13% on average in low performing ones. See also the discussion of Table 2.4 in Chapter 2.

Table 3.2 Percentage of headteachers who report a shared responsibility for different tasks: international comparison

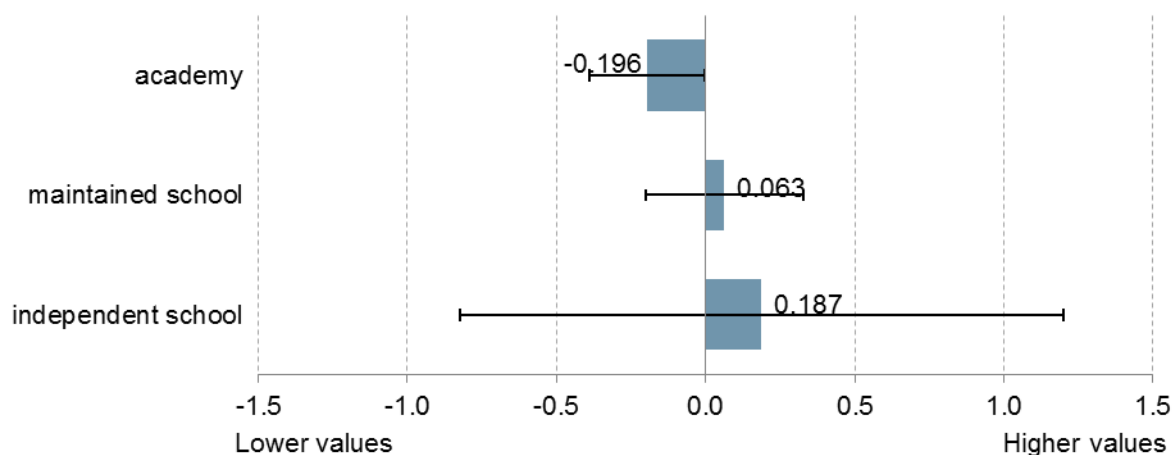
Activity	Eng	H9	Fin	Fla	Sng	L8	All
Deciding which courses are offered	66	61	60	66	76	34	52
Establishing student disciplinary policies and procedures	73	60	58	65	84	48	61
Deciding on budget allocations within the school	74	50	37	61	70	32	47
Establishing student assessment policies, including national/regional assessments	68	56	43	69	81	35	52
Appointing or hiring teachers	66	41	40	33	37	29	39
Choosing which learning materials are used	34	39	48	34	40	39	45
Determining course content, including national/regional curricula	41	33	35	8	41	23	35
Determining teachers' salary increases	61	18	14	0	15	13	18
Approving students for admission to the school	50	43	26	49	66	34	37
Dismissing or suspending teachers from employment	55	30	23	40	32	24	30
Establishing teachers' starting salaries, including setting pay scales	51	11	6	0	6	12	14

Source: OECD (2014) Table 3.4

Note: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries; Eng = England, Fin = Finland, Fla = Flanders, Sng = Singapore. Japan is not included in the calculations because the response options differ to the other countries: there is no option for 'school boards' to have a responsibility for these actions.

28. The overall degree of distributed leadership in the school is captured by a scale, calculated by OECD separately for each country or sub-national entity, including England. (The OECD advice is that the values of these scales cannot be compared across countries.) We standardised the values of the scale for England and, accounting for the study design, this produces a mean of zero and a standard deviation of one. Negative values therefore indicate a below average level of distributed leadership and positive values an above average level. The index captures the overall degree to which school heads share their responsibilities within their institution (whether or not this is their choice or it is required of them). As measured in this manner, the average degree of distributed leadership does not vary significantly between the different types of schools – see Figure 3.1. The differences in the mean values are small and the margins of error (indicated by the black lines running through the bars) are wide.

Figure 3.1 Index of distributed leadership, by school type (average values)



Source: TALIS database

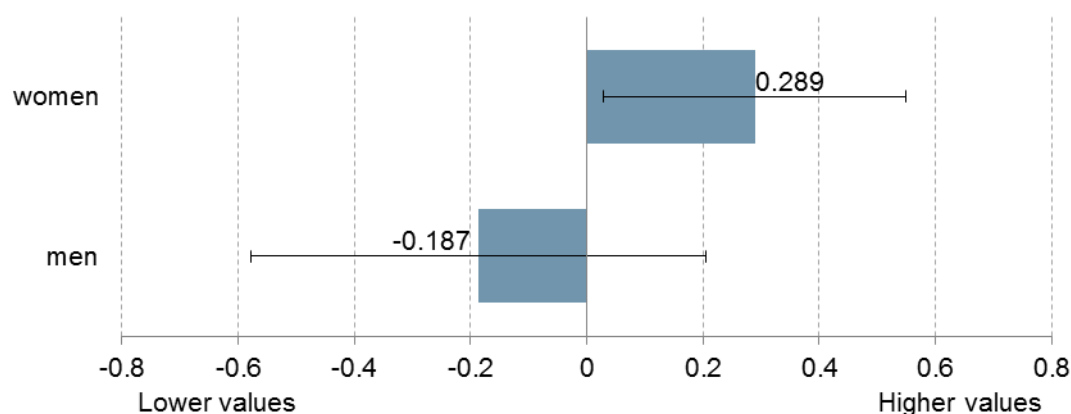
Note: the graph shows average values of an index of distributed leadership which across all headteachers has a mean of zero and a standard deviation of one. The horizontal lines through each bar represent 95% confidence intervals.

29. We also examined the extent of distributed leadership in schools with different pupil intakes. Specifically we measured the socioeconomic profile of a school's intake by the proportion of pupils who are eligible for Free School Meals (FSM). Independent schools were not part of this analysis, as data referring to their students' FSM eligibility was not available (eligibility will typically be zero). There is a significant difference between the top and bottom FSM quartiles of schools: headteachers in the quartile of schools with the highest proportion of FSM-eligible pupils scored higher on average on the degree of distributed leadership when compared with heads at the opposite end of the continuum (a difference of about 0.7 of a standard deviation – a non-trivial difference). The averages of the distributed leadership index for the intervening FSM quartiles were not significantly different from that for the most deprived quartile. This finding suggests that more deprived state-funded schools tend to have headteachers who have a more distributed leadership style.

30. About 1 in 5 headteachers in England reported that the lack of shared leadership with other school staff represented a barrier to their effectiveness to a moderate or large extent. Although a significant proportion, it was much smaller than the average across all countries participating in TALIS of 33%.

31. Headteachers who are women score more highly on average on the index of distributed leadership than heads who are men. The difference is statistically significant and is about a half of a standard deviation – see Figure 3.2.

Figure 3.2 Index of distributed leadership, by gender (average values)



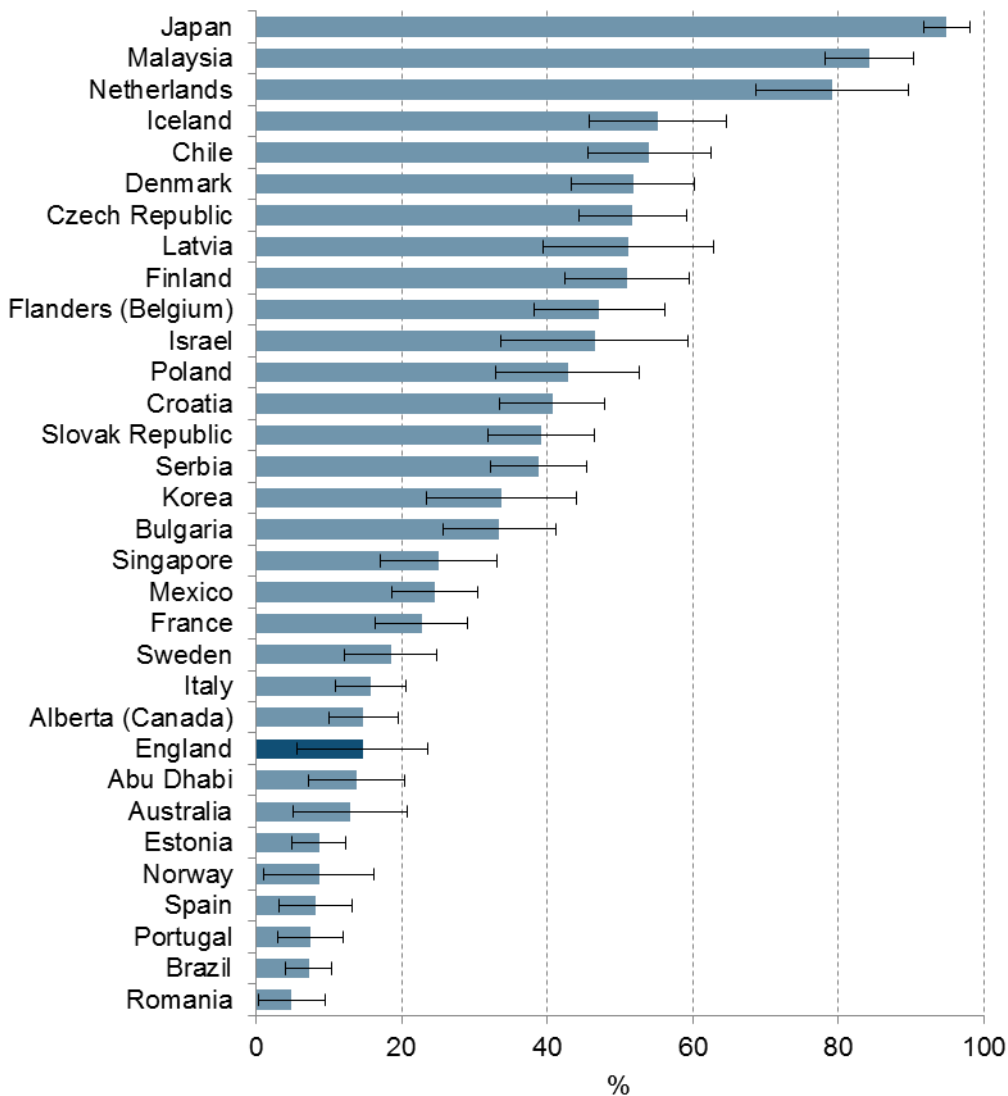
Source: TALIS database

Note: the graph shows average values of an index of distributed leadership which across all headteachers has a mean of zero and a standard deviation of one. The horizontal lines through each bar represent 95% confidence intervals.

32. There is also an interesting pattern of distributed leadership in relation to the make-up of the senior management team (SMT), whereby schools that have teachers on the SMT have significantly higher levels of distributed leadership than those which do not (with a difference of about 0.7 of a standard deviation). This is perhaps unsurprising given that the principle of distributed leadership is that responsibility and leadership is shared amongst staff. But it does provide corroborating evidence that when school heads claim to be exercising distributed leadership this does translate into greater teacher representation in management.
33. When asked about their SMTs, a very large proportion of headteachers in all types of schools in England agree or strongly agree that they are being supported by an effective SMT: 95% do so in maintained schools, 94% in academies and 85% in independent schools, with no statistically significant differences.
34. The quality of schools, as determined by Ofsted, is another factor associated with the level of distributed leadership in schools. There are significant differences across all Ofsted rankings of schools in the degree of distributed leadership. 'Outstanding' schools have the highest level of distributed leadership, followed by schools judged as 'good' or 'satisfactory' (each at a difference of 0.65 of a standard deviation from outstanding schools), and 'inadequate' schools significantly lower than all other types (at a difference of almost 1.5 standard deviations to outstanding schools – we note again the small number of inadequate schools in the sample). This might of course be tautological if Ofsted look for evidence of distributed leadership as one criterion contributing to a better quality grade. The current Ofsted inspection framework does not explicitly mention distributed leadership as a criterion for judgement, focusing

instead on leadership that aims to improve teaching, of all those in positions of leadership in the school.⁵⁰

Figure 3.3 Percentage of headteachers agreeing or strongly agreeing that they make important decisions on their own: international comparison



Source: TALIS database

Note: The horizontal lines through each bar represent 95% confidence intervals.

35. At the opposite end of the spectrum to distributed leadership, TALIS asked headteachers whether they agreed with the following statement:

'I make the important decisions on my own'

Overall, 28% of heads in England 'strongly disagreed' that they did and a further 58% 'disagreed' – leaving only 1 in 7 (14%) agreeing or strongly agreeing with the statement. When looking across school types, 12% of heads of academies and

⁵⁰ Ofsted (2014).

maintained schools agreed or strongly agreed, compared to 22% in independent schools. However, this difference between state-funded and independent schools is not statistically significant, meaning it may be due to chance in the sampling process for the survey. Nor are the differences in replies statistically significant across heads classified by the level of schools' Free School Meal eligibility or pupil outcomes at either Key Stage 2 or Key Stage 4. We would therefore conclude that there are insignificant differences across school types.

36. Across countries, headteachers' responses to this question varied a great deal – see Figure 3.3. At one extreme, only 5% of heads in Romania, 7% in Brazil, and 8% in Portugal agreed or strongly agreed that they make the important decisions on their own. At the other extreme, 79% in the Netherlands, 84% in Malaysia, and 95% in Japan did so. The median value for the nine high performing countries is 34% (in Korea), which is very close to the mean for all countries (35%) and well above the figure of 14% in England noted above. Judged on responses to this one question alone, England would seem to have a reasonably high degree of distributed leadership by international standards: that is, a relatively low proportion of heads saying they take the major decisions alone.⁵¹ At first sight, this might appear to contrast with the evidence given in Chapter 2 that school autonomy in England is very high by international standards. But the two findings are not necessarily incompatible: heads who share their decision making may do so with structures and people within the schools, for instance with their senior management teams or with teachers.
37. TALIS also collected information on the extent of instructional leadership by the headteacher. This was measured by the frequency with which heads engaged in activities geared towards the promotion of student learning by means of focusing on quality teaching, developing school-wide cultures of learning for both students and teachers (via professional development) and providing instructional feedback to teachers. Heads were asked a series of questions relating to such activities. Table 3.3 compares answers given in England with those in other countries, showing the percentage of heads who say they 'often' or 'very often' engage in different activities.
38. A large proportion of English heads engage in classroom observation: close to 80%. This is well above the average for high performing countries (43%), although there is great variation within the group as illustrated by the values for the four individual countries in the table. The figure for England is also well above the average for all countries in TALIS (49%), but is almost the same as the average for the low performers. At the other extreme, only 18% of heads in England report often or very often dealing with timetabling issues, higher than only Japan (at 9%) and much lower than average both for all countries (46%) and the high performers (34%). Among the latter, Finland is an outlier at 76%. The variation among the high performers illustrates that heads in different countries choose to allocate their time in different ways. Heads

⁵¹ It is impossible to know whether cultural differences may affect responses, independently of the true situation.

in England, as in Japan, appear typically to leave solving problems with the timetable to colleagues and spend their time on other matters.

Table 3.3 Percentage of headteachers who report engaging in different activities ‘often’ or ‘very often’: international comparison

Activity	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Take action to ensure that teachers feel responsible for students' learning outcomes	83	68	44	57	33	91	91	76
Observe instruction in the classroom	78	43	11	21	67	59	77	49
Take action to ensure that teachers take responsibility for improving their teaching skills	75	62	40	42	39	84	85	69
Provide parents or guardians with information on the school and student performance	71	59	25	43	51	68	87	66
Take action to support co-operation among teachers to develop new teaching practices	61	54	57	37	34	66	82	64
Collaborate with headteachers from other schools	58	65	82	64	55	36	66	62
Check for mistakes and errors in school administrative procedures and reports	41	49	46	34	37	69	87	61
Collaborate with teachers to solve classroom discipline problems	40	54	70	54	33	64	83	68
Resolve problems with the lesson timetable in the school	18	34	76	34	9	33	71	47

Source: OECD (2014) Table 3.2

The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

39. In addition to within-school collaboration and the distribution of leadership, in England TALIS also asked headteachers to report on the extent to which they were involved in school-level partnerships and collaboration. There are interesting differences as well as similarities between the three types of schools present in the sample. Overall, 98% of academy heads and 94% of maintained school heads reported working in partnership with another school (by answering with ‘agree’ or ‘strongly agree’ to the relevant questionnaire item); 78% of independent school heads provided the same answers, a lower, but not statistically significantly different proportion. Mirroring this were answers concerning whether school partnerships were a waste of time: none of the questioned headteachers strongly agreed, but while only 2% of academy and 3% of maintained school heads thought so, 15% of independent school headteachers agreed that they were a waste of time.

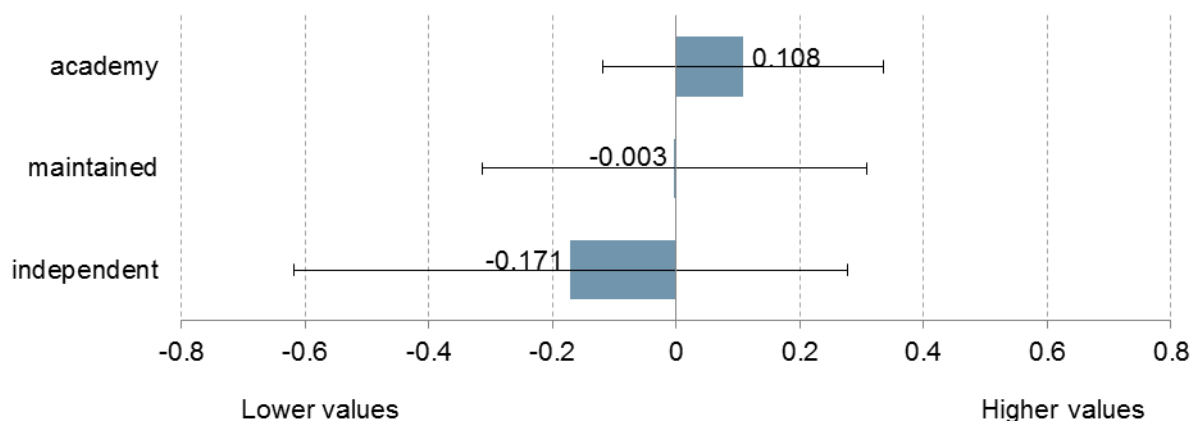
40. When asked about whether partnerships are an important driver of their school’s success, academy and maintained school headteachers agreed or strongly agreed in 69% and 75% of cases respectively, with only 51% of independent school heads doing the same. Of the total, about a fifth of both academy and maintained school heads strongly agreed.

41. Lastly on this issue, headteachers were asked whether schools which were failing should be required to join an academy chain. Interestingly, the highest proportion of

headteachers who agreed came from independent schools (38%, though none strongly agreed), while 24% of academies and 6% of maintained school headteachers agreed or strongly agreed to the conversion to academy status (all differences statistically significant).

42. On the whole, the results indicate a more negative perspective on school partnerships by independent school headteachers and more positive views from academy and maintained school heads, although the small sample of independent heads should again be noted.
43. Similarly to distributed leadership, a scale was also constructed for instructional leadership, based on items in Table 3.3. We again standardised this for England to give a mean of zero and a standard deviation of one. (And again, the values of this scale cannot be compared across countries.)

Figure 3.4 Index of instructional leadership, by school type (average values)



Source: TALIS database

Note: the graph shows average values of an index of instructional leadership which across all headteachers has a mean of zero and a standard deviation of one. The horizontal lines through each bar represent 95% confidence intervals.

44. The average level of instructional leadership by headteachers, as measured by the standardised scale, does not vary significantly across different types of schools, nor between schools with different proportions of students eligible for Free School Meals, nor between schools with different Ofsted ratings – see Figure 3.4. Nor were there differences in headteachers' instructional leadership score if they had completed an instructional leadership training programme as part of their formal education, nor if they had achieved a postgraduate qualification in educational leadership or management.

3.3 How do school heads spend their working time?

45. Workload is another key issue with respect to headteachers. TALIS collected data on how headteachers divide their time (in their role as a headteacher) over the school year, but not on the number of hours worked.⁵² (On the latter, see the results of the Teachers' Workload Diary survey for 2013 referred to in Chapter 2, which included a sample of secondary school headteachers – heads reported an average of over 60 hours a week.)

46. On average, headteachers in England say they spend 43% of their time engaged in administrative and leadership tasks and meetings, with little variation by the type of school they are leading – see Table 3.4. This includes meetings on a series of issues, ranging from human resourcing to budgeting, timetable preparation, as well as other leadership and management activities.

Table 3.4 Headteachers' allocation of working time (percentage of total), by school type

Activity	academy	maintained	independent	all
Administration/leadership	42	45	39	43
Teaching/curriculum	24	22	15	21
Student interactions	15	14	20	16
Parent interactions	9	9	13	10
Community interactions	6	7	5	6
Other	4	3	7	4
Total	100	100	100	100

Source: TALIS database

Note. figures may not sum to 100 due to rounding.

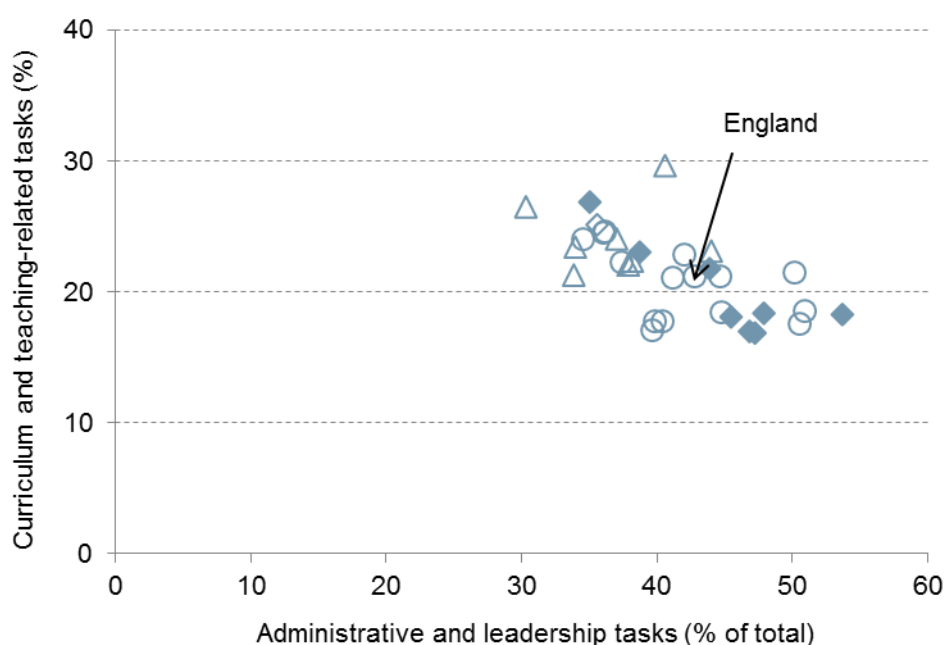
47. On average, a further 21% of heads' time is reported as spent in meetings and activities that relate to teaching and the curriculum, including the professional development of teachers, observing classrooms or undertaking student evaluations. Independent school heads dedicate significantly less time to such activities – about 15% of their time.

48. Headteachers also devote, on average, 16% of their time to student interactions and a further 10% to interactions with parents and guardians. Heads of publicly-funded schools are similar with regards to these activities, but headteachers of independent schools report spending larger proportions of their time interacting with students (20%) and parents and guardians (13%) – a third of their time throughout the year, taking the two together, compared to about a quarter for heads of academies and maintained schools.

⁵² The data are of unknown quality and the questionnaire notes that 'rough estimates are sufficient'.

49. Interacting with the local and regional community, businesses and industry takes up a further 6% of heads' time, on average. Headteachers in schools with a high proportion of children eligible for Free School Meals spend the most time in this type of activity (up to 8% of their time).
50. Importantly, the pupil intake of the school, as measured by Key Stage 2 test scores, and the performance of the school, as measured by Key Stage 4 scores, does not vary systematically with how headteachers spend their time – there is no simple association between either pupil intake or school performance and the heads' work patterns.

Figure 3.5 Percentage of headteachers' time spent on (i) curriculum and teaching-related tasks and (ii) administrative and leadership tasks: international comparison



Source: OECD (2014) Table 3.1

Note: The nine high performing countries and the eight low performing countries (see Table 1.2) are indicated by solid diamonds and open triangles respectively.

51. The average division of working time in England closely matches the average across all TALIS countries, as well as that in specific countries (such as Singapore, France, and Norway). Figure 3.5 plots the average percentages of time that heads report spending on the two most time-consuming activities: 'curriculum and teaching-related tasks and meetings' (on the vertical axis) and 'administrative and leadership tasks and meetings' (on the horizontal axis). For the former, the figures for the nine high-performing countries range from 35% in Japan and 36% in Korea to 54% in the Netherlands. The relationship between the two sets of figures slopes downwards – more time spent on one tends to mean less on the other.

3.4 What issues do heads view as barriers to their effectiveness?

52. There are several aspects of the school environment and features of the job which headteachers report constituting barriers to their effectiveness ‘to some extent’ or ‘a lot’:

- 79% cite government regulation and policy as a barrier;
- 78% highlight inadequate school budget and resources;
- 68% indicate that their high workload and level of responsibilities is a problem.
- 49% view teachers’ absences as a barrier to their effectiveness.

Figure 3.6 shows how heads’ views in England compare with those in other countries on the first two of these issues: government regulation and policy (on the vertical axis) and an inadequate school budget and resources (on the horizontal axis). The figures refer again to the percentages giving the answer ‘to some extent’ or ‘a lot’.

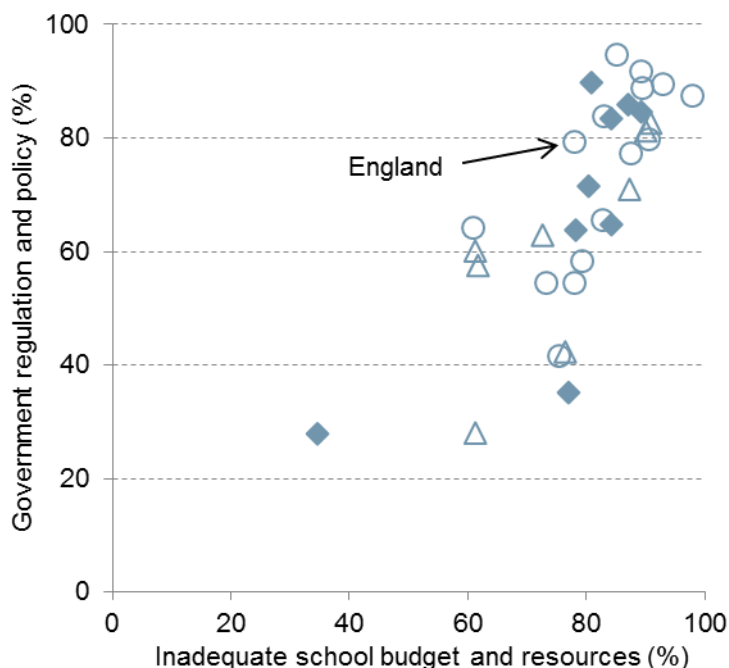
53. Concern about government regulation as a barrier to effectiveness is higher among headteachers in England than among heads in a substantial number of other countries. On average, 69% of headteachers in TALIS countries report that government regulations represent an important limitation to their effectiveness: 10 percentage points less than in England.⁵³ Countries with higher percentages than England include four of the group of nine high performing countries – Estonia, Flanders, Korea and the Netherlands – but the general pattern is that high performers are found everywhere in the diagram (solid diamond symbols). By contrast, the figure in England for concern about the school budget and resources is very close to the average for all countries (80%). The two high performers at the bottom of the graph with relatively low levels of concern about government action are Singapore on the left, where there is also much less concern about resources, and Finland on the right.

54. 68% of headteachers in England report that the high workload their job entails, together with its responsibilities, represents a moderate or strong barrier to their effectiveness. This mirrors international evidence: on average, across all TALIS countries, 72% of heads noted this same issue.

55. There is no difference in England between headteachers of maintained schools, academies, and independent schools with regards to how strongly they feel their workload and level of responsibilities impact on their effectiveness. But while only 39% of heads of independent schools feel that government regulations and policy are a barrier (either ‘to some extent’ or ‘a lot’), 85% of academy heads and 95% of maintained school heads report this.

⁵³ The difference between the figure for England and those for countries with lower values is statistically significant at the 5% level in 10 cases.

Figure 3.6 Percentage of headteachers reporting (i) government regulation and policy and (ii) an inadequate school budget and resources are barriers to their effectiveness ‘to some extent’ or ‘a lot’: international comparison



Source: OECD (2014) Table 3.24.Web

Note: The nine high performing countries and the eight low performing countries (see Table 1.2) are indicated by solid diamonds and open triangles respectively.

56. Lack of resource is much more keenly felt by heads in maintained schools (90%) and academies (85%) than by those in independent schools (43%). And, underlining this difference, whilst a third of heads in both the maintained schools and academies say that inadequate school budget and resources limits their effectiveness ‘a lot’, no independent school head believes this.

57. Interestingly, an inadequate school budget is seen as less of a limit to headteachers’ effectiveness in schools with pupils from more deprived family backgrounds. Only 66% of heads in schools in the top quartile of Free School Meals receipt report resources as a barrier (‘to some extent’ or ‘a lot’) compared to 90% or more in each of the other quartiles. This is consistent with compensatory financing models, which provide more deprived schools with additional funding.

58. With regards to aspects of the job that do not appear to limit their effectiveness, only a small proportion of heads in England identify the following issues as being problematic (in the first two cases no head gives the response ‘a lot’):

- the lack of professional development opportunities for themselves – 9%;
- the lack of professional development opportunities for teachers – 14%;

- the lack of shared leadership with other school staff members – 18%.

59. Professional development opportunities appear to have been addressed in England to a much greater extent than in other countries participating in TALIS. With respect to headteachers' own professional development, on average 30% of heads in all TALIS countries report the lack of such opportunities as problematic, far more than the 9% in England. Similarly, heads' responses also highlight that teachers' professional development is a significantly less acute issue in England than elsewhere, with 42% of heads on average seeing it as a barrier to their effectiveness, compared to the 14% in England. Chapter 4 considers the information on professional development reported by teachers in TALIS and gives a consistent picture.

60. Focusing on heads' views in England about limitations to their school's capacity to provide quality instruction, they report the following issues as being particularly problematic (see also the discussion of staff resources in Chapter 2):

- 43% report that the shortage of qualified staff or high performing teachers affects their school to some extent or a lot;
- 26% report that the shortage of teachers with competence in teaching students with special needs has this effect.

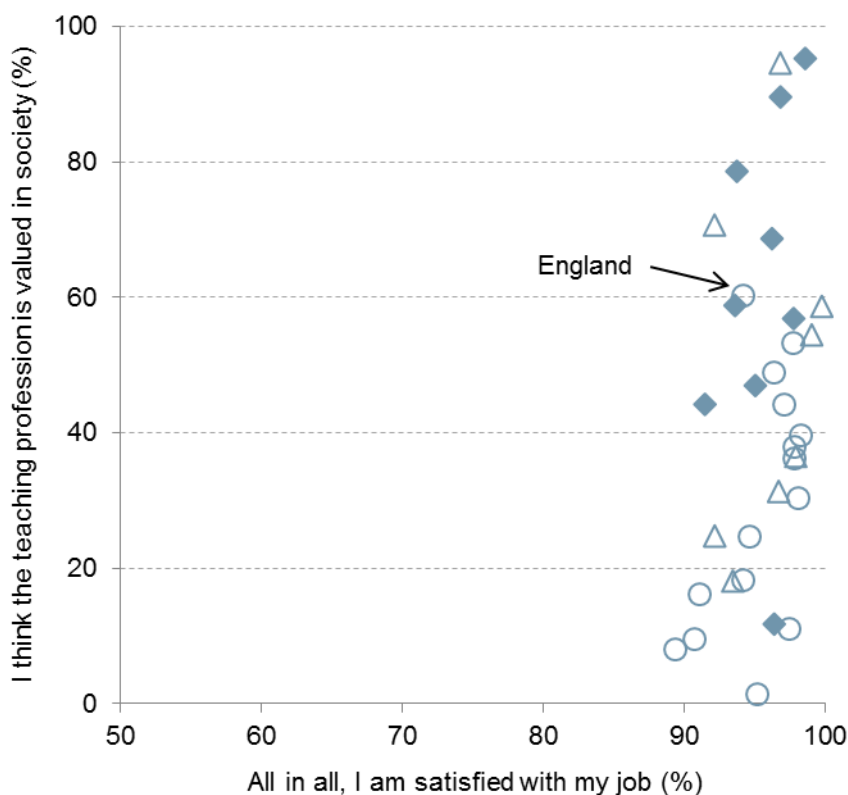
61. There are potential barriers to their effectiveness that headteachers view as important in England but that are not seen as important by heads in other TALIS countries, and vice versa.

- Teacher absences are seen as a barrier by 49% of heads in England but on average by only 37% of headteachers in all TALIS countries;
- The lack of parent or guardian involvement and support is reported as problematic by 38% of heads in England but on average across all countries by 50% of heads.

3.5 How satisfied are headteachers with their jobs?

62. Headteachers were asked their opinions on nine statements aimed at soliciting their views on how they felt about their jobs. Figure 3.7 compares responses for two of them across all countries in TALIS, plotting the percentages strongly agreeing with the statements 'All in all, I am satisfied with my job' (on the horizontal axis) and 'I think the teaching profession is valued in society' (on the vertical axis). (Exceptionally, we scale the axes differently, the horizontal axis running from 50-100% and the vertical axis from 0-100%.)

Figure 3.7 Percentage of headteachers agreeing or strongly agreeing that (i) ‘the teaching profession is valued in society’ and (ii) ‘I am satisfied with my job’: international comparison



Source: OECD (2014) Table 3.26.Web

Note: The nine high performing countries and the eight low performing countries (see Table 1.2) are indicated by solid diamonds and open triangles respectively.

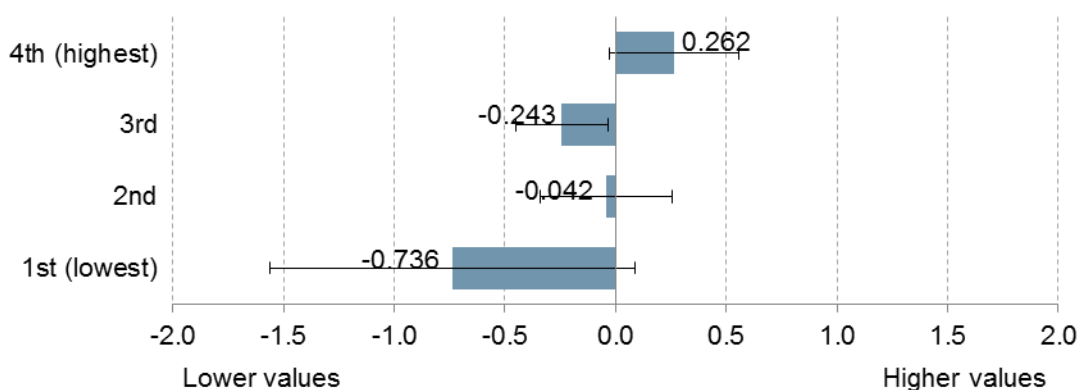
63. Almost all headteachers in England (94%) agreed or strongly agreed that they were satisfied with their job. The figure for England is very close to the average for all countries (95%). In fact there is little variation – the lowest figure is as high as 89% (for Italy).
64. There is a lot more variation between countries in the percentage of headteachers believing that society values the teaching profession as measured by agreement or strong agreement with the statement given above. The average across all countries is 44%, with 60% of heads in England responding in that manner.⁵⁴ The highest figure reported is for Singapore (95%). At the other end of the spectrum, only 2% of headteachers in the Slovak Republic agreed or strongly agreed that society values the teaching profession (the high performer at the bottom of the graph, on 12%, is Estonia). In Chapter 6 we compare the responses given by teachers to the same

⁵⁴ In no country did the majority of heads strongly agree that the teaching profession is valued, although 49% of heads in Korea and 39% in Singapore did so. The figure for England is 7%.

statement on society's valuation of the profession – headteachers are more positive than teachers (see Figure 6.10).

65. The OECD constructed scales for each country from headteachers' reactions to the nine statements put to them on job satisfaction. We standardised the values for England to give a mean of zero and a standard deviation of one. Based on analysis of this scale, we conclude that by and large headteachers' average levels of job satisfaction do not vary by gender, by type of school, nor by the level of deprivation among the school's pupils (measured by Free School Meals receipt).
66. Heads' job satisfaction levels do not vary by the school's pupil intake, as measured by Key Stage 2 test scores (this analysis does not include independent schools). Average job satisfaction does vary by school performance in terms of Key Stage 4 outcomes – see Figure 3.8. Headteachers leading schools with higher achieving pupils (top quartile) have above average levels of job satisfaction. Heads of schools with lower-achieving pupils (bottom quartile) have levels of job satisfaction that are well below average but the margin of error is large, reflecting the variation in job satisfaction among this group of heads. The difference between the average values in the top and bottom quartiles is not small – about one standard deviation – but the margins of error around the figures are sizeable.

Figure 3.8 Index of headteachers' job satisfaction, by Key Stage 4 quartile of school (average values)



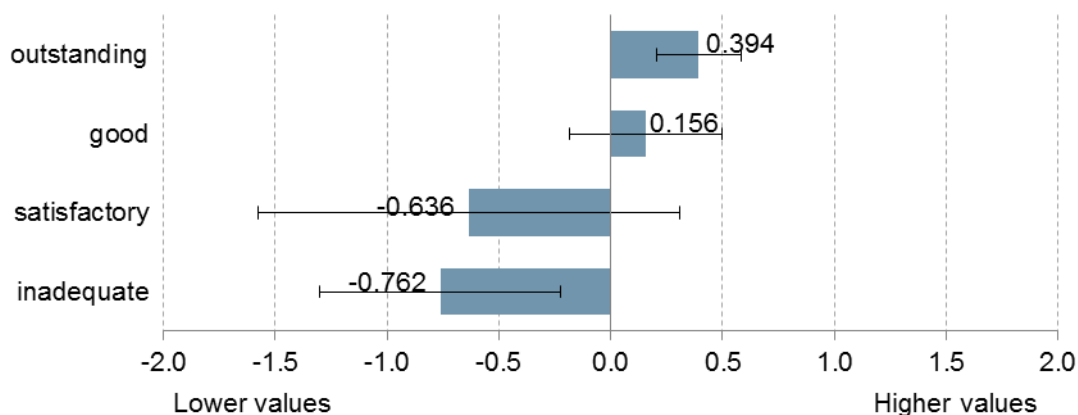
Source: TALIS database

Note: the graph shows average values of an index of headteachers' job satisfaction which across all headteachers has a mean of zero and a standard deviation of one. The horizontal lines through each bar represent 95% confidence intervals.

67. Perhaps unsurprisingly, the quality of schools, as judged by Ofsted, is also a factor associated with variation in headteachers' job satisfaction – see Figure 3.9. Average job satisfaction levels are higher for heads in 'outstanding' and 'good' schools, while heads of schools assessed as 'satisfactory' or 'inadequate' are significantly less satisfied. The very small number of 'inadequate' schools in the TALIS sample should

however be noted and the margins of error for the average satisfaction levels are large for both these and the 'satisfactory' schools.

Figure 3.9 Index of headteachers' job satisfaction, by Ofsted rating of school (average values)



Source: TALIS database

Note: the graph shows average values of an index of headteachers' job satisfaction which across all headteachers has a mean of zero and a standard deviation of one. The horizontal lines through each bar represent 95% confidence intervals.

68. In England (only), headteachers were also asked to report on a series of issues that may have an impact on how they feel about their profession. Table 3.5 shows the percentage of heads who responded with 'agree' or 'strongly agree' to each of 18 statements put to them. In terms of issues which are potentially problematic, the heads' views on teacher turnover are the most striking: only 6% of headteachers agree or strongly agree that it is very high in their school. Concerns about lack of autonomy are expressed by only about a fifth of heads, consistent with the picture of high school autonomy that emerges in Chapter 2.

69. A half of heads think that headteachers are underpaid compared to leaders in other professions, but 70% think their own pay is fair given their performance. Chapter 6 reports on teacher responses in England to analogous statements – a notably higher percentage of teachers think that teachers are underpaid as a profession and a notably lower percentage of them think their own pay is fair given their performance.

70. Almost all heads state that parents are supportive of their leadership and staff and all of them report that teachers are supportive of their leadership. Alongside the fact that heads say they are supported by an effective school management team (96%), these results appear to be suggestive of a very supportive working environment for headteachers.

Table 3.5 Percentage of headteachers who agree or strongly agree with different statements about their jobs

Statement	%
Teacher turnover at this school is very high	6
The accountability system does not add significantly to the pressure of the job	12
The accountability system does not add significantly to my workload	18
I do not have the autonomy I need to do a good job	21
My workload is unmanageable	36
I am able to financially reward teaching staff who perform well	42
Headteachers are underpaid compared to leaders in other professions	52
It is difficult to dismiss staff members with poor teaching skills	69
My own pay is fair given my performance	71
I have good opportunities to further progress my career should I wish to do so	77
I know where to go to seek support from a national or local education leader	80
I get the support/guidance I need to help me do my job	84
School's performance management system enables me to improve teacher quality	84
Teaching in this school is generally very good	88
I am supported by an effective school management team	96
On the whole, parents are supportive of my school's leadership and staff	96
The students in this school are generally well behaved	99
On the whole, teachers are supportive of my leadership	100

Source: TALIS database

3.6 Summary

71. In this chapter we considered the characteristics of headteachers, their leadership styles, how they spend their time and the extent of their job satisfaction.
72. Headship is increasingly a postgraduate profession. This is consistent with the professionalization of headteachers in England, particularly as their autonomy has increased with the introduction of new school types such as academies (see Chapter 1). Whilst there is no clear link between obtaining postgraduate qualifications and teacher or indeed headteacher performance, it may be that the esteem of teaching and headteaching will be enhanced by the move to a postgraduate profession.
73. The TALIS data also enable us to examine headteachers' leadership styles. Internationally, England is a relative outlier in terms of the high proportion of headteachers using distributed leadership styles and sharing important decision-making with others in their schools. Interestingly, distributed leadership is not systematically more widespread in high performing TALIS countries. There is therefore no clear relationship in the TALIS data between the performance of an education system and the extent of distributed leadership. That said, within England we found a greater degree of distributed leadership in schools ranked highly by

Ofsted. This may of course be because Ofsted are looking for evidence of distributed leadership and rank schools that exhibit it more highly.

74. We also found that headteachers in more deprived schools have higher levels of distributed leadership and, perhaps surprisingly, are less likely to find a lack of resources to be a barrier to their effectiveness. Both these findings may reflect the large investment that has been made during recent decades in the more deprived urban schools in England. This investment may have resulted not only in fewer resource constraints for deprived schools but also making such schools attractive to effective headteachers who are more likely to have a distributed leadership style.
75. In terms of what headteachers actually do, average working patterns in England as regards division of time across different activities are very similar to the average for all TALIS countries. And there is little variation in average patterns across types of school within England. England stands out, however, in terms of the barriers to effectiveness which headteachers identify, with government regulation emerging as an important one, significantly more so than in a range of other countries. This finding may appear contradictory. English headteachers clearly have more autonomy than heads in many other countries and yet they also are more likely to identify excessive government regulation as a barrier. This may be because England has adopted a quasi-market approach with increased autonomy and competition between schools alongside a relatively high degree of regulation (for example from Ofsted) to temper any negative impacts from the market. The effect may produce the results we see in the data.
76. Lastly, headteachers' job satisfaction levels in England are related to school performance, although the relationship is not that strong.

Chapter 4 Professional development

- Induction and mentoring programmes are universal in schools in England but not in many other countries in TALIS. Three-quarters of teachers in England say they actually had an induction programme in their first regular teaching job compared to only half of teachers, on average, elsewhere.
- Participation in continuing professional development (CPD) is very high in England – 92% of teachers in the 12 months prior to the survey – and the same is true in most other countries. Finland and Japan have the lowest figures among high performing countries (79% and 83%). Fewer teachers in England report paying for CPD than in any other country.
- While teachers' participation in CPD in England is high, the average number of training days is relatively low by international standards.
- 50% of teachers in England report 'effective' training over the previous year in their subject fields: CPD with a moderate or large impact on teaching. This is a low figure by TALIS standards – the average is 71% for high performing countries. Low numbers of teachers in England report effective CPD in ICT skills for teaching – 25% compared to 40% on average for high performers.
- The need expressed for more CPD by teachers in England is notably low by international standards. But 1 in 3 teachers report a moderate or high need for more training in ICT skills and in teaching students with special needs. 1 in 4 teachers expresses a need for training in mentoring/coaching peers.
- 60% of teachers in England believe that work schedules represent a barrier to undertaking CPD. About a half of teachers, whether men or women, with children aged 0-4 report a lack time due to their family responsibilities.
- Induction, participation in CPD, and 'effective' training is less frequent for teachers in independent schools in England. Among teachers in the state-funded sector, 'effective' training is higher on average in schools with lower ability intakes and higher percentages of pupils receiving Free School Meals.

1. This chapter investigates the continuing professional development (CPD) undertaken by teachers and some of the support that is offered by schools to help teachers further their skills. These matters have received considerable attention in England from both policy makers and researchers in the last 10-15 years and there is a range of existing survey evidence on teachers' professional development.⁵⁵ TALIS provides the international dimension, allowing the situation to be compared with that in other countries. The content of the TALIS questionnaire also means that the survey provides new evidence on several issues for England.

2. We address five questions:

Are induction and mentoring programmes universal?

How much (and what) CPD is undertaken by teachers?

Is the CPD undertaken seen by teachers as effective?

Do teachers perceive much need for more CPD?

What are seen as the barriers to more training?

The chapter does not consider the CPD of headteachers, which was covered briefly in Chapter 3.

4.1 Are induction and mentoring programmes universal?

3. For induction, the answer to this question for England is a clear 'yes': Table 4.1 shows that 99% of teachers work in schools where the head reports that there is an induction programme, either for all new teachers to the school (which is almost always the case in England) or just for teachers who are new to teaching. In part, this situation reflects the legal requirement that 'statutory induction' for teachers takes place in Local Authority maintained schools. By contrast, near universal provision is far from being the case in many other countries. On average across all countries in TALIS, 1 in 3 teachers is not in a school where there is an induction programme.

4. Induction is the initial step in developing staff when they join a school, especially newly trained staff. The universal provision in England reported by heads does not mean that all teachers in TALIS report actually having taken part in an induction programme. The second row in Table 4.1 shows that three-quarters of teachers in England say they had an induction programme in their first regular employment as a teacher, compared to about a half on average in other countries.

⁵⁵ For example, see the sample surveys of primary and secondary school teachers and leaders reported on in Opfer et al. (2008), Opfer and Pedder (2011), Pedder et al. (2010) and various NFER Teacher Voice Omnibus survey reports (including those for June 2009 and February 2011).

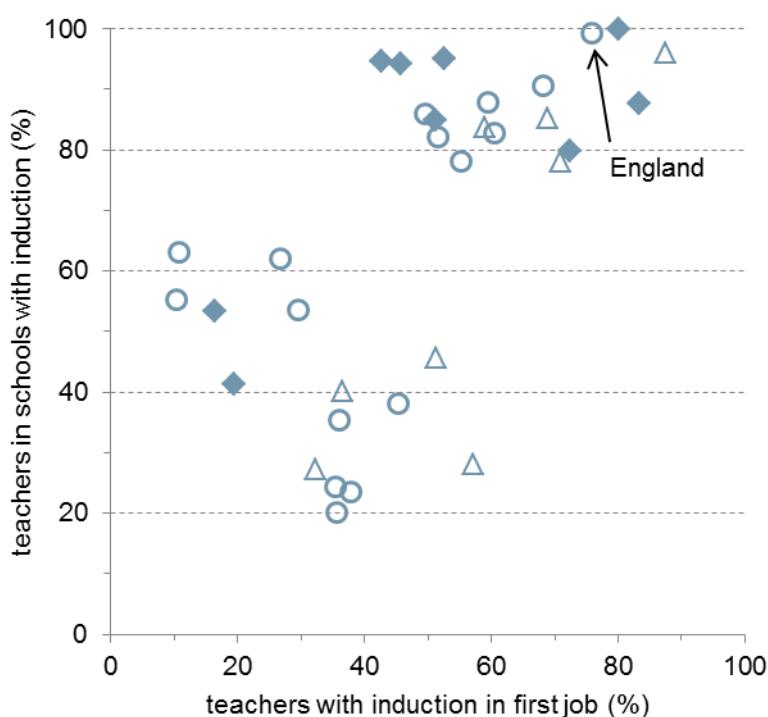
Table 4.1 Percentage of teachers in schools with induction programmes for new teachers and percentage of teachers reporting induction in first teaching job: international comparison

Percentage of teachers	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
in schools with induction programmes	99	81	54	95	88	100	61	66
who had induction in first teaching job	76	51	16	43	83	80	58	49

Source: OECD (2014) Table 4.1

Note: the first row reports the percentage of teachers in schools with a head who reported that their school has an induction programme for new teaching staff; the second row reports the percentage of teachers who had an induction programme in their 'first regular employment as a teacher' in any school and not just the current school. The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

Figure 4.1 Percentage of teachers in schools with induction programmes for new teachers and percentage of teachers reporting induction in first teaching job: international comparison



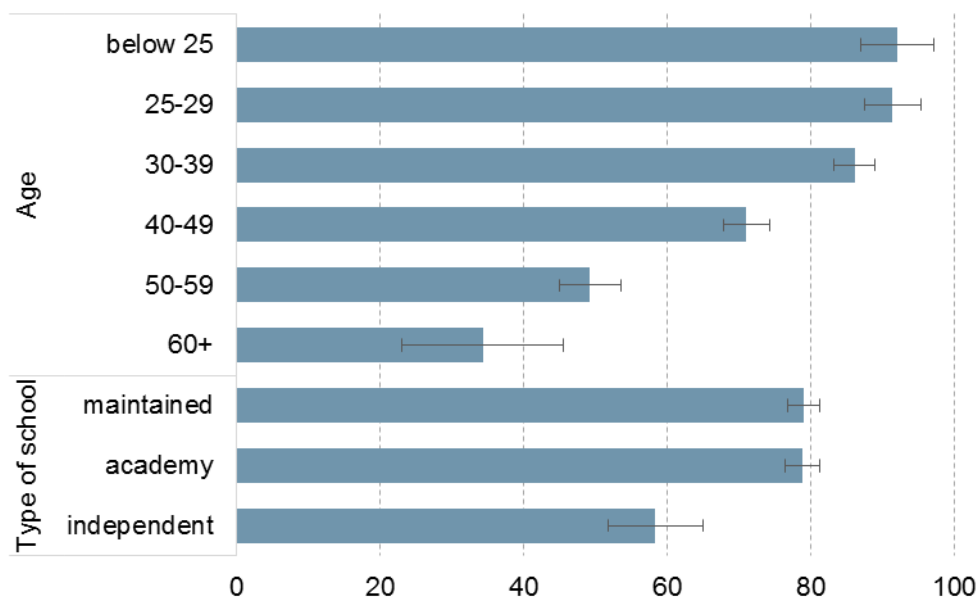
Source: OECD (2014) Table 4.1

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

- Figure 4.1 underlines the variation in these figures between countries, plotting school provision of induction programmes on the vertical axis and teacher reports of induction in their first job on the horizontal axis. England ranks very highly on both measures. As in many other aspects of teaching captured in TALIS, there is substantial variation among the high performing countries. The two high performers at the left of the diagram (solid diamond symbols) are Finland and Estonia: around 40-50% of teachers in schools with induction programmes and 20% or less of teachers having had induction in their first job. On the other hand, Singapore and Japan are up in the top right hand corner with levels similar to those for England.

6. Not surprisingly in view of the increase in professional development over time, the percentage of teachers in England having taken part in an induction programme varies substantially with age, from about 90% for teachers aged under 40 to around 50% for those in their 50s – see Figure 4.2. There may, of course, be issues of recall, especially for the older teachers for whom any induction is likely to have been many years before the survey. The figure is much lower for teachers in independent schools – 58% compared to 79% for teachers in other schools (and this is not explained by any difference in average ages).

Figure 4.2 Percentage of teachers reporting induction in first job, by age and type of school



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

7. For mentoring, the heads in England again report near universal programmes – 99% of teachers are in schools in which the head says that teachers ‘have access to a mentoring system’ – see Table 4.2. (This can be for all teachers or just for teachers new to the school or new to teaching.) This compares with 82% on average in the high performers and 74% for all countries. Of course, universality of provision in England again does not imply that all teachers actually have mentors – only 1 in 5 report being mentored currently. As one would expect, being mentored is much more common for younger teachers, although in fact some teachers of all ages do have mentors – see Figure 4.3.
8. The percentage of teachers with mentors in England is similar to that on average for the group of nine high performing countries. However, the figure for the average for the high performers hides huge variation – from 3% in Finland to 40% in Singapore. The percentage of teachers acting as a mentor for others is substantially higher in England than the average across the high performing nine – 31% of teachers in England report being mentors (Figure 4.3 shows the percentage is a bit higher for

older teachers), not far short of the 39% in Singapore. As with induction, either having a mentor or being a mentor is far less common in Finland and (not shown in Table 4.2) Estonia.

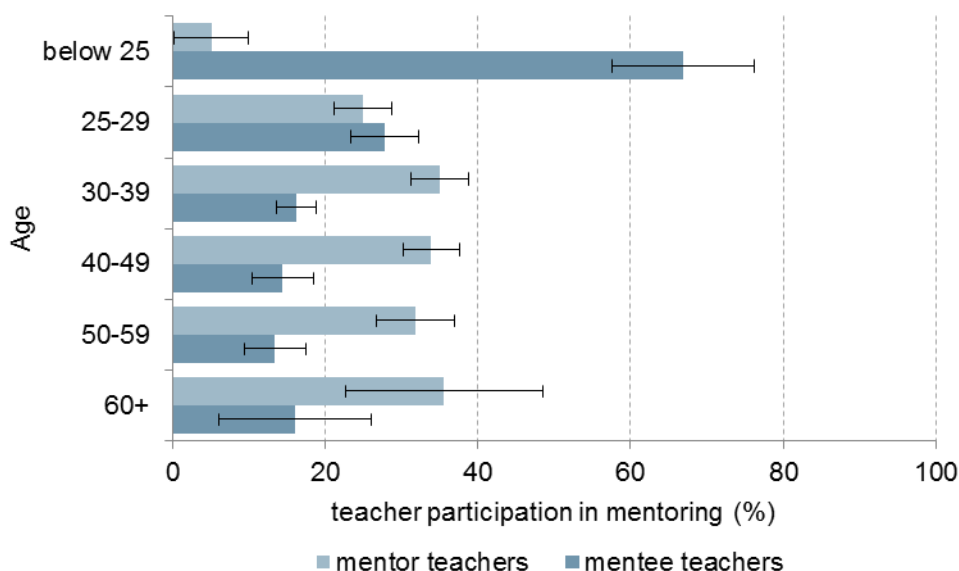
Table 4.2 Percentage of teachers (i) in schools with mentoring systems, (ii) who have mentors, and (iii) who act as mentors: international comparison

Percentage of teachers	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
in schools with mentoring	99	82	35	79	80	99	73	74
being mentored	19	17	3	10	33	40	19	13
acting as mentors	31	20	4	10	16	39	14	14

Source: OECD (2014) Table 4.3

Note: the first row reports the percentage of teachers in schools where the head says that teachers have access to a mentoring programme. The second and third rows refer to the teachers own answers about mentoring. The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

Figure 4.3 Percentage of teachers who have mentors and who act as mentors, by age



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

- The prevalence of induction and mentoring in England therefore looks good by international standards. However, TALIS records no information that sheds light on the quality of these particular development activities, which may also vary from country to country.

4.2 How much (and what) CPD is undertaken by teachers?

10. Teachers are asked in TALIS about their participation in nine different forms of CPD in the 12 months prior to the survey. The first row in Table 4.3 shows the percentage of teachers reporting that they took part in any of these nine forms. Participation in England is very high, 92%, and the same is true in most other countries. The figures for Finland and Japan are the lowest among the high performing countries. Any differences across countries may in part reflect differences in teachers' entitlements.
11. The second row in the table shows, among those teachers participating, the percentage reporting that they had to pay for some or all of the costs. Fewer than 1 in 10 teachers in England undertaking CPD paid for any of it compared to an average of 1 in 3 in all countries in TALIS and the same for just the high performing countries. The figure of 7% in England is in fact the lowest for any country, followed by the 10% in Singapore.

Table 4.3 Percentage of teachers reporting participation in CPD during the last 12 months and percentage who paid for the CPD undertaken: international comparison

Percentage of teachers	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
who undertook any CPD in last 12 months	92	91	79	88	83	98	89	89
who paid for CPD undertaken	7	32	27	13	44	10	43	34

Source: OECD (2014) Table 4.6

Note: the figures for the percentage of teachers who paid for CPD are for those reporting that they paid for 'some' or 'all' development in the last 12 months out of all those teachers undertaking some CPD. The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

12. Two thirds of teachers doing any CPD in England reported receiving time off for activities that took place during regular working hours. This is the same as the average for the high performers and above the average for all countries of a half.
13. Table 4.4 shows the types of CPD undertaken, comparing England with the average for the high performing countries and for all countries in TALIS. For five of the nine types, the survey collected information on the amount of time that the teacher had spent on the activity concerned, measured in days, and the table includes the average values reported. Broadly speaking, the activities most commonly reported in England are also those most commonly reported elsewhere: (i) courses and workshops, (ii) mentoring, peer observation and coaching, (iii) dedicated teacher CPD networks, and (iv) conferences and seminars. That said, participation in mentoring, observation and coaching is more frequently reported in England and going to

conferences and seminars reported less frequently.⁵⁶ The average time spent in most of the five activities for which the information was collected is lower in England.

14. The probability of doing any CPD in the previous 12 months is slightly lower for teachers in independent schools in England – 88% compared to 93% for teachers in other schools. (There are no differences by Ofsted rating.) The differences by type of school are most notable for taking part in dedicated teacher CPD networks (23% in independent schools, 35% in other schools) and mentoring, observation and coaching (48% compared to 59%).

Table 4.4 Percentage of teachers reporting participation in different types of CPD and average total time spent in each activity: international comparison

Type of CPD	% participation			average days		
	Eng	H9	All	Eng	H9	All
Courses/workshops	75	78	71	3.0	6.5	8.5
Mentoring and/or peer observation and coaching	57	33	29			
Teacher networks	33	41	37			
Conferences/seminars	29	50	44	2.0	3.1	3.7
Individual or collaborative research	27	33	31			
In-service training courses in other organisations	22	16	14	3.1	4.6	7.0
Observation visits to other schools	20	24	19	2.3	2.2	3.0
Qualification programme (e.g. a degree)	10	14	18			
Observation visits to other organisations	7	13	13	1.8	2.3	3.1

Source: OECD (2014) Table 4.9.Web

Note: courses/workshops are 'e.g. on subject matter or methods'; 'conferences/seminars' are 'where teachers and/or researchers present their research results and discuss educational issues'; teacher networks are specifically for the purpose of CPD; observation visits to other organisations are to businesses, public organisations or NGOs. The figures for 'H9' are averages for the nine high performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries.

15. We can summarise crudely the amount of CPD undertaken by each teacher in England by counting the number of different types of activity reported from the list of nine types in Table 4.4. Not surprisingly, given the differences in particular activities we have just noted, the average is lower for teachers in independent schools than in state-funded schools: 2.4 compared to 2.9. The average also falls with age. Teachers under the age of 25 report an average of 3.2 types and those aged 25-29 report 3.0. The figure drops to just under 2.5 for those aged 50-59.

4.3 Is the CPD undertaken seen by teachers as effective?

16. The next question is whether the CPD that teachers do undertake is seen by them as having a positive impact on their teaching. For those teachers who report having had

⁵⁶ The question on mentoring, peer observation or coaching is ambiguous as to whether e.g. the mentoring is only of others or whether being mentored should also be included. The lack of much variation with age in the percentage of teachers reporting this form of CPD suggests that both are reported.

any CPD in the 12 months before the survey – the great majority in England – Table 4.5 shows the percentage who indicate that the training or other activity had a moderate or large impact. The table distinguishes 14 different topics. When a teacher indicated that a topic was covered and that it had a moderate or large impact on their teaching, we refer to this as ‘effective’ training in the topic concerned.

17. Half of teachers in England report effective training in their subject field(s) and in student evaluation or assessment – the two areas at the top of the table. The figure falls to less than 10% for the activities in the last three rows. The percentage of teachers reporting effective training in the other nine areas ranges between 20% and 45%.

Table 4.5 Percentage of teachers who undertook any CPD in the last 12 months who report a moderate or large impact on their teaching, by topic covered: international comparison

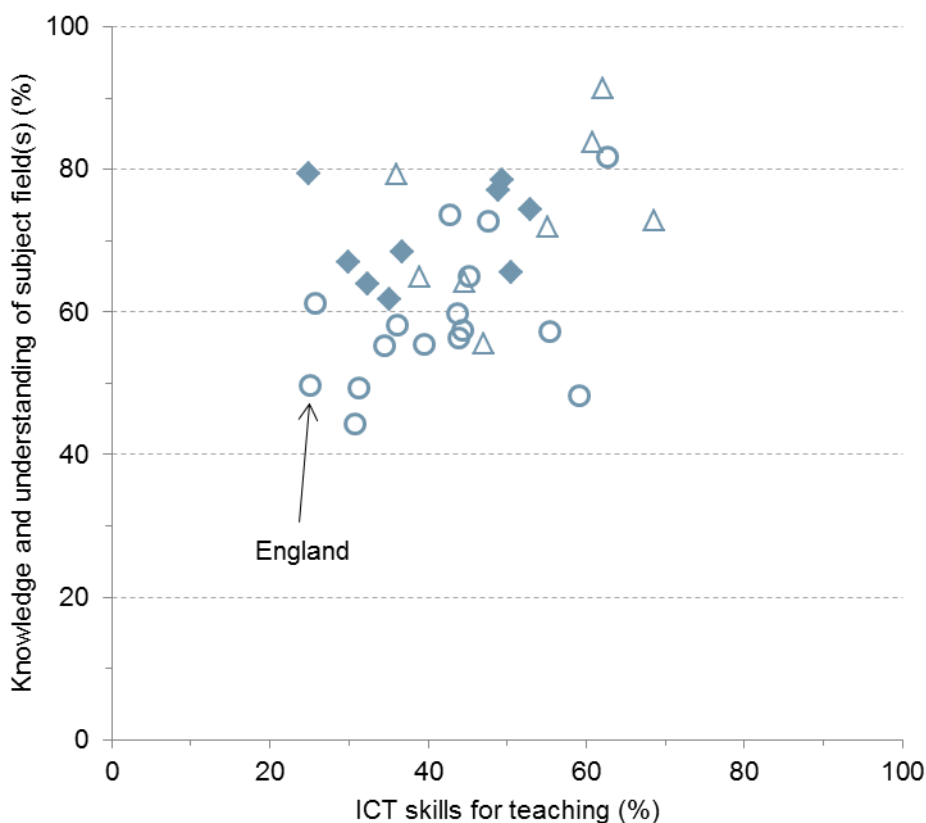
Topic covered	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
1. Knowledge/understanding of subject field(s)	50	71	64	67	79	79	73	66
2. Student evaluation/assessment	50	42	18	32	45	59	63	47
3. Pedagogical competencies in teaching subject field	45	59	42	52	77	74	69	59
4. Knowledge of the curriculum	42	49	18	49	35	69	59	47
5. Approaches to individual learning	37	33	27	17	40	29	44	33
6. Teaching cross-curricular skills	26	29	16	21	44	27	46	31
7. Teaching students with special needs	26	28	23	20	37	16	23	25
8. ICT skills for teaching	25	40	32	30	25	49	52	44
9. Student behaviour/classroom management	24	34	21	24	36	36	52	35
10. New technologies in the workplace	20	27	27	11	10	27	40	31
11. School management and administration	20	14	6	7	17	24	25	14
12. Teaching in multicultural/lingual settings	8	12	9	7	7	15	18	13
13. Developing cross-occupational competencies	7	14	7	5	12	12	31	16
14. Student career guidance/counselling	6	21	4	6	33	20	32	19

Source: OECD (2014) Table 4.10

Note: The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

18. For one or two areas, the figures for England are a little higher than the average for the high performing countries and/or the average for all countries in TALIS: student evaluation or assessment (row 2), approaches to individual assessment (row 5), and school management and administration (row 11). But most are lower, sometimes by a substantial margin. Figure 4.4 plots the figures for all countries for two areas where the reporting of effective training in England is particularly low, judged by the levels in other countries. These are knowledge of subject field(s) (row 1), notwithstanding this being the area most frequently reported in England – on the vertical axis – and ICT skills for teaching (row 8) – on the horizontal axis.

Figure 4.4 Percentage of teachers who had CPD in any area reporting ‘effective training’ in (i) knowledge of subject field(s) and (ii) ICT skills for teaching: international comparison



Source: OECD (2014) Table 4.10

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

19. Effective training in one area tends to go hand in hand with effective training in the other: there is an upward sloping pattern to the data in the graph. However, there are two exceptions – Japan at the top left with a high level of effective training in the subject field(s) and a low level for ICT skills and Sweden at the bottom right with the opposite. Australia, Estonia and Korea are the three high performing countries towards the top right of the graph with high levels of both. The position of England at the bottom left with low levels of effective training in both areas is clear.

20. In order to analyse differences within England in the extent of ‘effective training’, we created a summary variable equal to the number of areas from the 14 listed in Table 4.5 in which a teacher reported having had training with a moderate or large impact on their teaching. The mean values for teachers in independent schools and publicly-funded schools (academies and maintained schools) are 3.0 and 4.0 respectively, the difference reflecting in part the lower amount of CPD undertaken by teachers in independent schools that we have already noted.

21. Restricting attention to just teachers in publicly-funded schools, we find the average value of our index of effective training is significantly higher for teachers in schools

with higher percentages of children receiving Free School Meals (FSM). For example, teachers in schools in the top quartile of FSM receipt – children from the poorest family backgrounds – score 4.4 on average, compared to teachers in the bottom quartile who score 3.7. Effective training is also more prevalent among teachers in schools with less able pupil intakes, as measured by Key Stage 2 scores.

22. To complement this analysis of effective training, we also analyse respondents' answers to four questions put to teachers that are in line with the research literature on the quality of CPD.⁵⁷ Higher quality CPD is often considered to have certain features: to involve colleagues, to have active learning (rather than just listening to a lecturer), to require collaboration with others, and to take place over an extended period rather than at one-off events. Table 4.6 shows the percentage of teachers who say that the CPD they took part in the 12 months prior to interview included these four features in 'most' or 'all' activities. (The figures are restricted to those teachers who undertook some CPD.) We compare the figures for England with those for other countries.

Table 4.6 Percentage of teachers reporting that CPD undertaken in last 12 months had certain features in most or in all activities undertaken: international comparison

Percentage of teachers reporting that CPD involves:	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
A group of colleagues from my school or subject group	45	36	42	35	30	36	44	39
Opportunities for active learning methods	36	31	32	29	31	33	39	33
Collaborative learning activities or research with other teachers	29	26	22	21	26	28	32	28
An extended time period (taking place on several occasions)	19	16	13	11	8	16	23	21

Source: OECD (2014) Table 4.18.Web

Note: 'an extended period' is defined in the questionnaire as 'several occasions spread out over several weeks or months'. The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

23. The percentages for England vary between 19% for CPD over an extended time period up to 45% for activities undertaken with colleagues. There is clearly room for improvement in the organisation of CPD in England (to the extent that the aspects concerned are indeed hallmarks of 'good' professional development). But it is notable that all the averages for the high performing countries are a little lower than those for England. The figures for England are typically close to the average for all countries in TALIS.

24. Finally in this section, we constructed a summary index from the responses to the four statements analysed in Table 4.6. On each statement we scored the response 'in some activities' as 1, 'in most activities' as 2, and 'in all activities' as 3 (and 'not in any activities' as zero). The index therefore has a maximum value of 12. Teachers in state-funded schools have significantly higher average values than teachers in independent schools (4.8 compared to 3.8), as do teachers in schools with lower

⁵⁷ For example, see Desimore (2009).

ability pupil intakes (measured by Key Stage 2 scores) and higher levels of receipt of Free school Meals.⁵⁸

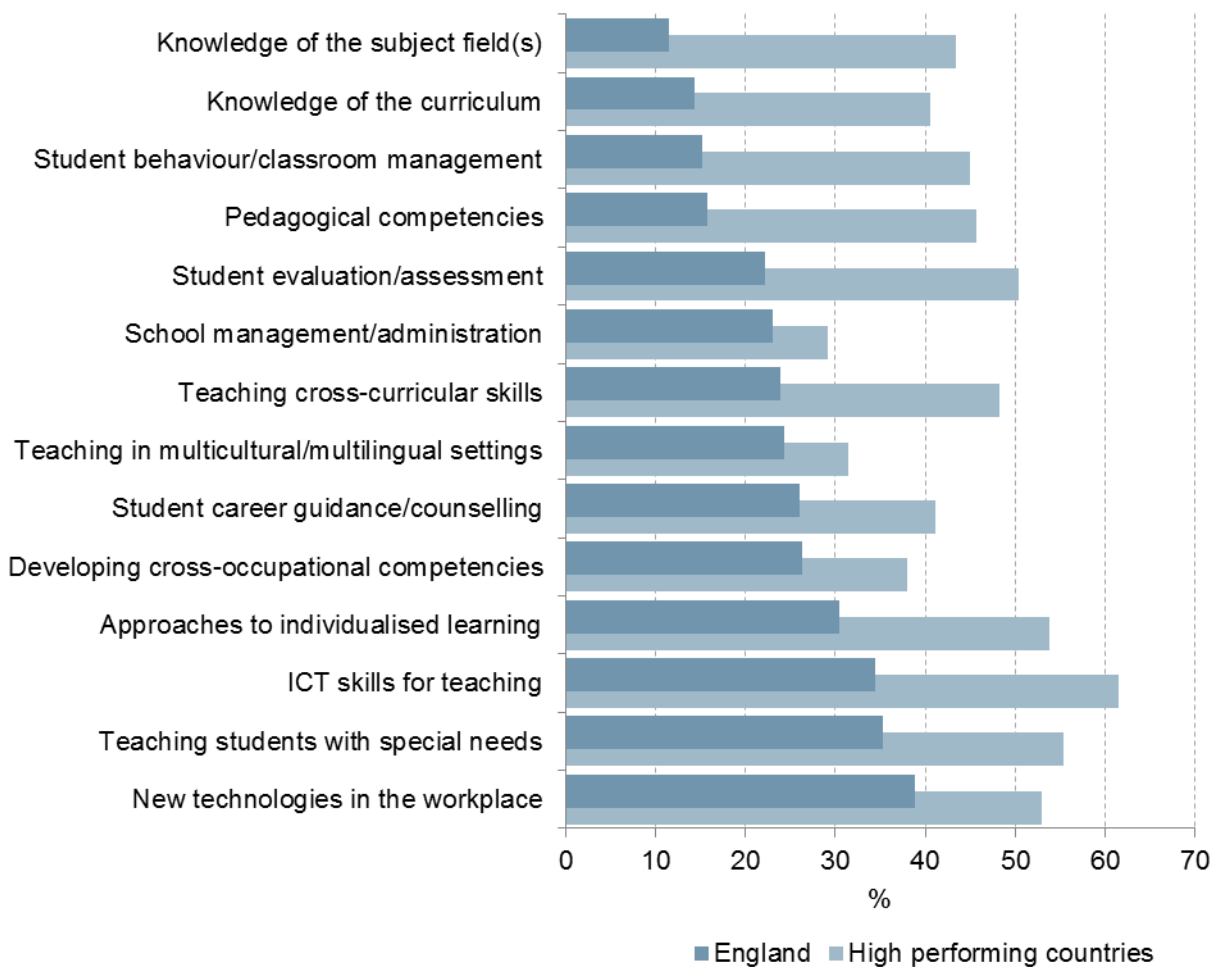
4.4 Do teachers perceive much need for more CPD?

25. Given the activities that they already undertake – both the amount and its perceived impact – do teachers in England believe they currently need CPD? Figure 4.5 shows the percentages reporting a ‘moderate’ or ‘high’ level of need for each of the 14 different areas considered earlier in Table 4.5 alongside the averages for the nine high performing countries. In every case the figures for England are well below the average for the high performers, which in turn are typically below the levels of the eight low performing countries and the average for all countries (not shown in the graph). Indeed, in 10 of the 14 areas, the figure for England is one of the three lowest among all countries in TALIS: the need expressed by teachers in England for more CPD is low by international standards.
26. But there are three areas listed at the bottom of the graph where at least 1 in 3 teachers in England feels a moderate or high need for more CPD: two relating to aspects of ICT (the distinction between the two areas is not very clear in the questionnaire) and one to students with special needs.
27. Teachers in England, but not other countries, were also asked about one further area of possible need – mentoring/coaching peers. 1 in 4 report a moderate or high level of need, making this one of the more commonly reported areas in England. The figure is quite similar for those currently acting as mentors and those not doing so – 21% and 27% respectively. That is, about 1 in 5 teachers currently acting as mentors feel the need for more CPD in this area.
28. However, it is probably encouraging that only about 1 in 7 teachers in England feel significantly in need of CPD in their knowledge of their subject fields and the curriculum, their pedagogical skills, and their management of student behaviour – shown at the top of Figure 4.5.⁵⁹ The differences between the figures for England and the average for the high performers are particularly large for these four areas. Among the high performing countries, the figures in these areas vary from about 1 in 5 in Belgium (Flanders) and Australia up to around 75% in Korea and 80-95% in Japan.

⁵⁸ Not all of these results are in line with those reported by Opfer and Pedder (2011) based on survey data from a national study of professional development of teachers in England.

⁵⁹ The uncertainty arises as teachers could be mistaken in their assessments of their need.

Figure 4.5 Percentage of teachers reporting moderate or high levels of need for CPD in different areas: international comparison



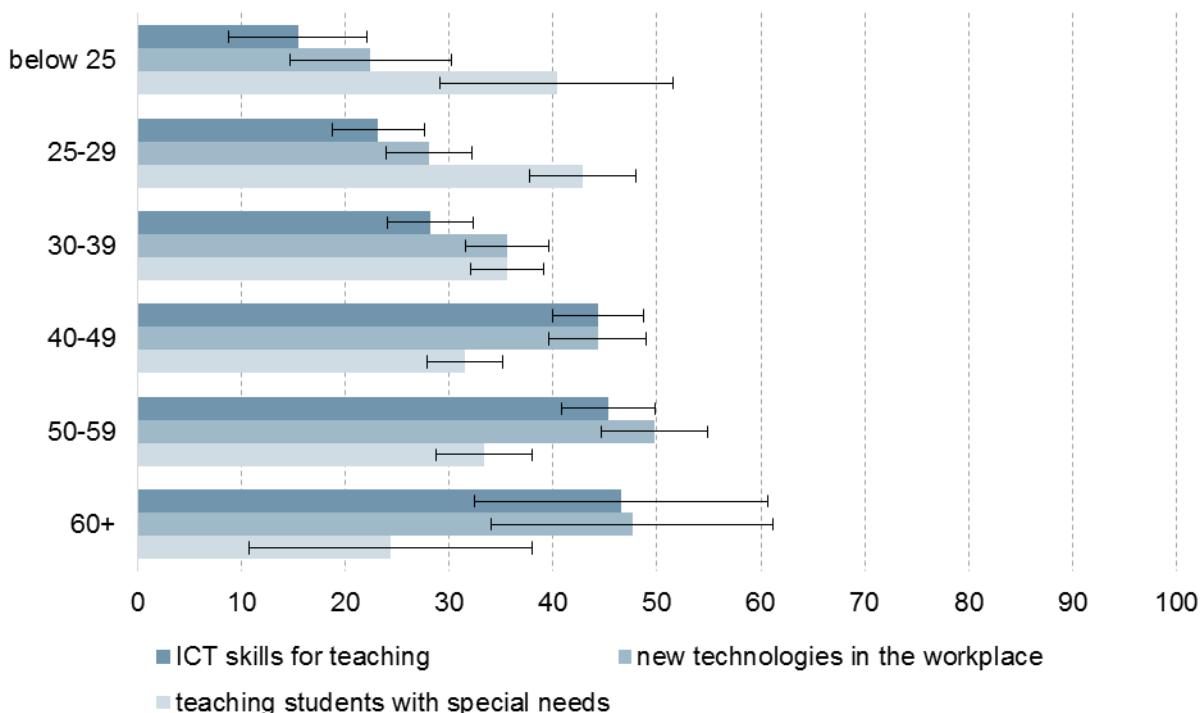
Source: OECD (2014) Table 4.12.Web

Note: the nine high performing countries are defined in Table 1.2. The percentages graphed are the average values across the nine.

29. We now consider the differences in need within England. We focus on areas where at least a third of teachers indicate a moderate or strong need. Which teachers want help with new technologies in the workplace, ICT skills for teaching, and – a rather different skill – teaching students with special needs?

30. Figure 4.6 shows how teachers’ beliefs of their need for CPD in these three areas vary with age. Unsurprisingly, need for professional development with new technologies and ICT skills used in teaching is felt less by younger teachers – around 25% or less for those in their 20s rising to 45-50% for those aged 50 or over. On the other hand, it is younger teachers who feel more need for professional development in teaching students with special needs, where experience may well tell – 40% of those in their 20s compared to 30-35% of those aged 40-59, although as this indicates the age gradient is not as large as for computer skills.

Figure 4.6 Percentage of teachers who report a moderate or high level of need for CPD in (i) ICT skills for teaching, (ii) new technologies in the workplace, and (iii) teaching students with special needs, by age



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

31. One of the questions put to teachers about the ‘target class’ (a particular Key Stage 3 class that they take – see Chapter 7) was to ask them to estimate the percentage of students in the class with special needs. Interestingly, the reported need for CPD in teaching students with special needs varies only little with these estimates. On the one hand, this is encouraging – the teachers with larger numbers of students of this type (at least in the ‘target class’) do not feel a particular need for help in how to cater for them. On the other hand, it is still the case that at least a third feel that need.

4.5 What are seen as the barriers to more training?

32. The last issue we consider in this chapter is the obstacles that teachers see to participation in CPD. Table 4.7 shows the percentages of teachers who agree or strongly agree with a series of statements about the barriers to CPD. The interpretation of these figures is not altogether straightforward. Disagreement with any statement may either be taken at face value – indicating that the issue concerned is really not viewed as a barrier – or could simply reflect low demand for further CPD from a teacher feeling little additional need.

33. Notwithstanding the relatively low levels of need reported in England, judged by the standards of other countries, significant numbers of teachers in schools in England do agree that there are barriers to undertaking CPD. As many as 60% believe that their existing work schedule represents a barrier. There is no definition of ‘work schedule’ in the TALIS questionnaire but it seems likely that most teachers interpret the statement as referring to all of their work, whether carried out at the school or at home. Chapter 2 showed that average total hours of work of teachers in England are higher than those in most other countries. Nevertheless, the percentage of teachers in England reporting ‘work schedule’ as a barrier to CPD is essentially the same as the average for the high performing countries, although it is above the figure for the low performers or for all countries taken together. Within England, average total hours per week for those strongly agreeing with the statement about work schedule are around 4.5 hours higher than for other teachers.

Table 4.7 Percentage of teachers agreeing or strongly agreeing with statements about barriers to their participation in professional development: international comparison

Barrier to participation	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
CPD conflicts with my work schedule	60	58	52	42	86	62	49	51
CPD is too expensive/unaffordable	43	35	23	17	62	20	51	43
There are no incentives for participating	38	38	43	25	38	37	58	48
There is a lack of employer support	27	31	23	15	60	21	38	31
Lack of time due to family responsibilities	27	38	37	34	52	45	30	36
There is no relevant CPD offered	25	33	40	29	37	22	42	39
Do not have the pre-requisites	10	13	7	9	27	16	13	11

Source: OECD (2014) Table 4.14

Note. The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

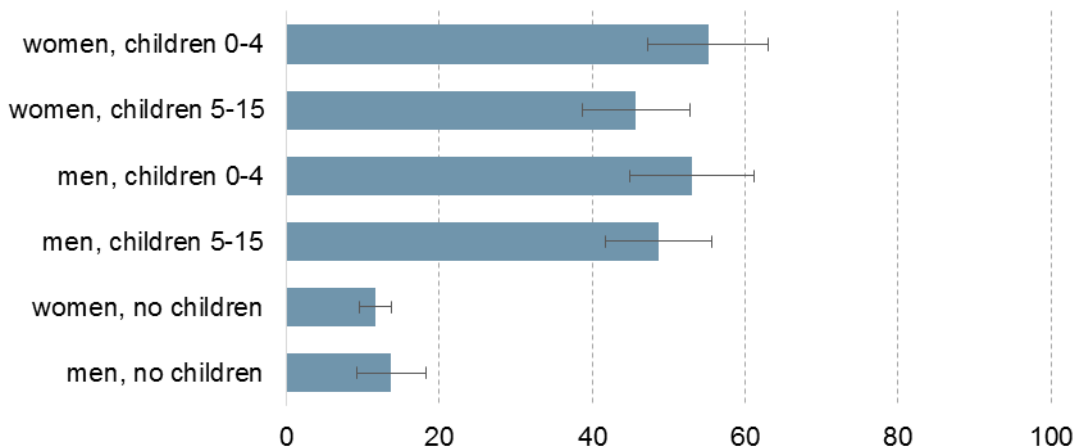
34. By contrast, only a quarter of teachers in England believe that no relevant CPD is on offer, compared to averages of a third in high performing countries and two-fifths in low performing countries. About 40% of teachers in England see CPD as too expensive – more than in several H9 countries. A similar figure see the lack of incentives as a barrier – the same as the H9 average and well below that for the L8 countries (58%), where lack of incentives is on average the most commonly cited barrier.

35. About a quarter of all teachers in England say that they lack time for CPD due to their family responsibilities. Unsurprisingly, this figure varies sharply with the presence of children in the home, especially young children – see Figure 4.7. About a half of teachers, whether men or women, with children aged 0-4 report this as a barrier.

36. About a quarter of teachers also perceive a lack of employer support for CPD. Figure 4.8 shows how this figure varies across school type and Ofsted rating. Teachers in independent schools are slightly less likely than teachers in other schools to perceive this as a barrier, despite their participation in CPD being lower and the CPD undertaken being less effective – see earlier sections of this chapter. There is a

marked gradient across Ofsted rating, with the employer being seen as a barrier by only 1 in 5 teachers in ‘outstanding’ schools but by 1 in 2 in the small number of schools rated as ‘inadequate’ at their last inspection. (There are no differences within the state sector across schools classified by the Key Stage 2 results of their pupil intake or levels of Free School Meals receipt.)

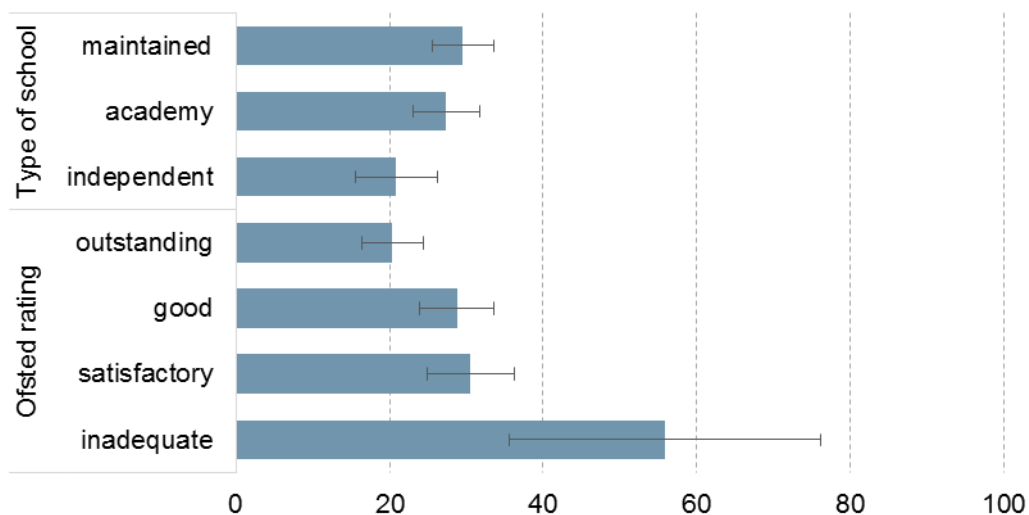
Figure 4.7 Percentage of teachers who agree or strongly agree that they lack time for CPD due to their family responsibilities, by gender and presence of children in the home



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

Figure 4.8 Percentage of teachers who agree or strongly agree that there is a lack of employer support for CPD, by school type and Ofsted rating



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

4.6 Summary

37. The quantity of CPD for lower secondary teachers in England is reasonably high by international standards, when measured by the existence and use of induction programmes, by mentoring, and by participation in some (but not all) forms of training.
38. However, the quantity does not compare so well when measured by the average number of days spent in training. And the extent of 'effective' training – the training felt to have a moderate or large impact on teaching – is lower in England for a number of important areas than in many other countries, including high performing countries. Teachers in England also tend to feel much less need for CPD across a whole range of different areas of activity than teachers elsewhere.
39. In some cases there are clear and striking comparisons to be made between figures for England and the average for high performing countries in TALIS. But as is the case for other topics considered in this report, it is important to note that there is often considerable variation among the nine high performing countries that we identified in Chapter 1.
40. We have noted several examples of variation in CPD provided or undertaken within England – variation with school and/or teacher characteristics – but also examples of where there is little apparent variation. Independent schools and their teachers appear to have rather less CPD when measured in various ways, including participation in some forms of training and teacher reports of 'effective' training.

Chapter 5 Appraisal and feedback

- The vast majority of teachers in England are formally appraised at least once a year but this is not the case in all other countries.
- 99% of teachers in England report receiving feedback from one or more sources in their current school, compared to an average of 88% across all countries in TALIS and 89% in high performing countries.
- The average number of sources of feedback reported by teachers is lower in independent schools (1.9 compared to 2.3 in maintained schools and academies) but there is no significant variation by a school's Ofsted rating.
- In almost every area of work and careers on which TALIS sought information, teachers in England are less positive about the impact of feedback than the average across other countries. But a half of teachers in England do say feedback had a moderate or large positive impact on their confidence, on their teaching practices, and on their job satisfaction.
- There is substantial variation across the high performing countries in systems of appraisal and feedback.
- The number of areas of work in which moderate/large positive change as a result of feedback was reported by teachers averaged 3.9 in independent schools and 4.9 in academies and maintained schools. There were no significant differences across Ofsted rating or Key Stage 4 performance.
- England is one of the few countries where sanctions for poor performance following appraisal such as withholding a pay increase are reported by a significant number of school heads as being likely to occur (32% of teachers are in schools where the heads report this). Most other outcomes of appraisal (e.g. a training plan or appointing a mentor) are more common in England than, on average, in other countries.
- There appears to be some disagreement between heads and teachers in England on the outcomes of appraisal and feedback.
- About a half of teachers in England – the same as on average in other countries – believe that appraisal and feedback are largely done to fulfil administrative requirements.

1. This chapter considers how schools appraise teachers' classroom and broader working practices and how these appraisals translate into feedback to the teacher and, ultimately, into consequences for their careers. At its best, the cycle of appraisal, feedback and systematic improvement in response to feedback should be a central determinant of the effectiveness of schools.
2. We make use of data both on headteachers' reports for their school and the individual teachers' reports of their own experiences. School heads were asked in TALIS only about systems of 'formal appraisal', for example as part of a performance management system. Teachers, on the other hand, were asked about feedback 'defined broadly as any communication you receive about your teaching... through informal discussions or as part of a more formal arrangement'. The information sought from teachers therefore refers to wider feedback than that provided through formal appraisal. Moreover, while the questions to headteachers refer to current practice, those to individual teachers relate rather ambiguously to the past as well as the present.⁶⁰
3. One route through which teachers may get feedback is through comments from mentors. Where appropriate we refer back to our analysis of mentoring included in Chapter 4.
4. The chapter addresses five questions:
 - Who provides feedback to teachers and on what basis?*
 - What positive impacts come from feedback?*
 - How often does formal appraisal of teachers take place?*
 - What outcomes do headteachers see from appraisal?*
 - What are teachers' views of appraisal and feedback?*
5. In addressing these questions, we aim to consider how systems of feedback and appraisal vary according to type of school and the Ofsted inspection rating. School type determines in part the level of school autonomy – see Chapter 1 – and so is likely to alter systems of external oversight of the school with respect to its formal appraisal processes, although the very recent conversion from maintained schools of some academies in the sample will weaken any relationship in the data. By contrast, other school contextual factors such as levels of pupil deprivation are likely to be less important.

⁶⁰ Teachers are asked in the present tense whether they receive feedback from different sources (they are not, for example, asked about the last 12 months) or whether they agree with a statement that they have 'never received' the feedback from the source concerned in their current school. The implication seems to be that feedback reported could refer to any time since the teacher's appointment. However, there is no significant impact of tenure in the school in a regression of the average number of sources of feedback reported by teachers in England.

6. Any relationship we might observe between Ofsted school inspection ratings and appraisal and feedback systems may occur for one of two reasons. First, if particular types of system are more effective at improving practice than others then we should observe that schools judged by Ofsted at their most recent inspection to be ‘good’ or ‘outstanding’ do indeed have systematically different procedures in place for the management of teachers. Second, schools that have been judged to be ‘inadequate’ by Ofsted are subject to frequent external monitoring and may have put in place stronger internal systems of accountability to prepare for subsequent inspection visits. But, as in the rest of the report, we are very limited in our ability to say anything about the relationship between appraisal and feedback and the lowest rating of ‘inadequate’ due to the small number of schools and teachers in the TALIS sample with this rating (six schools and 85 teachers).

5.1 Who provides feedback to teachers and on what basis?

7. Almost all teachers (99%) in England report that they have received feedback from one or more sources in their current school – see Table 5.1. By contrast, feedback is not universal in other countries: the average is 88% across all countries in TALIS and 89% for the nine high performing countries. The outlier for the high performers, pulling down the average, is Finland where over a third of teachers report never having received feedback.

Table 5.1 Percentage of teachers who report having received feedback from different sources: international comparison

Source	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
SMT	85	51	7	20	65	83	58	49
Other teachers	51	47	43	20	47	43	34	42
Headteacher	42	51	42	70	75	50	65	54
External sources	29	22	18	34	31	11	37	29
Assigned mentor	29	18	1	18	39	38	29	19
Any of above sources	99	89	63	86	94	99	94	88

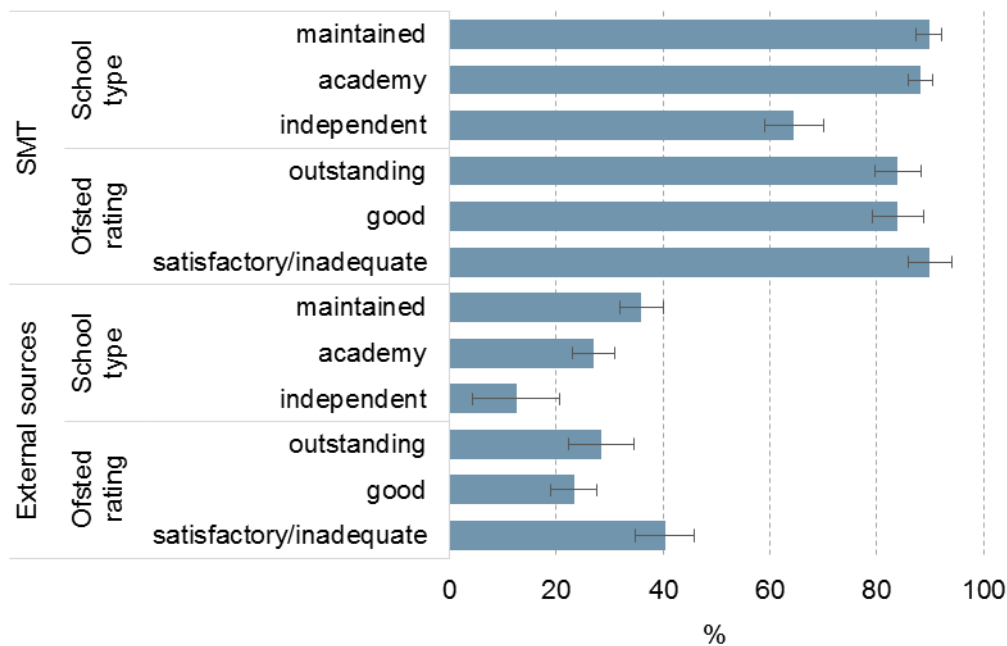
Source: OECD (2014) Table 5.4

Note: ‘External sources’ are ‘external individuals or bodies’. ‘SMT’ is school management team. ‘Other teachers’ excludes the SMT. The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

8. The higher than average figures for England are driven by the differences for most sources: compared with the average for the high performers, more teachers receive feedback in England from the school management team, other teachers, sources external to the school, and mentors. However, feedback from the headteacher is less common. It is notable that 29% of teachers in England say they have had feedback from mentors whereas Chapter 4 showed that only 19% report currently having a mentor. This could reflect that the feedback reported in Table 5.1 may be sometime in the past.

9. How do the sources of feedback vary across schools in England? Figure 5.1 focuses on two sources, the school management team and external individuals or bodies. In both cases feedback is substantially less common in independent schools. External feedback is more common for teachers in schools rated either as only 'satisfactory' or as 'inadequate' – combined together as one group in the diagram. The percentages of teachers reporting other sources of feedback do not vary so obviously by school type or by Ofsted rating (not shown in the graph). Teachers in 'outstanding' and 'good' schools are a little more likely to report that they have had feedback from other teachers than are teachers in 'satisfactory' or 'inadequate' schools (55% and 51% compared to 46%) but the differences are only just statistically significant.⁶¹ The average number of different sources of feedback reported by teachers is lower in independent schools (1.9 compared to 2.3 in maintained schools and academies) but there is no statistically significant variation by the Ofsted rating of the school.

Figure 5.1 Percentage of teachers who report having received feedback from (i) SMT and (ii) external sources, by school characteristics



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

10. Table 5.2 shows the bases on which feedback was given. Virtually all teachers in England report receiving feedback following classroom observation. By contrast, on average, 1 in 5 teachers do not across all countries in TALIS and the same in the nine high performing countries. (It is notable that all the low performer averages are above those both for the high performers and for all countries in TALIS.) Feedback on the basis of a review of test scores of the teacher's students is also very common in England – 70% of teachers reporting this – and more common than in most other

⁶¹ p = 0.04.

countries. (Singapore is a counter-example.) For the other four bases, the figures for England are a bit lower than the averages for the high performers.

Table 5.2 Percentage of teachers receiving feedback on different bases: international comparison

Basis	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Classroom observation	99	81	46	81	87	97	88	79
Student test scores	70	60	28	42	63	81	79	64
Self-assessment of own work	46	56	21	35	78	87	67	53
Student surveys of own teaching	42	54	26	35	66	62	65	53
Parent surveys or discussion	41	50	37	34	65	52	67	53
Assessment of subject knowledge	39	53	26	43	67	70	73	55

Source: OECD (2014) Table 5.5

Note: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

11. Within England, feedback following student surveys is more commonly reported by teachers in schools rated as 'outstanding' by Ofsted, than by teachers in schools with lower ratings – 49% compared to 39%. The same is true for feedback following surveys of, or discussion with, parents – 46% compared to 38%. Feedback following student surveys is less commonly reported by teachers in independent schools: 30% do so.

5.2 What positive impacts come from feedback?

12. Given the feedback they receive, do teachers think that it does any good? For a range of different areas of work and careers, Table 5.3 shows the percentage of teachers who report that feedback at their current school resulted in a moderate or large positive change for them. (The calculations exclude those teachers who report never receiving feedback.) We comment first on the nine high performing countries: it is striking that teachers in these countries are much less positive about the outcomes of feedback than are teachers in the eight low performing countries. The differences between the averages for the two groups of countries range between 15 and 30 percentage points, although it should also be noted that the examples in the table illustrate again the extent of the variation among the high performers.

13. Then, in almost every case, teachers in England are even less positive than the average for the high performing countries. In four cases, the figure for England is the lowest recorded for any country in TALIS. Figure 5.2 illustrates this for two of them: the percentage of teachers reporting a moderate or large positive change in their confidence is shown on the horizontal axis and the percentage reporting such a change in their 'knowledge and understanding of main subject field(s)' is shown on the vertical axis. (The other areas for which the England figure is the minimum is

‘motivation’ and ‘job satisfaction’.) England is a clear outlier in the bottom left-hand corner. It is notable that the low performing countries (open triangles) are grouped in the top-right hand corner, with the highest percentages of teachers reporting positive impact. With one exception (Japan, up among the low performers towards the top-right of the graph), the high performing countries (solid diamonds) come in between the low performing group and England, illustrating the point made above about the pattern of the results in Table 5.3.

Table 5.3 Percentage of teachers reporting a moderate or large positive change as the result of receiving feedback, by area of work or career: international comparison

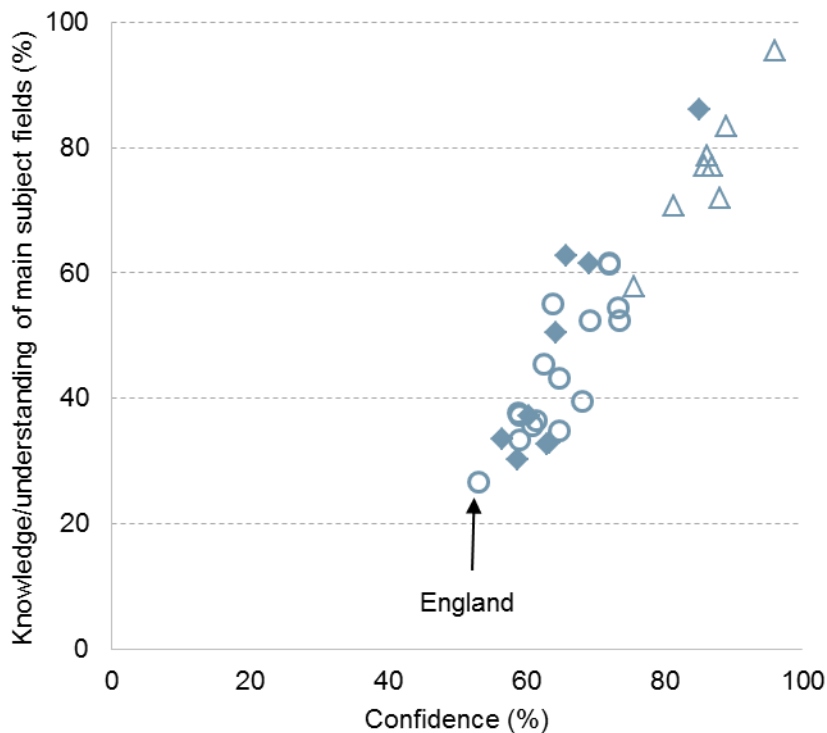
Area of work/career	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Confidence as a teacher	53	65	63	63	85	69	86	71
Use of student assessments	49	49	32	40	75	63	80	59
Teaching practices	48	55	38	44	89	69	81	62
Classroom management practices	42	47	33	38	71	62	79	56
Public recognition from head or colleagues	41	55	56	52	83	49	75	61
Motivation	41	59	61	56	82	63	80	65
Job satisfaction	39	56	60	52	77	61	80	63
Role in school development initiatives	36	45	33	35	63	49	67	51
Job responsibilities at the school	35	50	34	43	71	58	79	55
Likelihood of career advancement	33	30	15	18	34	44	53	36
Methods for teaching SEN pupils	30	40	30	33	63	40	55	45
Amount of professional development	28	40	27	34	42	47	66	46
Knowledge/understanding of main subject field(s)	27	47	33	33	86	62	77	53
Salary and/or financial bonus	18	22	13	7	28	38	39	25

Source: OECD (2014) Table 5.7

Note: The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

14. There are several possible explanations for the lower figures for England. The quality of feedback might be lower on average and hence have less effect. Teachers in England could be less easy to change in their attitudes or behaviour. Or their need for change may be less e.g. they might have teaching practices that are less in need of improvement. (These explanations might also account for the differences on average between the high and low performers.) But there may, of course, be other explanations for the differences. It also needs to be remembered that the figures for England refer to all teachers – given that feedback is universal – while those for other countries often do not (see Table 5.1).

Figure 5.2 Percentage of teachers reporting a moderate or large positive change in their (i) confidence and (ii) knowledge/understanding of their main subject field(s) as a result of feedback: international comparison



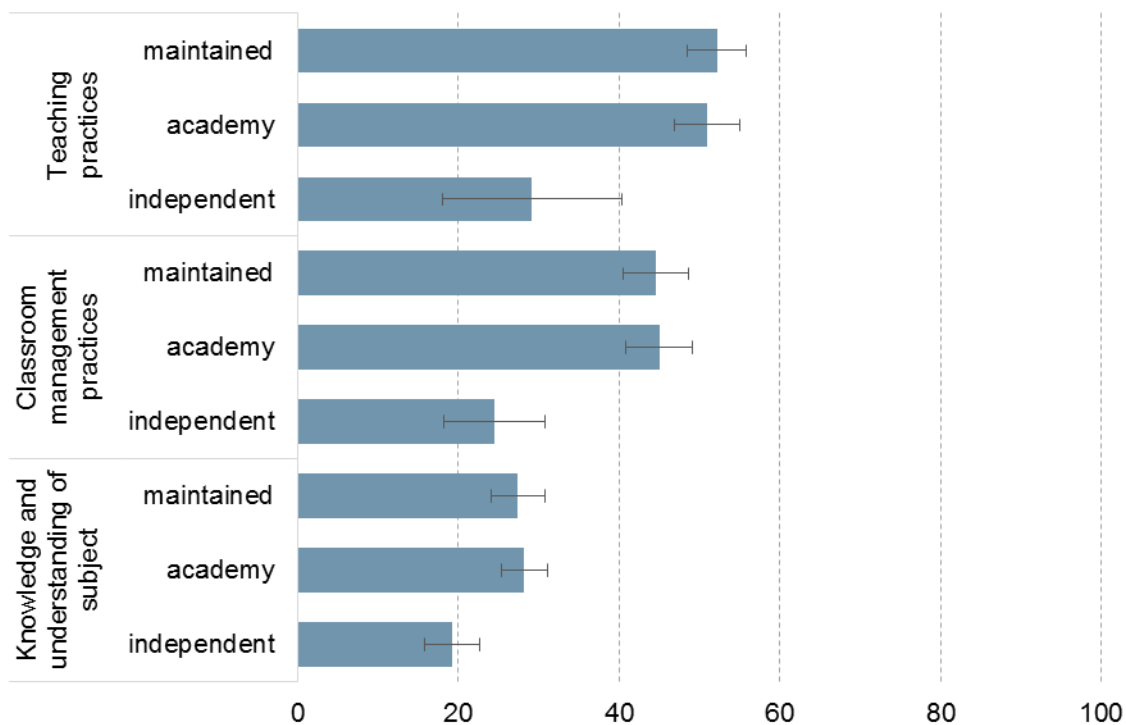
Source: OECD (2014) Table 5.7

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

15. Although the figures for England are low compared to those for many other countries, they are very far from being negligible: about a half of all teachers say feedback had a moderate or large positive impact on their confidence, on their teaching practices, and on their job satisfaction. Only for 'salary and/or financial bonus' does the figure fall below a quarter.
16. Figure 5.3 illustrates the variation within England across schools for three areas: teaching practices, classroom management practices, and knowledge/understanding of main subject area(s). In each case, teachers in independent schools are substantially less likely to say there has been a moderate or large positive change following feedback. For example, just under 30% report this for their teaching practices, compared to 51% for maintained schools and academies. The graph shows that there is a large margin of error around this figure, but the difference between the percentages for independent school teachers and those in state-funded schools is statistically significant, and the same is true for classroom management and knowledge/understanding of main subject area(s).

17. By contrast, we find almost no differences in the reported impact of feedback for any of the 14 areas of work and career across schools with different Ofsted ratings or in different quintile groups of pupil achievement in Key Stage 4. An exception is the impact on motivation where very different percentages of teachers in schools rated by Ofsted as ‘outstanding’ and ‘inadequate’ report a moderate or large positive impact of feedback: 46% versus 26%. These differences are statistically significant despite the small size of the sample of teachers in inadequate schools. Around 40% of teachers in ‘good’ or ‘satisfactory’ schools report such an impact.

Figure 5.3 Percentage of teachers reporting a moderate or large positive change in their (i) teaching practices, (ii) classroom management practices, and (iii) knowledge/understanding of their main subject field(s) as a result of feedback, by school type



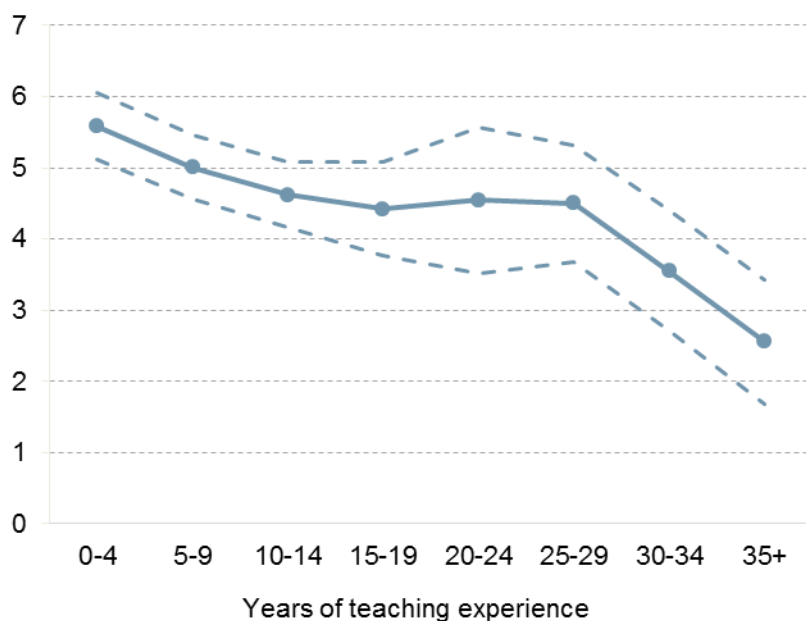
Source: TALIS database

Note: The black lines represent 95% confidence intervals.

18. To summarise teachers’ overall views of the impact of feedback, we created a variable equal to the number of types of moderate/large positive changes reported by each teacher. The average value for teachers in independent schools was 3.9, significantly below that for teachers in academies and maintained schools: 4.9 in both cases. There were no significant differences across Ofsted rating or Key Stage 4 performance. As far as teacher characteristics are concerned, Figure 5.4 shows that teachers with less teaching experience report a larger number of positive changes, on average: 5.6 for teachers with 0-4 years of experience compared to 3.6 for those with 30-34 years and 2.6 for those with 35+ years. The decline with years in the profession

is consistent with greater experience resulting in less need for change.⁶² There is no difference in the average between men and women.

Figure 5.4 Average number of areas or work or career in which teachers report a ‘moderate’ or ‘large’ positive change as a result of feedback, by years of teaching experience



Source: TALIS database

Note. The dashed lines represent the upper and lower bounds of the 95% confidence level.

5.3 How often does formal appraisal take place?

19. We now turn to the headteachers’ reports on formal appraisal in their schools. Table 5.4 shows the percentage of teachers in schools where the head reports that formal appraisal of every teacher takes place at least once a year, distinguishing various sources of appraisal. Most of the figures for England are well above the averages for the high performers. (The low performers are again substantially above the high performers on average.) However, there is huge variation across the high performing countries. This is illustrated by the contrast between Finland and Flanders, on the one hand, and Japan and Singapore on the other. In all cases, the England figures also equal or exceed the averages across all countries in TALIS. The picture from the table is one of the vast majority of teachers in England being formally appraised at least once a year by one or more people or bodies.

20. Figure 5.5 compares the figures reported by headteachers for at least annual formal appraisal from any source (horizontal axis) with those for the percentages of teachers reporting that they received feedback from any source which were analysed earlier in

⁶² The ambiguity in when the feedback was received should again be noted – see the footnote at the start of the chapter.

Table 5.1 (vertical axis). (As with Table 5.4, the figures for the heads' reports refer to the percentages of teachers and not schools.) Recall that the questions to teachers about feedback cover more than formal appraisal and refer implicitly to the period since arrival at the school. England is one of the countries up in the top right corner of the graph, with very high figures both for feedback and appraisal. The four high performing countries also found in this corner are the three Asian countries, Japan, Korea and Singapore, and Estonia.

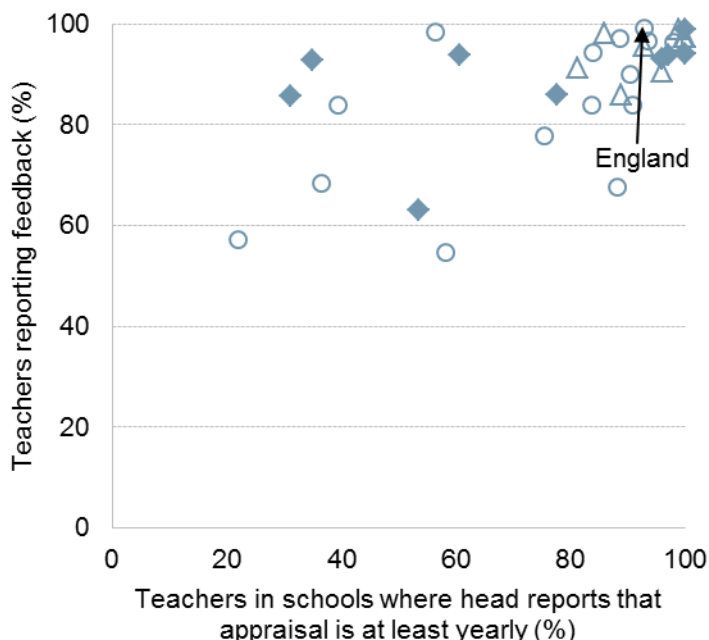
Table 5.4 Percentage of teachers in schools where the head reports that teachers have formal appraisal from one or more sources at least once a year: international comparison

Source of appraisal	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
SMT	90	54	6	12	72	98	78	57
Other teachers	86	31	3	5	59	24	50	32
Assigned mentor	67	34	2	20	56	50	52	34
Headteacher	65	57	51	15	93	90	86	66
External individuals or bodies	24	20	4	3	67	36	52	25
Any of above	93	72	54	31	97	100	93	78

Source: OECD (2014) Table 5.1.Web and TALIS database

Note: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

Figure 5.5 Percentage of teachers in schools where the head reports that teachers are formally appraised at least once a year and percentage of teachers reporting feedback: international comparison



Source: OECD (2014) Table 5.4 and TALIS database

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

21. Looking more closely at the entries for England in Table 5.4, some are much higher than one would expect from our earlier analysis of feedback received by teachers in Table 5.1. We saw from Table 5.1 that only 42% of teachers in England reported ever receiving feedback from the headteacher, whether through formal or informal channels. Yet Table 5.4 shows 65% of teachers being in schools where the head says that he or she formally appraises every teacher each year. (An assumption that appraisal should lead to some feedback seems reasonable.) There is a similar contrast in the figures for feedback from other teachers compared to formal appraisal by other teachers each year – 51% in Table 5.1 versus 86% in Table 5.4. Whatever the reasons for the differences between the teacher and headteacher reports, which may include reporting error of various types, a clear picture remains in terms of the international comparison: there is more reporting in England than in many other countries both by teachers of feedback and by headteachers of annual appraisal (by someone, not necessarily the head).
22. Significant variation within England in systems of formal appraisal is hard to detect due to the small sample size of schools. (There is one report per school by the headteacher, whereas for feedback we analyse reports by every teacher in the sample so the sample size is much larger.) Independent school headteachers report no annual formal appraisal of teachers by external bodies, which is not surprising. Excluding this source, the average number of individuals or bodies giving formal appraisal for each teacher reported by independent school heads is 2.2, compared to 3.0 in other schools, but the difference is only of marginal statistical significance and the small number of independent schools in the sample (just 10) needs to be noted again. We find no significant variation in the frequency of heads' reports of each source of appraisal, or in the average number, by Ofsted rating or by average Key Stage 4 achievement of the school's pupils.

5.4 What outcomes do headteachers see from appraisal?

23. What do the headteachers say are the outcomes of appraisal? Table 5.5 shows the percentage of teachers in schools in which the head reports that a particular outcome follows teacher appraisal 'most of the time' or 'always'. (The calculations are restricted to schools where formal appraisal occurs.) Some outcomes concern teacher development. These are the ones most commonly reported and come towards the top of the table. Other outcomes are potentially more punitive (a 'change in salary/financial bonus' could be either positive or negative) and are less commonly reported and come lower down in the list.
24. The figures for England for the first four outcomes in the table are high or very high by international standards, whether judged by the average for the high performers or that

for all countries in TALIS.⁶³ As is often the case, the figures for the high performing countries vary substantially. Of the four example countries in the table, Finland, Flanders and Japan all have figures that are typically well below those for England, while those in Singapore are all higher.

Table 5.5 Percentage of teachers in schools where heads report outcomes occur most of the time or always after formal appraisal: international comparison

Outcome	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Remedies for any weaknesses in teaching discussed with teacher	80	62	42	72	20	92	84	69
Development or training plan	76	45	23	21	13	79	57	44
Appoint mentor to help improve teaching	68	34	4	43	6	79	33	26
Material sanctions, if teacher is found to be a poor performer	32	6	0	0	2	50	6	7
Change in career prospects	16	10	3	4	1	28	14	11
Change in work responsibilities	14	12	3	5	4	35	17	12
Change in salary or payment of a financial bonus	6	9	2	1	1	49	10	9
Dismissal or non-renewal of contract	5	3	1	7	1	4	7	5

Source: OECD (2014) Table 5.3.Web

Note: 'material sanctions' include withholding annual increases in pay. The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

25. Figure 5.6 plots the percentages for each country for the second and third outcomes, a development or training plan is prepared for the teacher and the appointment of a mentor ('to help the teacher improve his/her teaching'). England's outlying position towards the top right corner, second only to Singapore, is in striking contrast to the cluster of seven countries at the bottom left corner where either outcome happens infrequently or even rarely: Finland, France, Iceland, Japan, Norway, Portugal, and Spain.

26. The outcome in the fourth row in Table 5.5, 'material sanctions', refers to the statement:

'If a teacher is found to be a poor performer, material sanctions such as withheld annual increases in pay are imposed on the teacher'

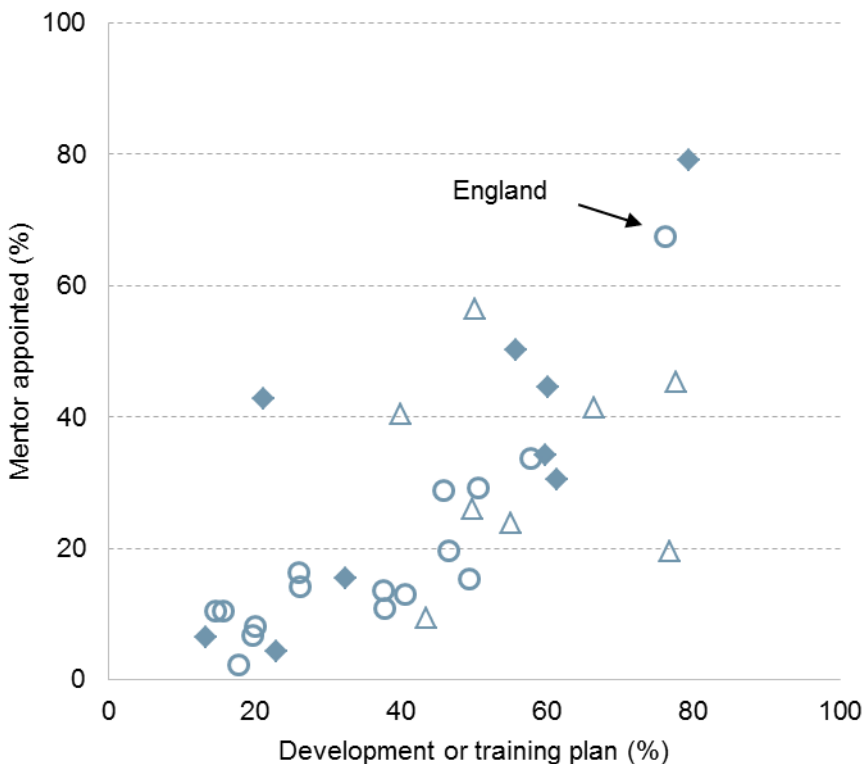
Besides Singapore (50%), England (32%), and Sweden (31%), only three other countries even reach double figures (Chile, the Czech Republic, and Romania).

⁶³ It seems surprising that the first outcome of appraisal, 'measures to remedy weaknesses are discussed with the teacher', is not almost universal in every country. One might think that such discussions are an integral part of the appraisal process. If the response 'sometimes' is included in the figures, the percentage is indeed 100% in most countries, including England.

England is therefore one of a very small group of countries where this outcome is at all common.⁶⁴

27. Many more headteachers report the punitive (or potentially punitive) outcomes as occurring ‘sometimes’. If this response is included in the figures for ‘material sanctions’, the percentage of teachers working in schools where the head reports this outcome rises from the 7% shown in Table 5.5 to 22% on average across all TALIS countries. The figure for England rises by a much bigger margin, to 78%. The average figures for all countries for ‘change in salary/financial bonus’ and ‘dismissal/not extend contract’ rise to 34% and 56% (from 9% and 5% respectively). Again, the rise is much larger in England – to 66% and 81%. The large majority of teachers in England work in schools where the head reports as possible outcomes from appraisal that involve changes in pay or contract and this is not true of many other countries.

Figure 5.6 Percentage of teachers working in schools where the head reports that (i) the development of a training plan and (ii) the appointment of a mentor follow appraisal most of the time or always: international comparison



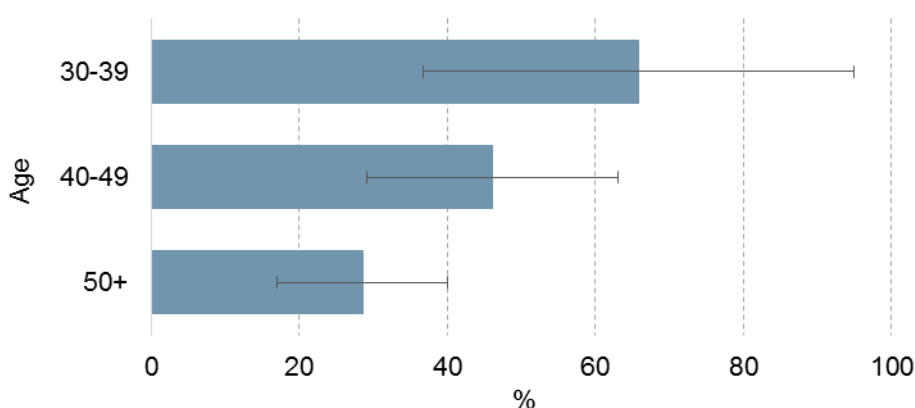
Source: OECD (2014) Table 5.3.Web

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

⁶⁴ Although the survey took place before the revised teachers’ pay and conditions in England came into force in September 2013, headteachers would have known these changes were on the horizon and this may have been reflected in their answers.

28. Which are the schools in England where the head reports ‘material sanctions’ for poor performance as being likely to occur? (We restrict attention to the responses ‘most of the time’ and ‘always’, as in Table 5.5.) First, there are no independent school heads in the sample who report this outcome (the same is also true for a change in career prospects, a change in salary, or dismissal/non-extension of contract). Second, among the heads in maintained schools and academies, younger heads appear more likely to report material sanctions – see Figure 5.7. Despite the large margins of error around the figures, the hypothesis of no difference across the three age groups can be rejected. (We find no significant differences by gender of the head.)

Figure 5.7 Percentage of headteachers in maintained schools and academies who report ‘material sanctions’ as following appraisal ‘most of the time’ or ‘always’, by age of the headteacher



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

5.5 What are teachers’ views of appraisal and feedback?

29. Finally, we turn to the teachers’ views of how appraisal and feedback operate in general in the school, as distinct from the impacts on their own teaching or careers. The question concerned makes clear to teachers that their opinions are being sought of the whole system of both formal appraisal and informal feedback. Table 5.6 shows the percentage of teachers agreeing or strongly agreeing with nine different statements about the aims and outcomes of appraisal and feedback in their school.

30. Several of the statements are very similar to those put to the headteachers about formal appraisal that were analysed in the previous section. These include the statements in the first three rows in the table. Most teachers in England agree that the developmental outcomes concerned do occur in their school, in line with the views of heads about these outcomes following formal appraisal shown in Table 5.5. And as is the pattern with the headteacher reports, the percentages in the first three rows are higher for England than the averages across all TALIS countries.

31. The fourth and fifth rows in Table 5.6 show around a half of teachers in England agreeing with the following two statements:

'Feedback is provided to teachers based on a thorough assessment of their teaching'

'Teacher appraisal and feedback are largely done to fulfil administrative requirements'

One might think that teachers would either agree with one of these statements or the other – the former presenting a positive view of appraisal and feedback and the latter a negative view. Within England this tends to be the case but the separation of the sample is far from complete: about three-quarters of teachers disagreeing with the first statement agree with the second one while two-thirds of teachers disagreeing with the second statement agree with the first.

Table 5.6 Percentage of teachers agreeing or strongly agreeing with statements about the aims and outcomes of formal appraisal and feedback in their school: international comparison

Aim or outcome	Eng	H9	Fin	Fla	Jap	Sng	L8	All
1. Remedies for any weaknesses in teaching discussed with teacher	83	73	65	68	71	88	83	74
2. Appoint mentor to help improve teaching	73	49	17	53	31	84	63	48
3. Development or training plan	66	53	38	29	46	80	73	59
4. Feedback follows a thorough assessment of teaching	55	43	17	47	32	60	63	47
5. Appraisal and feedback largely done to fulfil administrative requirements	51	52	62	51	47	53	51	51
6. Consistently underperforming teachers likely to be dismissed	43	27	16	33	14	46	37	31
7. Best performing teachers receive greatest recognition	40	36	25	15	37	71	50	38
8. Appraisal and feedback have little impact on teaching practice	34	41	50	41	32	39	41	43
9. If a teacher is found to be poor performer, material sanctions follow	30	-	-	-	-	-	-	-

Source: OECD (2014) Table 5.8

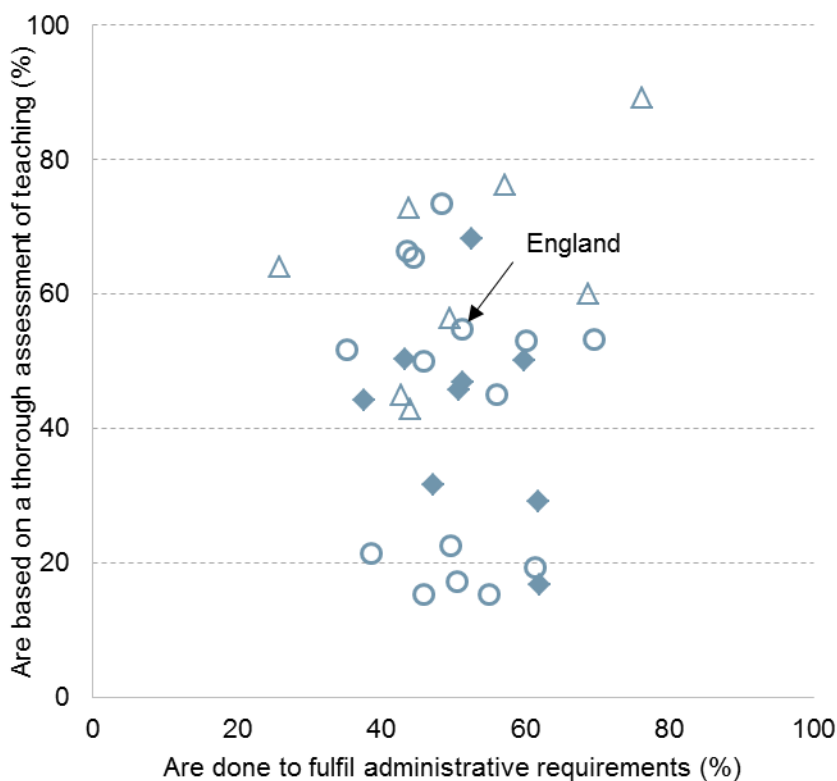
Note: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

32. Figure 5.8 plots the percentages of teachers agreeing with the fourth and fifth statements for all countries, with the positive view 'thorough assessment of teaching' on the vertical axis and the negative view 'administrative requirement' on the horizontal axis. One might expect to see a downward sloping relationship between the two sets of figures, with countries where more teachers are positive about the basis for appraisal and feedback being the countries where fewer teachers are negative

about the purpose of the system. But this is not the case. England is a country where teachers are a bit more positive than average about the basis for feedback (Finland, Japan and Australia are the three high performing countries towards the bottom of the graph with figures at or below 30%) and right at the average in terms of negative views about the purpose of appraisal and feedback.

33. The penultimate row in Table 5.6 shows the percentage of teachers agreeing with another negative view – that appraisal and feedback have little impact on teaching practices in their school. The figure for England of 34% is a bit lower than in many other countries, including all but one high performer (Japan), implying a less negative view on average. This contrasts with the pattern shown earlier in Table 5.3 detailing teachers’ reports of impacts of feedback received on their own individual teaching practices: teachers in England were less positive than in other countries with only about half saying there had been a moderate or large impact.

Figure 5.8 Percentage of teachers who agree or strongly agree that (i) feedback is based on a thorough assessment of teaching and (ii) appraisal and feedback are largely done to fulfil administrative requirements: international comparison



Source: OECD (2014) Table 5.8

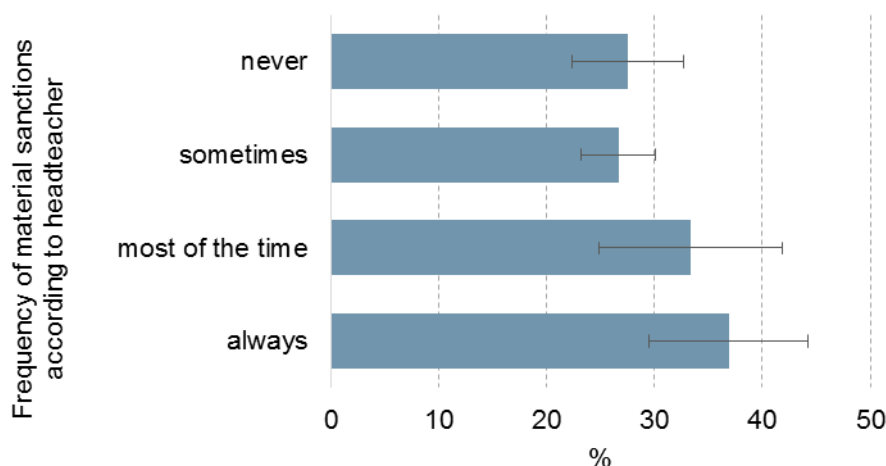
Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

34. The final row in the table refers to a statement put only to teachers in England:

'If a teacher is found to be a poor performer, he/she would experience material sanctions such as withheld annual increases in pay'

30% of teachers agree. This compares to a figure of 32% of teachers who are in schools in England where the head reports 'material sanctions' as an outcome that occurs 'most of the time' or 'always' following formal appraisal (Table 5.5). It is notable that the teachers' responses vary only modestly with the head's view – see Figure 5.9. In schools where the head says that 'material sanctions' never follow formal appraisal indicating poor performance, 28% of teachers agree with the statement above, apparently contradicting the head's view. And the figure rises to only 37% in schools where the headteacher says that the sanction 'always' occurs. This seems to indicate a considerable amount of disagreement between teachers and heads. The same holds for the other statements in Table 5.6 that are similar to those put to headteachers.

Figure 5.9 Percentage of teachers who agree or strongly agree that poorly performing teachers face 'material sanctions', by headteacher reports of the frequency of this outcome



Source: TALIS database

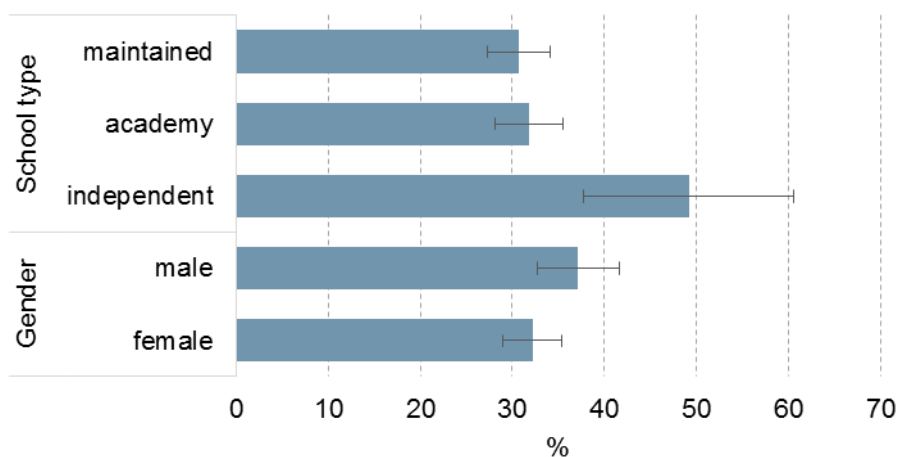
Note: 'material sanctions' include withholding annual increases in pay. The black lines represent 95% confidence intervals.

35. The other outcome in Table 5.6 that is a clear sanction for underperformance is dismissal, shown in row 6. In this case, comparison of England with other countries is possible as the statement concerned was put to teachers in all countries. We saw in the previous section that only 5% of teachers in England work in schools where the head reports dismissal or non-renewal of contract as an outcome that follows formal appraisal most of the time or always (Table 5.5). But that this figure rises to 81% when the response 'sometimes' is included – and that this percentage exceeds the average for all countries in TALIS (56%) by a large margin (the average for the high performers is 66%). Here, Table 5.6 shows 43% of teachers in England agreeing or

strongly agreeing that consistently underperforming teachers are likely to be dismissed, compared to an average for high performing countries of 27% and an average for all countries of 31%. As with the headteachers, teachers in England report dismissal as a possible sanction more often than is the case in many other countries.

36. We find few statistically significant differences across either school or teacher characteristics in the percentage of teachers in England agreeing or strongly agreeing that appraisal or feedback have little impact on teaching practice ('little impact upon the way teachers teach in the classroom'). Figure 5.10 shows two of them. Teachers in independent schools are substantially more likely to hold this view than teachers in state-funded schools (49% compared to 31%) and there is also a small difference between men and women (37% compared to 32%).⁶⁵

Figure 5.10 Percentage of teachers who agree or strongly agree that appraisal and feedback have little impact on teaching practices in their school, by school type and teacher gender



Source: TALIS database

Note: The black lines represent 95% confidence intervals.

5.6 Summary

37. This chapter has shown that England has near universal systems of appraisal of teachers, reported by school heads, and that the great majority of teachers in England report receiving feedback, whether through formal appraisal or more informal avenues of comment. England is a high appraisal/feedback country compared with the average

⁶⁵ Independent school teachers are also more likely than teachers in maintained schools and academies to agree or strongly agree that appraisal and feedback are largely done to fulfil administrative requirements: 65% compared to 48%, a difference which is again statistically significant. But in this case there is no difference by gender.

TALIS country and with some but not all of the high performers. The latter, as in the analyses of other chapters in this report, display considerable variation.

38. But we have also seen that teachers in England tend to be rather less positive about the effect of feedback than teachers in many other countries. We noted various possible explanations for this but it is impossible to choose between them.
39. Within England, there is some indication of less feedback in independent schools, and feedback that is seen as less effective on the teacher's own job and career or teaching practices in the school in general.
40. There is also some evidence (but not a lot) of variation across schools with different Ofsted ratings, with teachers in 'outstanding' schools reporting more feedback from some sources. However, we found no significant differences across Ofsted ratings in simple summary measures of the number of different sources of feedback or the number of positive changes in teaching that occurred as the result of feedback.
41. We have only scraped the surface of the data as far as the comparisons that can be made of each headteacher's views of appraisal and feedback and the teachers' views within the same school, but enough to show that teachers and heads in England do not always agree.

Chapter 6 Teachers' views of their jobs

- 73% of teachers in England feel that teachers are underpaid compared to other similarly qualified professionals. But 53% agree that their own pay is fair given their level of performance.
- Teachers who work long hours are less satisfied with their pay. 61% of teachers working 37 hours or less per week agree that their own pay is fair, compared to 44% who work 56 hours or more.
- Most teachers in England disagree with the view that they lack the autonomy they need to do a good job (71%). The great majority see parents as supportive (87%). 61% agree that there is scope for progression into a leadership role. Views are less positive in schools with lower Ofsted ratings.
- 65% of full-time teachers in England believe that they have scope to progress to a higher pay level but only 45% of part-time teachers.
- 51% of teachers in England think that their workload is unmanageable and 85% report that the accountability system (e.g. Ofsted, performance tables) adds significantly to the pressure of their jobs.
- Around 1 in 3 teachers in England (35%) believe that their profession is valued by society. The majority of countries in TALIS record even lower figures. Teachers in most high performing countries are more positive, including two thirds in Singapore and Korea, although they are not in Japan.
- There is a strong negative association in England between teacher age and whether the teacher believes that the teaching profession is valued in society – younger teachers hold more positive views. England is unusual in this respect. Headteachers in almost all countries, England included, are more positive than teachers about society's valuation of the profession.
- 82% of teachers in England either agree or strongly agree with the statement that 'all in all, I am satisfied with my job.' Although this figure is high, it is lower than in any other country in TALIS.

1. This chapter focuses on teachers' attitudes and beliefs surrounding the teaching profession, and their reflections on their own careers. It attempts to answer the following four questions:

Do teachers believe that their pay is fair?

Are teachers satisfied with their working conditions?

Do teachers believe their profession is valued in society?

Are teachers happy in their jobs?

2. Given the data collected in TALIS, the first two questions can be addressed only for England. But comparisons with other countries can be made when dealing with the third and fourth questions.

6.1 Do teachers believe that their pay is fair?

3. As part of the TALIS questionnaire in England, teachers were asked whether they strongly agree, agree, disagree or strongly disagree with the following two statements about their pay:

'Teachers are underpaid compared to other qualified professionals with similar levels of responsibility'

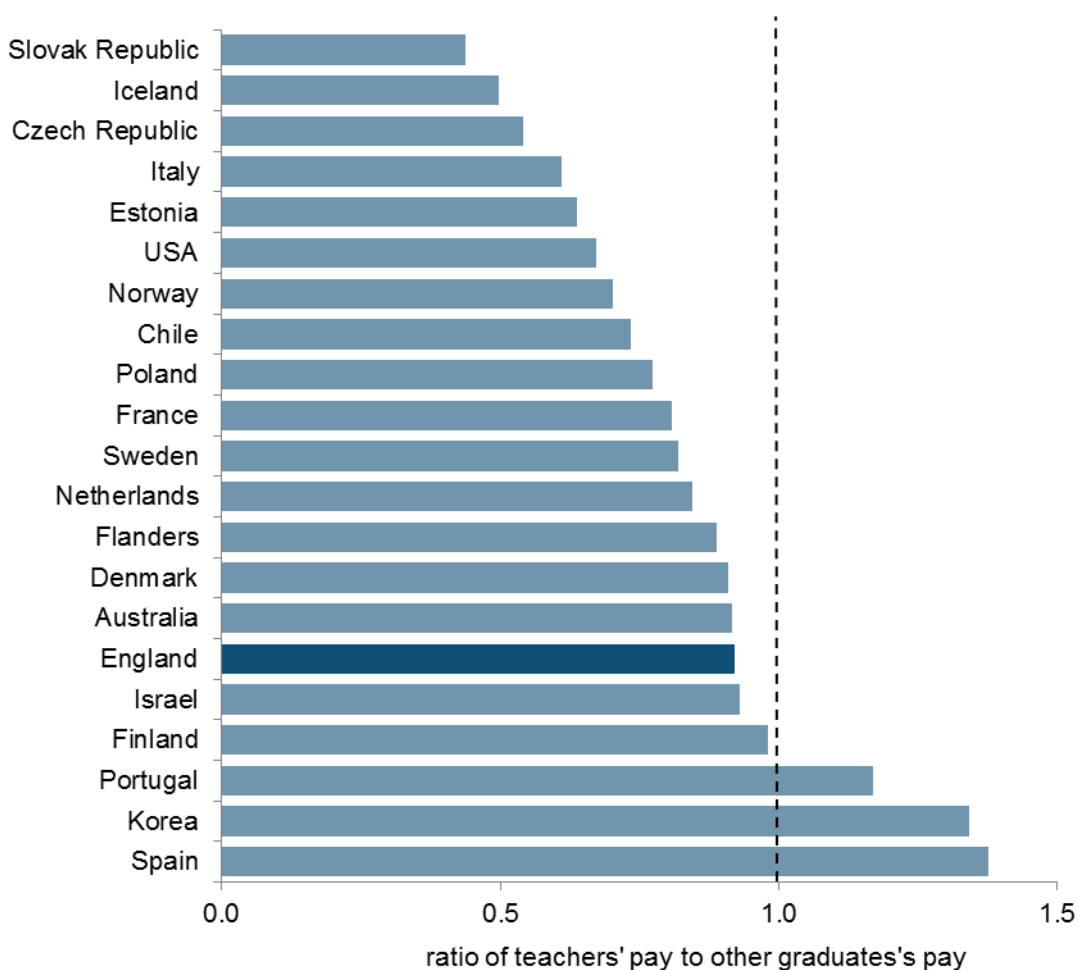
'My own pay is fair given my performance'

4. This part of the chapter explores teachers' reactions to these statements, providing insight into how teachers view their level of pay.
5. Teachers in England clearly feel that they are underpaid compared to other similarly qualified professionals. Just 27% of respondents disagreed or strongly disagreed that teachers are underpaid compared to other professionals. In contrast, 47% agreed that they were underpaid and 27% strongly agreed.⁶⁶
6. However, teachers' views on their own pay, given their own level of performance, are much more evenly split. The majority of teachers (53%) either agreed or strongly agreed that their pay is fair given their level of performance. Only a small minority of respondents (8%) expressed strong dissatisfaction with their pay.

⁶⁶ The figures do not sum to 100 due to rounding. As we noted in Chapter 1, it is important to bear in mind that teachers' views of pay that are recorded in TALIS refer to the Spring of 2013. These views may have changed subsequently.

7. The question putting these statements to teachers was asked only in England and not in other countries that participated in the TALIS study, meaning comparison of teacher views of pay across countries is not possible.
8. However, to provide context for the findings for England, Figure 6.1 illustrates how teachers' pay varies across countries. Specifically, it presents the ratio of average pay for lower secondary teachers to the pay of other university educated workers between the ages of 25 and 64. The data refer to 2011 in most cases. Countries with values greater than one are those where teachers on average earn more than the average graduate. Values below one are for countries where they earn less.

Figure 6.1 Ratio of average pay of lower secondary teachers to other graduates in 2011: international comparison



Source: OECD (2013a) Table D3.2

Note: With one or two exceptions, the figures are the ratio of the average lower secondary education teacher salary to the average salary of full-time, full-year workers with tertiary education aged 25 to 64 (including bonuses and allowances). Data refer to 2011 in most cases.

9. Two features of the graph stand out. First, the ratio of teacher pay to other graduate pay is closer to one than in many other countries. The ratio in England is 0.92 compared to, for example, just 0.50 in Iceland, 0.61 in Italy, 0.67 in the USA and 0.70 in Norway. Second, the relative pay of teachers tends to be higher in the high performing countries (as defined in Chapter 1), with the ratio standing at 1.34 in

Korea, 0.98 in Finland and 0.84 in the Netherlands. It is also interesting to note that the relative pay of teachers to other graduates in England is exceeded in only two of the six high performing countries present in the graph.

10. Tables 6.1 (pay relative to other professions) and 6.2 (own pay) investigate how teachers' views on pay differ with personal and job characteristics and with school type. The teachers' views do not seem to vary systematically with gender, age or whether the teacher works full or part time. Nor are the differences by type of school statistically significant. The somewhat negative views of pay in England hold across a broad spectrum of teachers – it is not confined to just certain groups.

Table 6.1 Teacher views on whether teachers are underpaid compared to other professions, by teacher and school characteristics (percentages)

	strongly disagree	disagree	agree	strongly agree
<i>Gender</i>				
Female	2	25	48	25
Male	3	23	44	30
<i>FT or PT teacher?</i>				
Full-time	3	23	47	27
Part-time	2	28	44	26
<i>Age</i>				
below 25	2	20	54	23
25-29	1	20	48	31
30-39	3	28	43	27
40-49	3	26	46	24
50-59	3	20	53	25
60+	4	19	38	39
<i>School Type</i>				
Maintained	2	26	45	26
Academy	3	24	47	26
Independent	2	18	52	28
<i>All</i>	3	24	47	27

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

11. However, teachers who work longer hours tend to hold more negative views surrounding teacher pay – see Figure 6.2. Recall from Chapter 2 that teachers in England reported some of the longest working hours of any country that took part in TALIS. About 55% of teachers who work between 35 and 45 hours per week believe their own pay is fair and 70% believe teachers are generally underpaid relative to other comparable professions. In contrast, less than 40% of teachers who work more than 65 hours per week see their own pay as fair. (Note that only one in ten teachers report working such long working hours – see Table 2.5.) We find this relationship between hours worked and satisfaction with pay to be statistically significant at conventional thresholds.

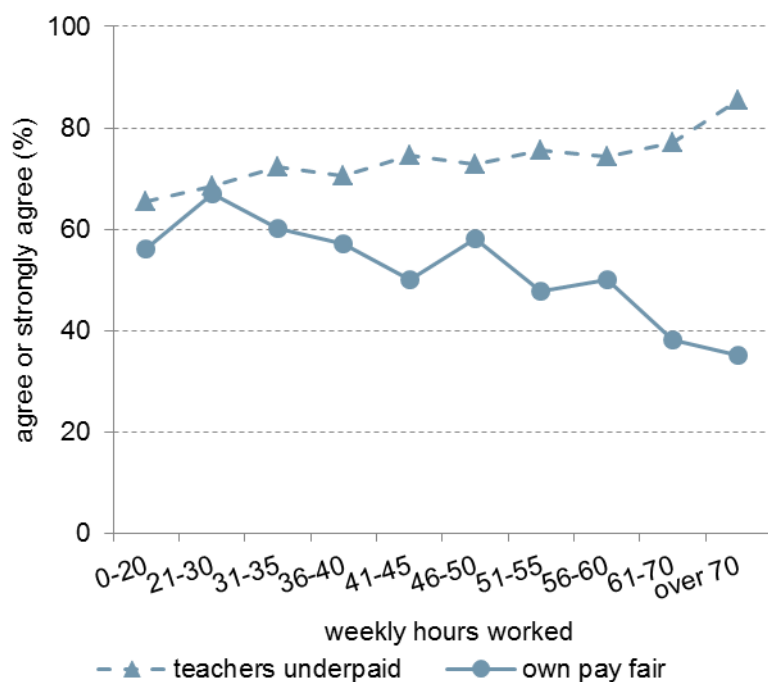
Table 6.2 Teacher views on whether own pay is fair given performance, by teacher and school characteristics (percentages)

	strongly disagree	disagree	agree	strongly agree
<i>Gender</i>				
Female	7	41	48	4
Male	9	37	50	4
<i>FT or PT teacher?</i>				
Full-time	8	39	49	5
Part-time	8	40	49	3
<i>Age</i>				
below 25	9	42	47	2
25-29	9	42	45	4
30-39	7	38	52	3
40-49	6	41	48	5
50-59	8	37	49	5
60+	11	33	44	12
<i>School Type</i>				
Maintained	8	38	49	5
Academy	7	39	50	5
Independent	10	42	46	3
<i>All</i>	8	39	49	4

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

Figure 6.2 Percentage of teachers agreeing or strongly agreeing that (i) teachers are underpaid and (ii) their own pay is fair given their performance, by hours worked



Source: TALIS database

12. Is it long working hours that is causing these teachers to be dissatisfied with their pay? It is impossible to provide a definitive answer to this question, but we can provide some insight by examining whether the link between long working hours and dissatisfaction with pay can be explained by observable teacher characteristics. In other words, is it the long hours in themselves which is responsible for the feeling of unfair pay? Or is this finding simply a reflection of certain types of teachers choosing or being obliged ('selecting') to work long hours?

13. To answer this question, we estimate a simple linear probability model, with the dependent variable taking a value of 1 if a teacher views their pay as fair (strongly agree or agree with the statement that their own pay is fair) and 0 otherwise.⁶⁷ The covariate of interest, working hours, is divided into four equal groups (quartiles) as follows:⁶⁸

Bottom Quartile (low working hours) = 0 – 37 hours per week

Second Quartile = 38 – 48 hours per week

Third Quartile = 49 – 55 hours per week

Top Quartile (high working hours) = 56 – 90 hours per week

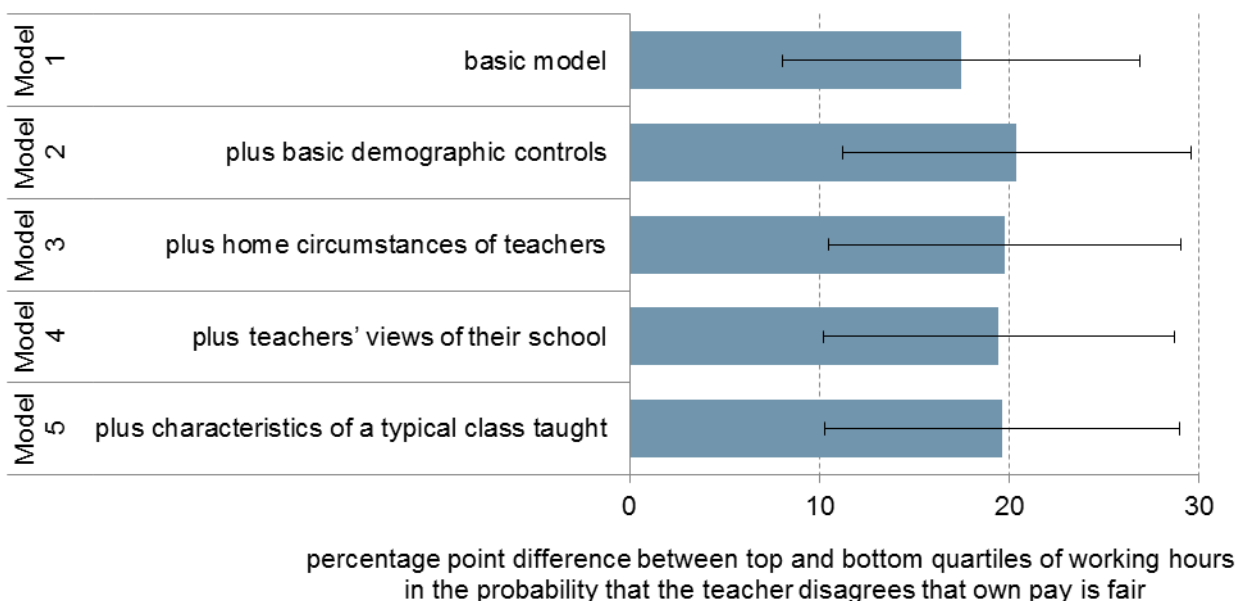
14. To begin, the working hours quartile dummy variables are the only explanatory variables included in the model (the bottom quartile is set to the reference group). We refer to this as Model 1. Other explanatory variables are then added to the model, in an attempt to explain why teachers who work longer hours are less satisfied with their pay. These control variables are added sequentially in blocks. In Model 2 we include basic demographic variables (gender, age, educational attainment, whether the teacher works part time and their subject specialism). Model 3 additionally controls for the home circumstances of teachers (if they are married or cohabiting, and whether they have children). Model 4 then adds explanatory variables reflecting teachers' views of their school, such as whether the school has effective management, and whether they feel they have enough autonomy in their role. Finally, Model 5 then additionally controls for characteristics of a typical class that they teach (e.g. percentage of disadvantaged children, percentage SEN, percentage low achievers, all as perceived by the teacher).

15. The results are illustrated in Figure 6.3. The length of each bar shows the estimated difference in the percentage probability of a teacher disagreeing with the statement that their own pay is fair, comparing those in the top and bottom quartiles of working hours.

⁶⁷ That is, an OLS regression with a 0/1 dependent variable.

⁶⁸ Approximately 70% of teachers who report they are working part-time are within the bottom working hours quartile, with a further 20% in the second quartile.

Figure 6.3 The association of long working hours with the percentage probability that a teacher disagrees with the statement that their own pay is fair



Source: TALIS database

Notes: Estimates from linear probability models of whether a teacher disagrees with the statement 'My own pay is fair given my performance'. The thin black line in the centre of each bar represents the estimated 95% confidence interval.

16. The results for Model 1 show the strong association between working hours and dissatisfaction with pay already demonstrated in Figure 6.2. Teachers in the top quartile of the working hours distribution (56 hours per week or more) are approximately 17 percentage points more likely, on average, to believe their own pay to be unfair, relative to those in the bottom quartile (37 hours per week or fewer).
17. Interestingly, observable teacher characteristics do not seem to explain the association between long hours and dissatisfaction with pay. In fact, the estimate of the difference in the probability of dissatisfaction between the top and bottom quartiles of hours actually increases slightly as additional control variables are added to the model – reaching approximately 20 percentage points in Model 5. Thus it does not seem to be the case that the link between long working hours and dissatisfaction with pay is simply being driven by teachers with certain observed characteristics 'selecting' into doing additional work.
18. In further analysis, we also investigated whether teachers' attitudes towards pay in England are associated with various school characteristics. There is little evidence of a strong association for any of the characteristics considered, including school type (results shown in Tables 6.1 and 6.2), Ofsted rating, percentage of pupils in receipt of Free School Meals or GCSE performance.

19. Teachers in England were also asked whether they believe they have scope to progress to a higher pay level. 38% of teachers either disagreed or strongly disagreed while 53% agreed and 9% strongly agreed. There is also some variation in teacher responses by their gender or subject area. Only 45% of teachers working part-time either agreed or strongly agreed that they had scope for pay progression, compared to 65% of teachers working full-time. As one might expect, younger teachers were much more optimistic about opportunities for pay progression than older teachers.

6.2 Are teachers satisfied with their working conditions?

20. Teachers in England (but not other countries) were asked a lengthy additional question related to their working lives. This section focuses on their responses to four statements concerning working conditions and the ability to operate effectively as a teacher. The statements relate to (i) autonomy, (ii) workload, (iii) the support of parents and (iv) scope for progression into leadership.

21. Specifically, teachers were asked to respond to the following four statements, using a four point scale from 'strongly disagree' to 'strongly agree':

'I do not have the autonomy I need to do a good job as a teacher'

'My workload is unmanageable'

'Parents are supportive of my role as their children's teacher'

'I have scope to progress into a leadership team role'

22. Most teachers in England either disagree (56%) or strongly disagree (15%) with the statement that they lack the autonomy they need to do a good job as a teacher. Similarly, the vast majority of teachers see parents as being supportive of their role (76% agree with the statement above and a further 11% strongly agree). The majority of teachers also see opportunities for progression into leadership roles, with more than 60% agreeing or strongly agreeing that there is scope for progression.

23. However, many teachers view their workload as unmanageable. 38% of those surveyed agreed with this statement with a further 13% strongly agreeing – about a half in total.

24. Most teachers believe that the accountability system adds significant pressure and workload to their job. 85% of teachers in England reported that factors such as Ofsted inspection and school league tables added significant pressure. Similarly, 77% of teachers saw the accountability system as adding significantly to their workload – with more than a quarter of teachers (27%) expressing a strong view. There was relatively little variation in these views by teacher gender, part-time/full-time working status, subject specialism and working hours. However, only 64% of independent school

teachers say that the accountability system adds significant pressure to their jobs, compared to 89% of state school teachers (a statistically significant difference). There is also some evidence that the accountability system adds more pressure and workload to teachers working in schools with lower Ofsted ratings.

25. Tables 6.3 to 6.6 illustrate how teachers' attitudes to their working conditions vary with selected demographic characteristics. It is striking that there is relatively little variation by gender, subject specialism, age group, and type of school.

26. However, Figure 6.4 does suggest that there is a relationship between teachers' working hours and whether they feel they have the opportunity to progress into management (darker bars) and whether they feel their workload is manageable (lighter bars). It is interesting that teachers who work longer hours feel they have more opportunity to progress into a school leadership role, but also feel overburdened in terms of workload. This perhaps suggests that ambitious teachers feel the route into school managerial roles involves working long hours, but also that this is difficult to deal with.

Table 6.3 Teacher views on whether they have the autonomy needed to do a good job as a teacher, by teacher and school characteristics (percentages)

	strongly disagree	disagree	agree	strongly agree
<i>Gender</i>				
Female	14	58	23	5
Male	16	52	24	7
<i>Main Subject</i>				
Languages	17	57	20	6
Human Science	17	53	27	4
Maths and Science	11	59	24	6
Other	15	54	25	6
<i>Age group</i>				
below 25	16	61	21	2
25-29	15	61	21	3
30-39	16	55	25	5
40-49	14	57	23	6
50-59	14	52	25	9
60+	21	52	17	9
<i>School type</i>				
Maintained	14	55	26	6
Academy	15	55	24	7
Independent	17	62	17	3
<i>All</i>	15	56	23	6

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

Table 6.4 Teacher views on whether their workload is unmanageable, by teacher and school characteristics (percentages)

	strongly disagree	disagree	agree	strongly agree
<i>Gender</i>				
Female	3	43	41	13
Male	4	49	35	12
<i>Main Subject</i>				
Languages	2	43	41	14
Human Science	4	42	38	16
Maths and Science	3	48	37	12
Other	4	47	38	11
<i>Age group</i>				
below 25	4	39	51	7
25-29	2	48	37	13
30-39	3	44	39	14
40-49	4	48	36	12
50-59	4	45	39	12
60+	11	38	39	12
<i>School type</i>				
Maintained	3	43	41	13
Academy	3	45	38	14
Independent	4	53	33	10
<i>All</i>	3	45	38	13

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

Table 6.5 Teacher views on whether parents are supportive, by teacher and school characteristics (percentages)

	strongly disagree	disagree	agree	strongly agree
<i>Gender</i>				
Female	2	12	76	10
Male	2	11	75	12
<i>Main Subject</i>				
Languages	2	12	77	10
Human Science	2	9	81	8
Maths and Science	3	10	76	12
Other	1	13	74	12
<i>Age group</i>				
below 25	3	9	76	12
25-29	2	14	76	8
30-39	2	11	78	9
40-49	2	11	75	12
50-59	2	10	75	13
60+	2	6	69	24
<i>School type</i>				
Maintained	2	14	75	9
Academy	2	11	77	11
Independent	1	7	77	16
<i>All</i>	2	11	76	11

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

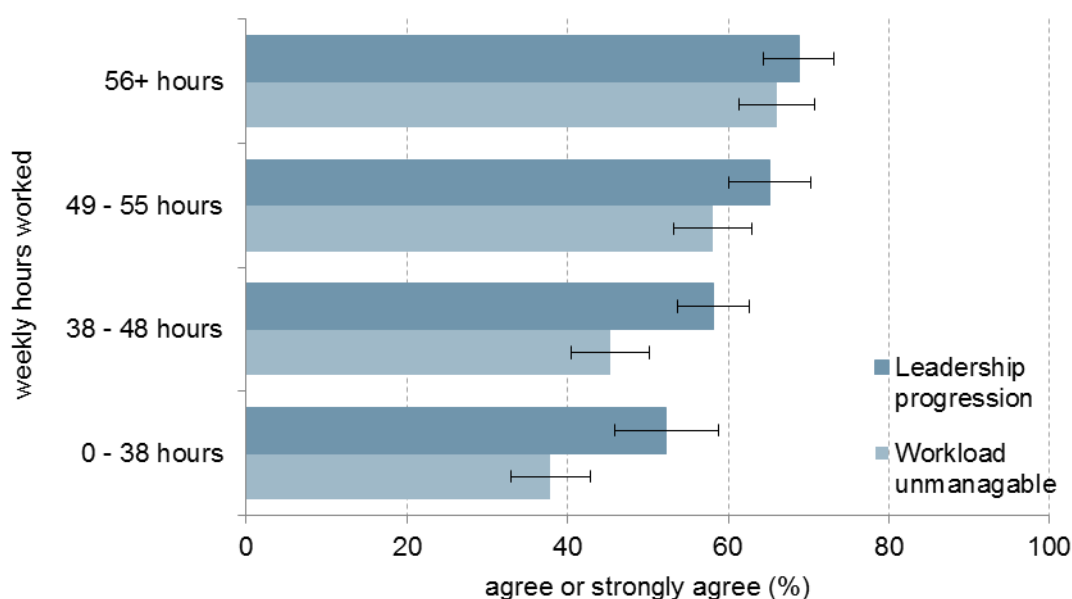
Table 6.6 Teacher views on whether they have scope to progress into a leadership team role, by teacher and school characteristics (percentages)

	strongly disagree	disagree	agree	strongly agree
<i>Gender</i>				
Female	7	33	52	8
Male	9	28	50	12
<i>Main Subject</i>				
Languages	7	30	53	10
Human Science	7	31	48	14
Maths and Science	7	30	54	8
Other	10	32	49	9
<i>Age group</i>				
below 25	2	26	61	10
25-29	5	23	59	13
30-39	6	30	53	11
40-49	9	30	51	9
50-59	12	42	40	5
60+	20	30	40	9
<i>School type</i>				
Maintained	9	29	51	11
Academy	8	32	50	10
Independent	5	35	56	4
<i>All</i>	8	31	51	10

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

Figure 6.4 Percentage of teachers agreeing or strongly agreeing that (i) they have scope to progress into a leadership team role and (ii) their workload is unmanageable, by hours of work



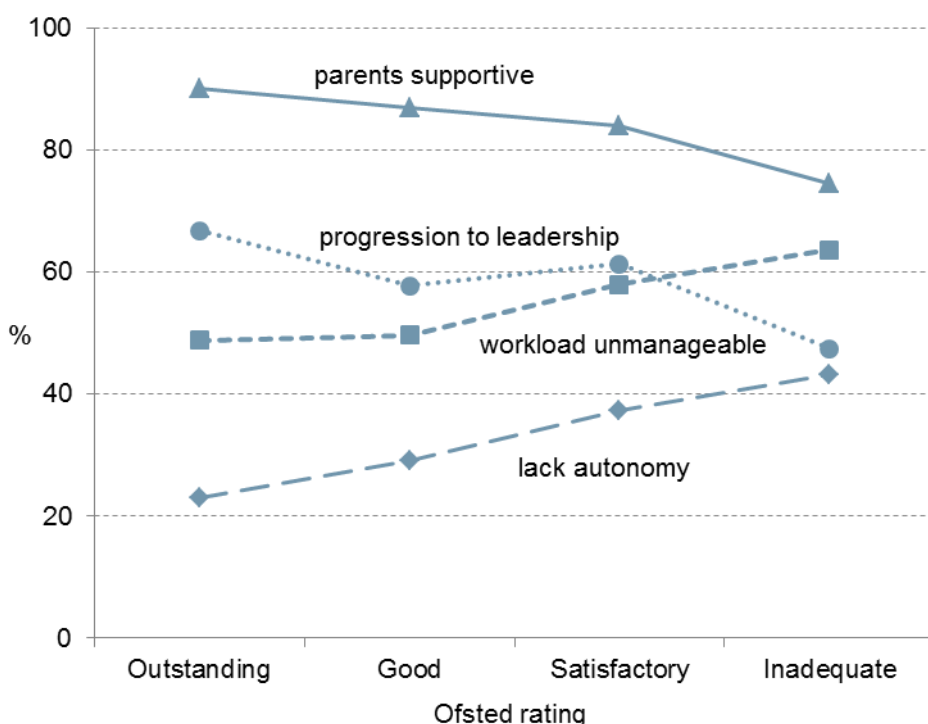
Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

27. How do teachers' attitudes to their working conditions vary with the characteristics of the schools that they work in? Figure 6.5 illustrates the association between the Ofsted rating of the school and the percentage of teachers either agreeing or strongly agreeing with the four statements provided at the start of this section.

28. Teachers working in schools with lower Ofsted ratings are less favourable about their working conditions.⁶⁹ Whereas only 20% of teachers in 'outstanding' schools report a lack of autonomy, this increases to almost 40% in 'inadequate' schools. Similarly, whereas approximately 50% of teachers in outstanding schools report their workload is unmanageable, this increases to 60% for schools that were rated as inadequate.

Figure 6.5 Percentage of teachers agreeing or strongly agreeing with statements on (i) autonomy, (ii) workload, (iii) parent support and (iv) progression, by Ofsted rating of school



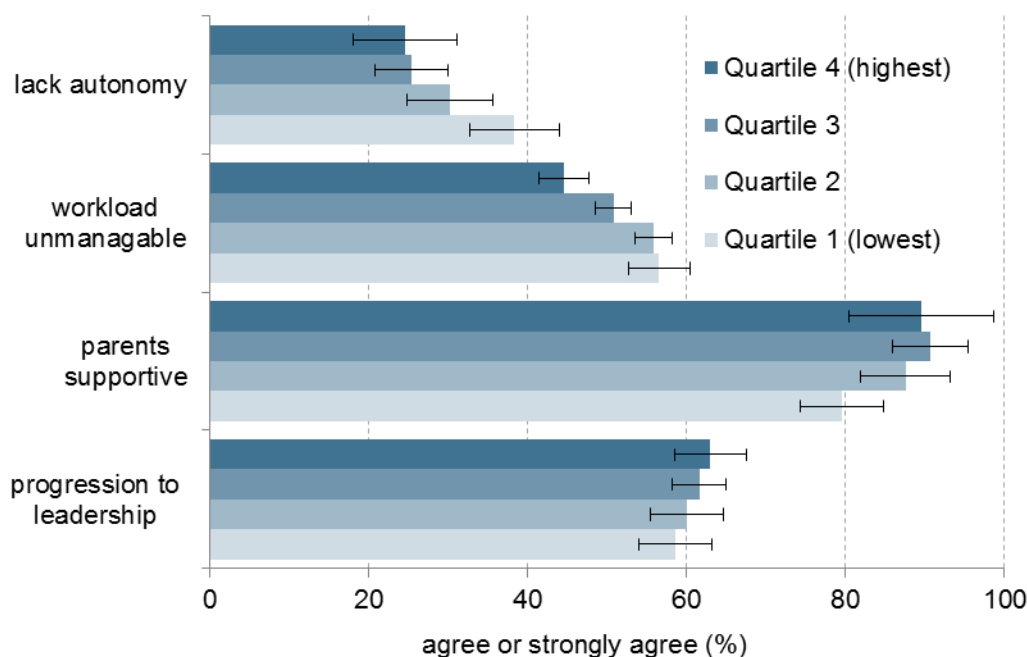
Source: TALIS database

29. Figure 6.6 provides a similar breakdown, but now based upon quartiles of Key Stage 4 test scores. Teachers working in schools with lower average test scores are more likely to agree that they lack autonomy and have an unmanageable workload. They are also more likely to disagree (or strongly disagree) that parents are supportive of their role and that they have opportunities for progression into leadership roles. It is important to remember that these estimates refer to simple associations – they do not reveal whether working in a poor performing school leads to these negative attitudes,

⁶⁹ To test whether the differences by Ofsted rating plotted in Figure 6.5 are statistically significant, a variable with values 1 ('outstanding') to 4 ('inadequate') was entered as a covariate into linear probability regression models for agreement with each statement (agree or strongly agree coded as 1 and other responses as 0). The estimated coefficient was statistically significant at the 5% level in each case.

or whether these negative attitudes leads to a lower performing school. The same holds true for the link found with Ofsted rating discussed in the paragraph above.

Figure 6.6 Percentage of teachers agreeing or strongly agreeing with statements on (i) autonomy, (ii) workload, (iii) parent support and (iv) progression, by Key Stage 4 test quartile of school



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

30. In additional analysis, we also explored the association between teacher attitudes and school type. Differences between academies and maintained schools are small. But there is some suggestion that teachers at independent schools are somewhat more positive. For example, only 43% of teachers within independent schools agreed or strongly agreed that their workload is unmanageable, compared to 52% of teachers in academies and 54% of those in maintained schools. However, caution is needed when interpreting this finding due to the small sample size within the independent group.⁷⁰

6.3 Do teachers believe their profession is valued in society?

31. In the rest of this chapter we analyse answers to questions asked in all countries in TALIS. This means we can compare the views of teachers in England with those of teachers in other countries, as well as seeing how teachers' views vary within England.

⁷⁰ A formal test failed to reject the null hypothesis of no association between school type and the questions on autonomy, workload and progression.

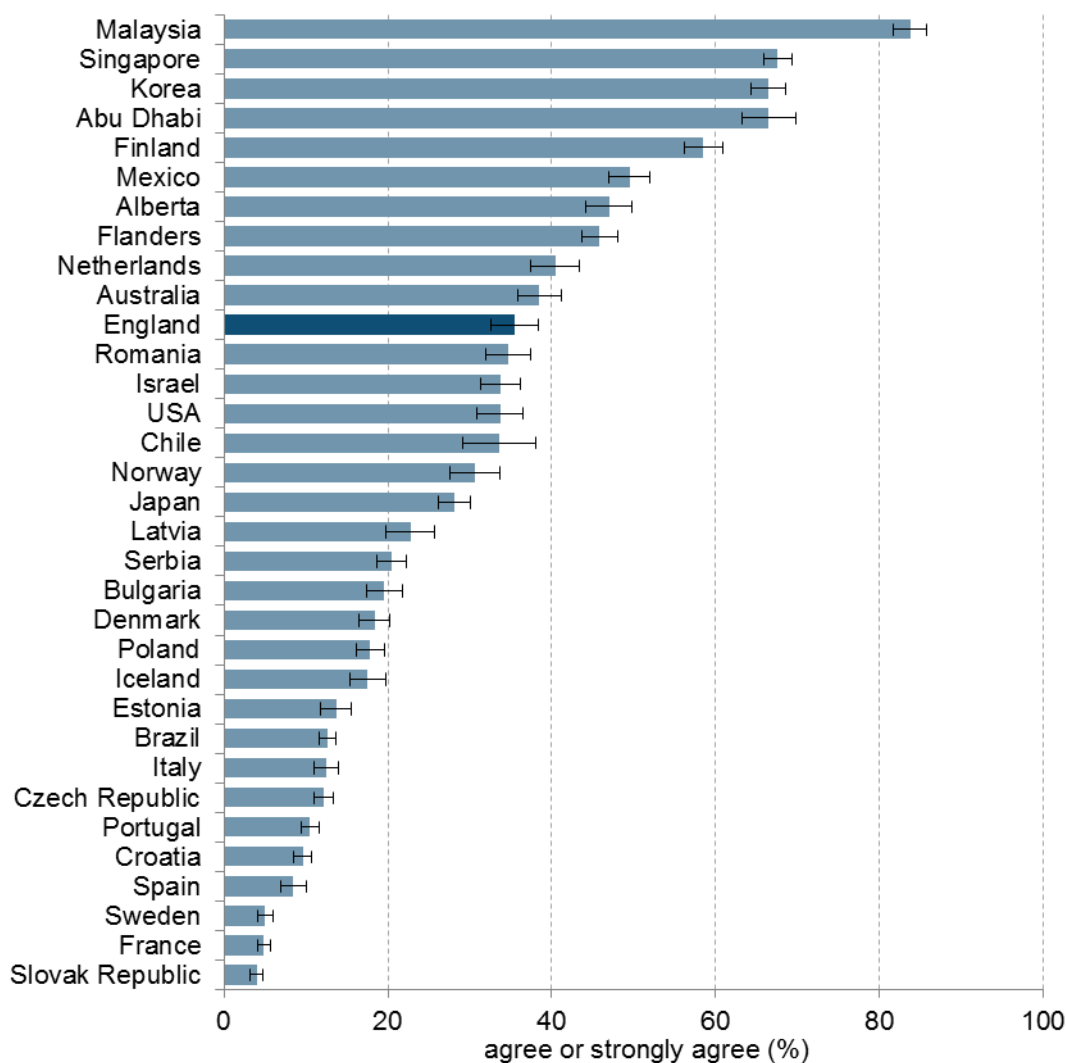
32. Teachers were asked to what extent they agree with the following statement:

'I think that the teaching profession is valued in society'

33. The majority of teachers in England did not agree. One in five (21%) strongly disagreed, while a further 44% disagreed. About one in three teachers in England agreed (30%) or strongly agreed (5%) that teaching is a valued profession in society.

34. Interestingly, there is a strong and statistically significant association between the Ofsted rating of the school that the teacher works in and whether they believe that the teaching profession is valued by society. In schools rated 'outstanding' or 'good', approximately 37% of teachers agreed with the statement presented above. This compares to approximately 30% of teachers in 'satisfactory' schools and just 20% of those in 'inadequate' schools.

Figure 6.7 Percentage of teachers who agree or strongly agree that the teaching profession is valued in society: international comparison



Source: OECD (2014) Table 7.2

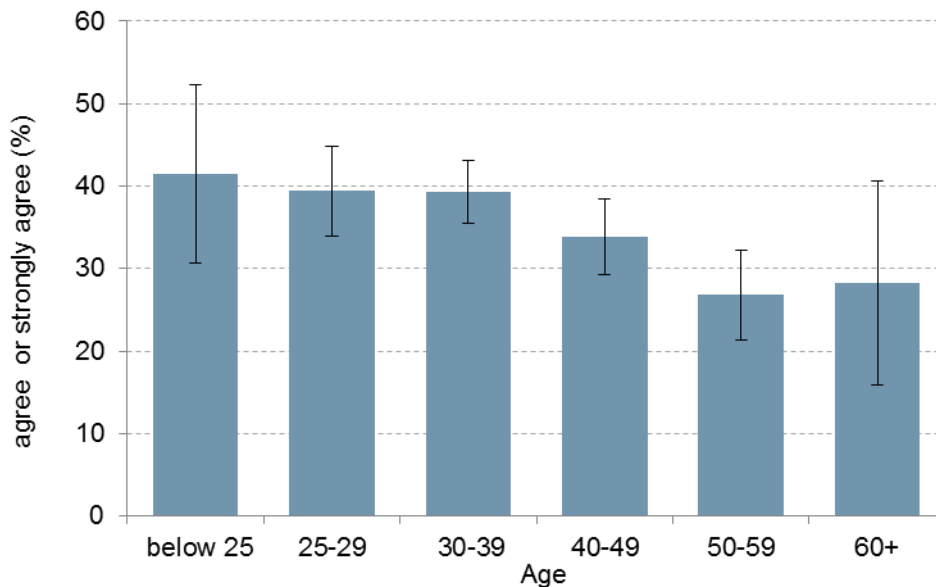
Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

35. Figure 6.7 compares across the TALIS countries the percentage of respondents who agree or strongly agree that the teaching profession is valued. There is clearly a huge amount of variation in teachers' views. England sits in the top half of the distribution of the 33 countries, a little way above the median value of 28% (Japan).
36. Whereas 35% of teachers in England agreed or strongly agreed that teaching is a valued profession, less than 10% did so in some other European countries – including Sweden, Spain and France.
37. Most high performers are towards the top of the graph, occupying seven of the ten places above England. (The average for the high performers is 45%.) These countries include Singapore and Korea, where approximately two thirds of teachers believe that the teaching profession is valued by society. But there are also exceptions: Japan, where as already noted only 28% of teachers agree or strongly agree that society values the teaching profession, and Estonia, where the figure is even lower – 14%. Notwithstanding these counterexamples, the graph in general shows that more teachers believe that their profession is valued by society where educational systems perform well (in the sense defined in Chapter 1). However, the direction of causation here is not clear. Does the high value that society places on the teaching profession lead to higher performance on international tests? Or do the high educational standards in these countries lead society to value teachers more, or at least lead teachers to believe so? Or does another factor drive both performance and society's valuation? Further work is needed to untangle this issue.
38. Figure 6.8 shows for England the relationship between age (horizontal axis) and whether teachers believe society values their profession (vertical axis). There is clearly a negative relationship, with older teachers seeing the profession as less valued by society than younger teachers. Around 40% of teachers between the ages of 20 and 30 agreed or strongly agreed that teaching is a profession that is valued by society. This compares to about 25-30% of 55 to 65 year olds.
39. Does this negative association between teacher age and agreement with the statement 'I think that the teaching profession is valued in society' hold across other countries? In other words, does the pattern observed in Figure 6.8 hold elsewhere in the world? To test this hypothesis, we estimate a linear probability model, with the response variable coded as 1 if the teacher agrees or strongly agrees with the statement given above, and zero otherwise.⁷¹ The age of the teacher is entered as the sole covariate (and as a continuous variable). This model is estimated separately for each country in TALIS.
40. Figure 6.9 shows the results in the form of the predicted change in the percentage probability of agreeing that the teaching profession is valued for a ten year increase in

⁷¹ As with the models behind the results in Figure 6.3, this linear probability model is an OLS regression with a 0/1 dependent variable.

teacher age. For example, the value for England (-4.9) indicates that a ten year increase in teacher age is associated with a 4.9 percentage point decline in agreement (or strong agreement) that the teaching profession is valued by society. This reflects the pattern for England that has just been shown in more detail in Figure 6.8.

Figure 6.8 Percentage of teachers who agree or strongly agree that the teaching profession is valued in society, by age



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

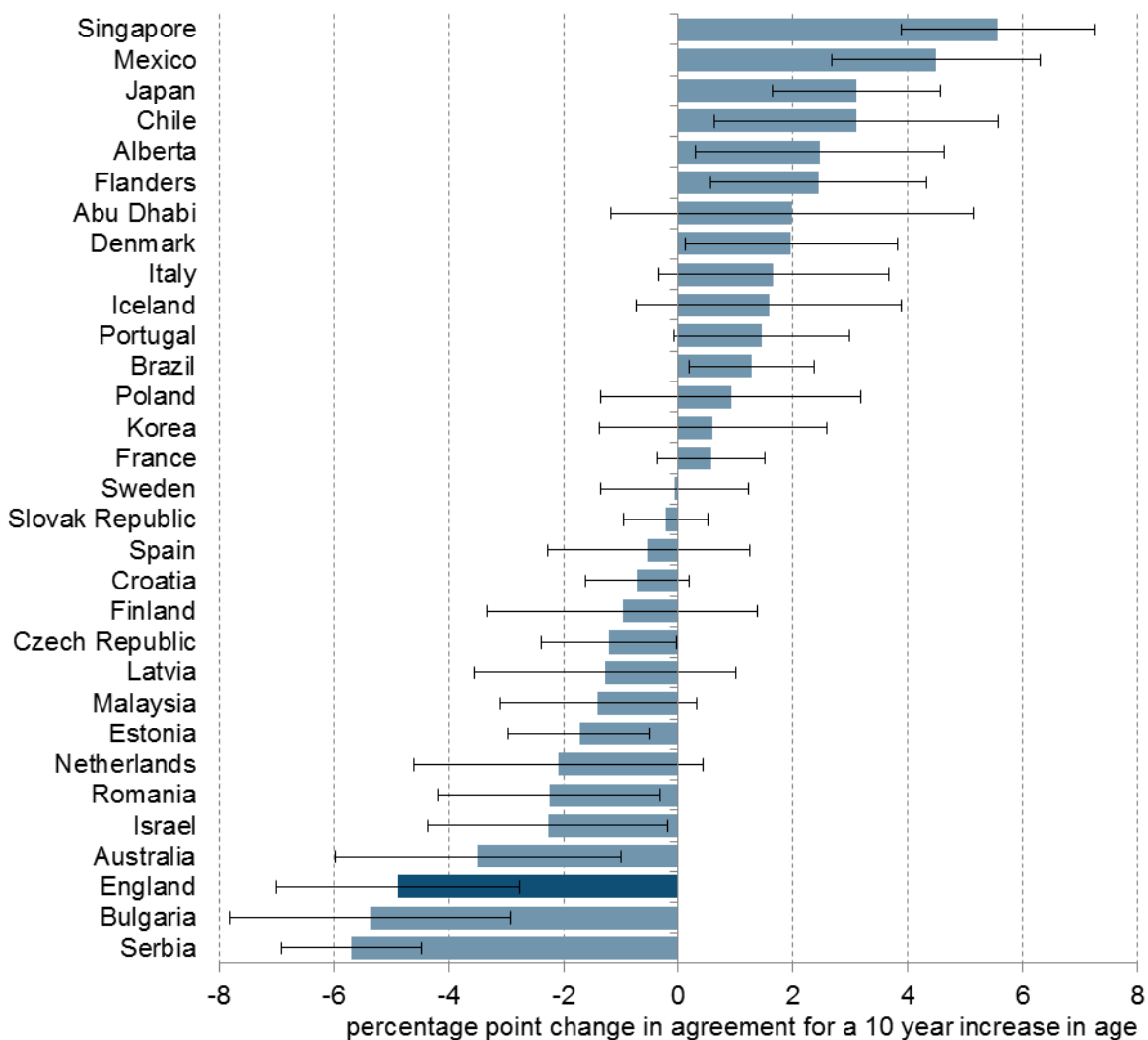
41. England is down the bottom of the graph – it is one of the countries where the decline in agreement with age is strongest. The thin black lines running through the bars show the ‘margins of error’ around the estimates (the 95% confidence intervals) and many of these include the value zero. In only eight countries, of which England is one, can we be confident that there is a decline in agreement with age. Amongst these eight countries, Australia is the only high performer. But there are a number of high performing countries where the opposite pattern holds. In Flanders, Alberta, Japan and Singapore, which occupy four of the top six positions in the graph, older teachers are significantly more likely to agree that the teaching profession is valued by society. This link is particularly strong in Singapore – a ten year increase in teacher age is associated with a 5.6 percent point increase in agreement that society values teachers.⁷²

42. Figure 6.9 provides strong evidence that the pattern observed in Figure 6.8 for England, of younger teachers having a more positive view, is not one that is common

⁷² The difference between England and 24 of the other 30 countries included in the analysis is significant at either the 5% or 1% threshold of statistical significance (along with a further three countries at the 10% threshold).

across all countries – England is in a minority in this respect. The position of the four high performing countries just identified, where younger teachers are less positive than older teachers, does not seem a cause for envy (although one should not lose sight of the overall levels in each country shown in Figure 6.7, especially for Singapore). Moreover, it is worth recalling that teachers in England are younger on average than in many other countries (see Table 2.1). Hence, although older teachers in England seem to hold more negative views of their profession, they account for a lower proportion of the total teacher ‘stock’ than in other countries.

Figure 6.9 The relationship between agreement that the teaching profession is valued in society and teacher age: international comparison



Source: TALIS database

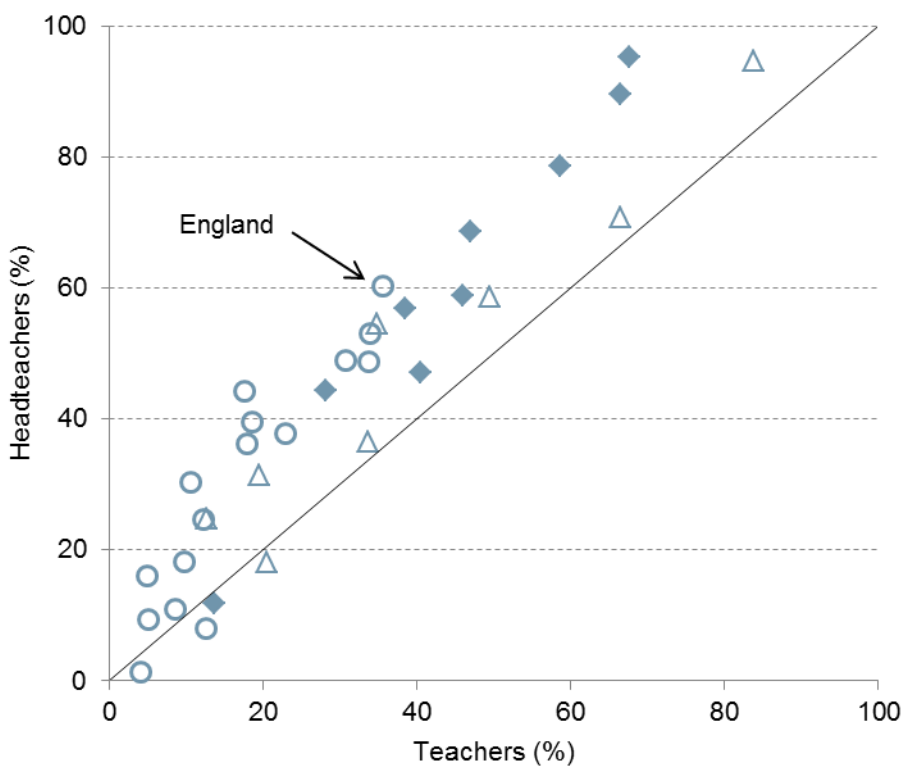
Notes: The regression model behind the results in this graph is explained in the text. The thin black line in the centre of each bar represents the estimated 95% confidence interval.

43. As part of the TALIS survey, headteachers were asked an identical question about whether teaching is a valued profession in society and we have already analysed their answers in Chapter 3. Headteachers in England were much more positive than

teachers. Figure 3.7 showed that 60% agreed or strongly with the statement offered to them.

44. Do headteachers provide more positive responses than their teachers to this question in all countries? Or is England exceptional in this respect? The answers are shown in Figure 6.10. The percentage of teachers who agreed or strongly agreed with the statement that the teaching profession is valued in society is plotted along the horizontal axis. The figures for the headteachers' responses are plotted on the vertical axis. A 45 degree line has been superimposed on the graph. Countries that sit above this line are where headteachers are more positive about the status of teaching in society than the individual teachers themselves.

Figure 6.10 Percentage of (i) headteachers and (ii) teachers who agree or strongly agree that the teaching profession is valued in society: international comparison



Source: OECD (2014) Table 3.26.Web and 7.2

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

45. Of the 33 countries included in the analysis, just four sit below the 45 degree line (Italy, Estonia, Serbia, and the Slovak Republic). In the vast majority of countries, headteachers are more likely to agree or strongly agree that their profession is valued by society than the teachers within their schools. England is therefore not unusual in this respect.

46. Two other features of Figure 6.10 stand out. First, there is a very strong cross-national correlation between teacher and headteacher reports (the correlation

coefficient for the two sets of percentages is 0.95). In other words, teachers are more likely to provide positive responses in countries where headteachers also provide positive responses.⁷³ Second, the high performing countries (solid diamond symbols) tend to be towards the top and right of the graph. This reinforces the earlier message of Figure 6.7; in high performing countries, both teachers and headteachers are more likely to agree or strongly agree that the teaching profession is valued within society.

6.4 Are teachers happy in their jobs?

47. The previous sections of this chapter have indicated that a non-trivial percentage of teachers are not particularly satisfied with certain aspects of their career. A significant proportion of teachers in England believe that their profession is underpaid, and that the workload is unmanageable. But, overall, are teachers happy in their jobs? And, in hindsight, do they believe they made the right decision to become a school teacher?

48. As part of TALIS, teachers were asked for their opinions on the following statements:

'I regret that I decided to become a teacher'

'I wonder whether it would have been better to choose another profession'

'If I could decide again, I would still choose to work as a teacher'

'All in all, I am satisfied with my job'

49. Using the teachers' reactions to these statements, this section addresses the broad issue of whether teachers in England are happy with their jobs and choice of career.

50. Table 6.7 shows that despite some dissatisfaction with pay and working conditions, the vast majority of teachers in England indicate that they are satisfied with their job (82% either agree or strongly agree), and if they were to make the decision again, they would still choose teaching (80%). Approximately one in twelve teachers (8%) expressed some degree of regret in becoming a teacher. A much higher fraction – more than one in three teachers (35%) – did wonder whether it would have been better for them to have chosen another profession and it is possible that these are the teachers who are most at risk of dropping out of the profession.

51. The figures reported in Table 6.7 should be viewed in the light of the proportion of teachers who leave the profession. Cross-national data on teacher attrition appear not to be readily available, but 'wastage' rates are published for England based on the School Workforce Census. Around one in ten teachers in publicly-funded schools in

⁷³ Note that we cannot conclude from this that there tends to strong agreement between heads and the teachers within their own schools – that would be an example of the 'ecological fallacy' that we mentioned in Chapter 1.

England leaves the profession every year (a ‘wastage rate’ of around 10 percent).⁷⁴ It is of course likely that those teachers who choose to leave the profession are the ones who really were the least satisfied in their jobs. Consequently, ‘self-selection’ will have an influence upon reported levels of teacher satisfaction; individuals who trained as teachers but who were not satisfied in their job are likely to have left the profession – and in this case their views will not be captured in TALIS.

Table 6.7 Teachers’ views on statements about their job and career (percentages)

	strongly disagree	disagree	agree	strongly agree	total
I regret that I decided to become a teacher	52	40	6	2	100
I wonder whether it would have been better to choose another profession	29	36	29	5	100
If I could decide again, I would still choose to work as a teacher	5	16	48	32	100
All in all, I am satisfied with my job	3	16	61	21	100

Source: TALIS database

Note: figures may not sum to 100 due to rounding.

52. How do these figures compare to those in other countries? Figure 6.11 shows the percentage of respondents who agree with the statements that they regret becoming a teacher (horizontal axis) and whether they are satisfied in their job (vertical axis). Note that we have deliberately chosen to plot the data on axes that run from 0 to 100%, a point we return to below.
53. Starting with regret over choice of career, England is placed in the middle of the distribution of countries. Note also that the high performing countries are found everywhere, although that is hard to see given the bunching in the data. For example, 20% of teachers in Korea express some regret with choosing the teaching profession, whereas the figure is only 5% in Finland, Flanders and the Netherlands. Hence, that 8% of England’s lower secondary teachers regret their choice of profession is not a substantially different situation to that in most other countries, including most of the high performing countries.
54. However, the same is not true of teachers’ overall level of satisfaction in their job. Of the 33 countries included in graph, England has the lowest figure for the percentage of teachers who agree or strongly agree that they are satisfied. This finding is not just due to the chance variation that comes when drawing a survey sample – the difference between England and every other country is statistically significant at the conventional threshold typically used for such comparisons.⁷⁵ In most countries, more

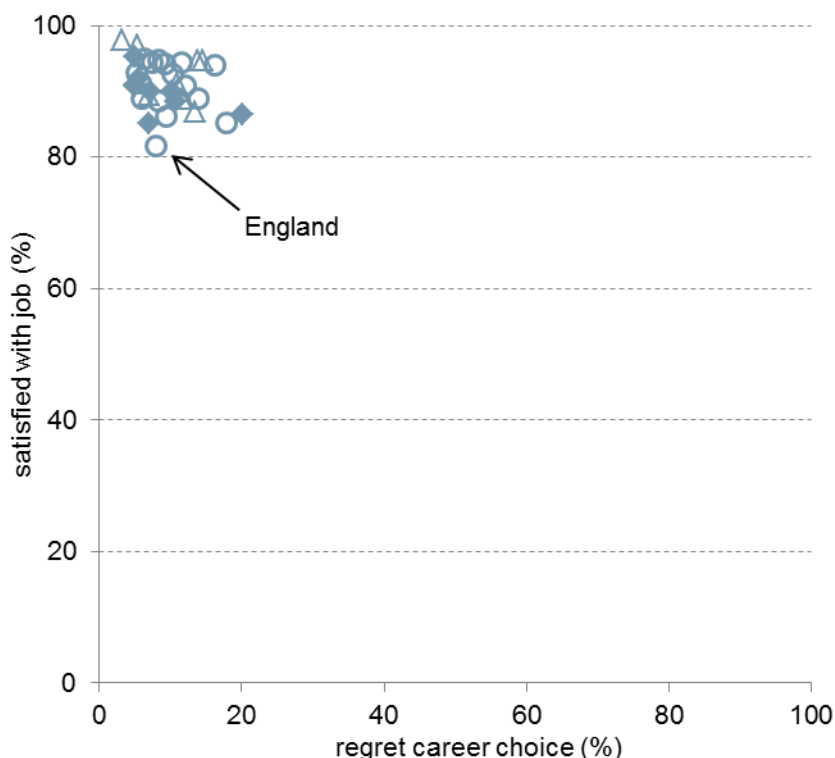
⁷⁴ See <https://www.gov.uk/government/publications/school-workforce-in-england-november-2012>, Additional Table C2.

⁷⁵ The 5% significance level.

than 90% of teachers express satisfaction. The two high performers that are closest to England are Japan (85%) and Korea (87%).

55. But, to put this into perspective, it is important to emphasise the absolute level of satisfaction in England rather than just focusing on the position relative to other countries: 82% of teachers agree or strongly agree with the statement ‘All in all, I am satisfied with my job.’ The high levels of satisfaction with jobs and the low levels of regret about career choice – in almost all countries – are emphasised by our choice of scale for the axes of the graph: the full range from 0 to 100%.

Figure 6.11 Percentage of teachers who agree or strongly agree (i) they are satisfied with their job and (ii) that they regret their career choice: international comparison



Source: OECD (2014) Table 7.2

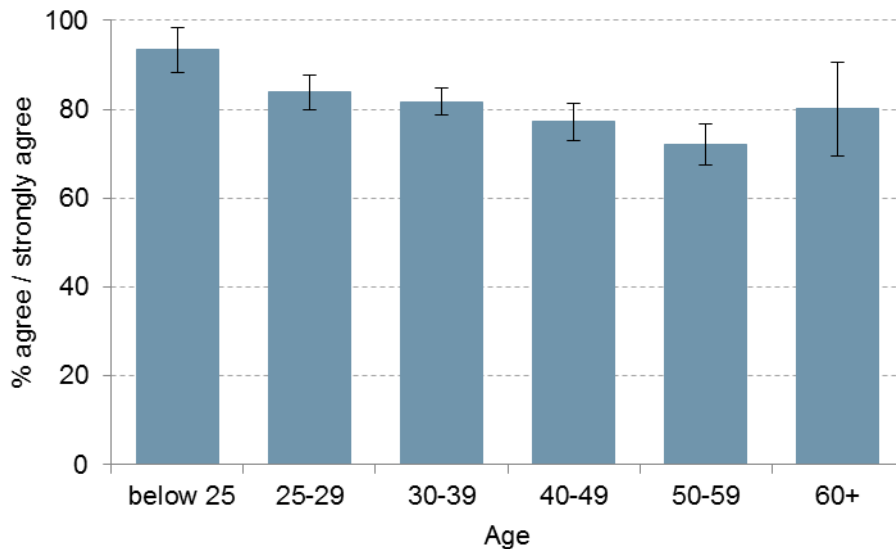
Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

56. There is little evidence that regret at choosing teaching as a career varies with teacher characteristics in England, including gender, subject specialism and whether the teacher works part or full time. The same holds true for teachers’ views on whether they would choose the teaching profession again.

57. However, there is a clear relationship between teacher age and whether the teacher agrees that, with the benefit of hindsight, they would still choose to become a teacher again – see Figure 6.12. Nearly 95% of the (small number) of teachers under the age of 25 agree or strongly agree that they would become a teacher again, if they were given the choice. However, this falls to approximately 77% for those in their 40s and

to 72% for those in their 50s. Interestingly, the percentage agreeing then recovers a little, reaching 80% for those aged 60 or over. This may be due to self-selection, as age 60 is the normal retirement age for teachers who began their careers prior to 2007. Hence it may be that only teachers who have positive views of the profession continue to work beyond age 60.

Figure 6.12 Percentage of teachers who agree or strongly agree that they would choose to become a teacher again, by age



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

58. The pattern in Figure 6.12 could be due to ‘age’ (growing older) or to ‘cohort’ effects (entering the profession at different times), or a mix of the two. In other words, the pattern could reflect generational differences in attitudes towards teaching, rather than it being driven by teacher age per se.

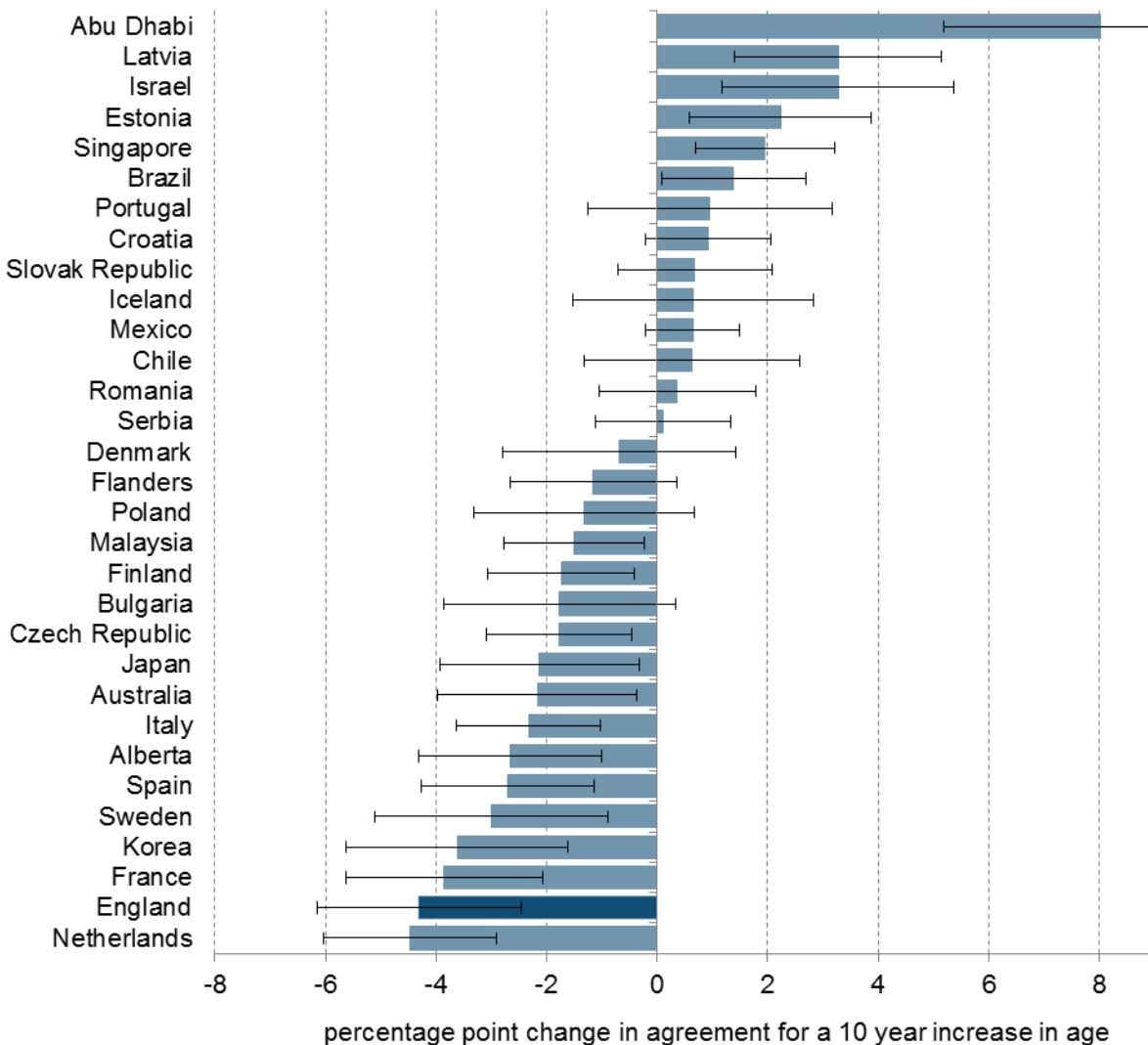
59. The pattern observed in Figure 6.12 is similar to that in Figure 6.8 – in England older teachers are more negative about the extent to which society values the teaching profession and about whether they would choose teaching again. Moreover, recall that Figure 6.9 illustrated this negative association between teacher age and views on whether the teaching profession is valued by society to stand out as something different about England compared to most other countries.

60. In Figure 6.13 we consider whether this is also the case for the negative association observed between teacher age and agreement with the statement ‘If I could decide again, I would still choose to work as a teacher’. To test this hypothesis, we estimate a linear probability model, with the response variable coded as 1 if the teacher agrees or strongly agrees with the statement given above, and zero otherwise.⁷⁶ The age of

⁷⁶ Again, this is simple OLS regression with a 0/1 dependent variable.

the teacher is again entered as the sole covariate. The model is estimated separately for each country in TALIS. Figure 6.13 shows the results.

Figure 6.13 The relationship between agreement that ‘I would choose again to work as a teacher’ and teacher age: international comparison



Source: TALIS database

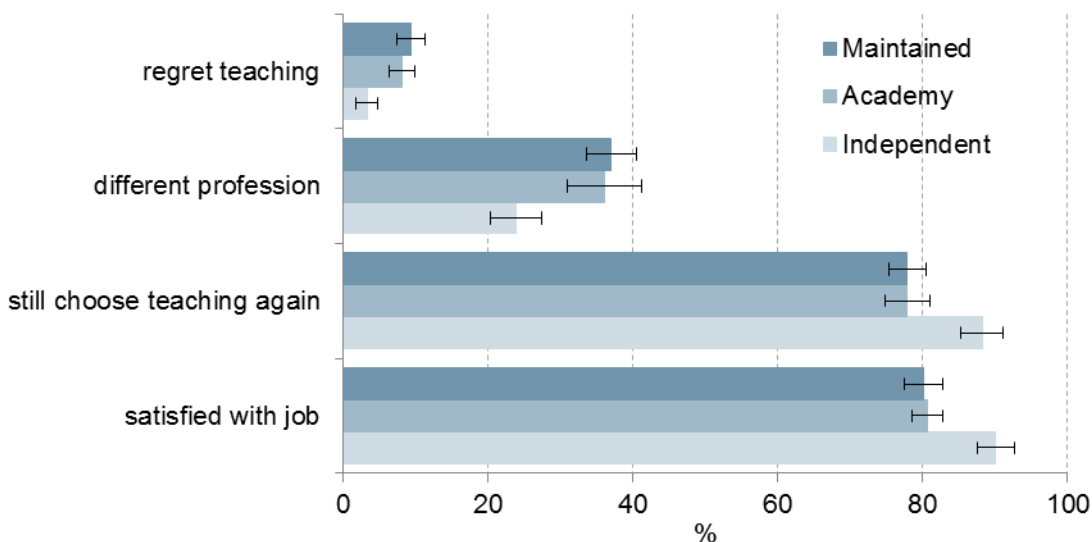
Notes: The regression model behind the results in this graph is explained in the text. The thin black line in the centre of each bar represents the estimated 95% confidence interval.

61. Out of the 31 countries included in the analysis, there is a statistically significant negative association with age in 13 countries; that is, an association unlikely to have occurred by chance.⁷⁷ This includes six of the nine high performing countries: The Netherlands, Korea, Alberta, Australia, Japan and Finland. These are countries where, as in England, older teachers are less likely than younger teachers to say they would have chosen to teach again. England is almost at the bottom of the graph: a

⁷⁷ This refers to a test at the 5% significance level. We did not have access to the survey data for the USA which is why this country appears in neither Figure 6.9 nor Figure 6.13.

ten year increase in teacher age is associated with a 4.3 percent point decline in the probability of agreement (or strong agreement) with the statement. The size of this change with age in England is significantly different (in the statistical sense) to those in most of the other TALIS countries, although not to those in the six high performers just mentioned. By contrast, in Singapore, towards the top of the graph, it is the older teachers who are more likely to say they would choose again to be a teacher. In Singapore, a ten year increase in teacher age is associated with a 2 percentage point decline in the probability of agreement that teaching would be chosen again. This implies a difference of 6 percentage points between a teacher aged 25 and one aged 55, which is only a modest amount but it is still notable that it is the young who are less likely to say they would enter the profession again. Singapore also stood out in Figure 6.9 for the more negative view of younger teachers on society's valuation of the teaching profession.

Figure 6.14 Percentage of teachers who agree or strongly agree with statements about their careers, by school type



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

62. Finally, Figure 6.14 examines the relationship between school type and the probability of agreeing with the four statements presented at the start of this section. For all four, there is evidence that teachers working in independent schools are more satisfied with their careers than those in academies or maintained schools. For instance, about 90% of independent schools teachers are satisfied with their job, compared to 80% of teaching staff in academies and maintained schools. Likewise, only one in four (24%) independent school teachers wonder whether it would have been better to work in a different profession, compared to more than one in three teachers (36%) in state-funded schools. Just 3% of independent school teachers agree or strongly agree with the statement that they regret choosing teaching, compared to 9% for teachers in

state-funded schools, highlighting the high satisfaction levels amongst this particular group.⁷⁸

6.5 Summary

63. This chapter has investigated how teachers in England feel about various aspects of their jobs and careers. Part of the analysis was based on questions that were asked of teachers in England but not in other countries.
64. Views are mixed and need careful interpretation. Some of our results could either be presented as 'good' or as 'bad', depending on the perspective taken. For example, fewer teachers in England express overall satisfaction with their jobs than in any other country in TALIS, which may be seen as disappointing if a crude 'league table' view is taken. But 82% of teachers do in fact agree or strongly agree that they are satisfied – on this view satisfaction seems high in absolute terms.
65. One notable finding is that younger teachers in England are more positive in their views about society's valuation of teaching and on whether they would choose teaching again than older teachers. In many countries, including some high performing countries, the opposite is true.

⁷⁸ All differences between teachers in independent schools and academics or maintained schools presented in Figure 6.14 are statistically significant at the 5% level.

Chapter 7 Teaching practices

- Teachers in England report, on average, spending 7% of their time in the classroom on administrative duties, 11% on maintaining discipline, and 82% actually teaching. The situation in England compares quite favourably to that in other countries – England is near the median for the high performing countries.
- Less time is spent on administration and on keeping order by teachers in schools with an 'outstanding' or 'good' Ofsted rating, in schools with high Key Stage 4 test scores, and in independent schools.
- 74% of teachers in England agree with the statement that 'Thinking and reasoning processes are more important than specific curriculum content.' This is less than in most other TALIS countries (the average is 84%). The figure in England does not vary significantly with observed characteristics of schools. Women are slightly less likely to hold this view.
- 58% of teachers in England say that they frequently or nearly always get students to work in small groups to come up with joint solutions to a problem compared to 40% on average in high performing countries. There is no significant variation across types of schools in England but women and younger teachers are more likely to use this technique.
- Teachers in England are also much more likely than teachers in most countries to give different work in the classroom to students of different abilities. 63% do so at frequently or nearly always compared to 32% on average in high performing countries.
- Teachers in England report more use of several different methods to assess student learning than teachers in many other countries. The percentage of teachers reporting that they provide written feedback frequently or nearly always is among the highest for any country: 82%, compared to an average for high performing countries of only 47% (and 55% for all countries in TALIS).

1. This chapter focuses on teaching practices, broadly defined. It examines how teachers use their time in the classroom, their beliefs about teaching and learning, the techniques they use in teaching, and how they assess what students have learned. We address four questions:

How much class time do teachers spend teaching?

Is thinking seen as more important than the curriculum?

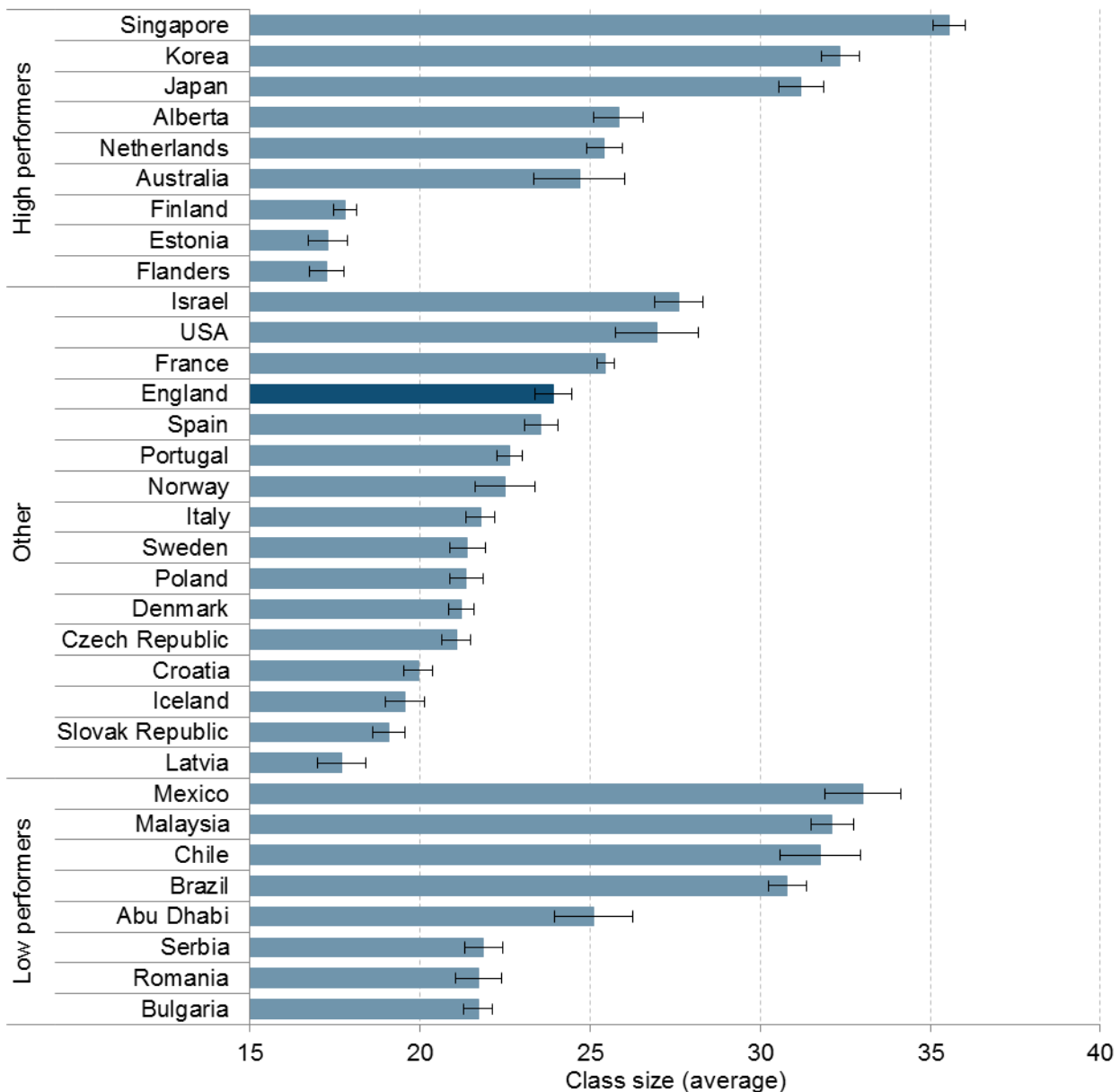
How common are small group work and 'differentiation'?

What methods do teachers use to assess learning?

2. The information to investigate three of these issues (the exception is the second) comes from answers that teachers gave to questions about one specific class: the Key Stage 3 class that they taught on the Tuesday of the TALIS survey week at 11am (or, if this class was to other pupils, the very next Key Stage 3 class that they took). However, if teachers replied in the affirmative to a screening question that this class was 'directed entirely or mainly to special needs students' then no further questions about the target class were asked. A perhaps surprising number of teachers in most countries said this was the case – 14% in England and 12% on average across all countries.⁷⁹ Our analysis of the 'target class' data is therefore restricted to those teachers not screened out at this stage.
3. Figure 7.1 shows the average class size reported by the teacher for the target class for each country in TALIS, distinguishing between high performers, low performers, and other countries. The figure for England of 24 students is similar to that for the countries in the middle of the high performing group – Australia, the Netherlands, and Alberta (Canada). It is well above the figures for each of the other European members, Flanders (Belgium), Estonia, and Finland, where the average class size is 17 or 18, and well below the East Asian countries, Japan, Korea, and Singapore, where teachers report target class sizes that average 31, 32 and 36 students respectively. These large differences in average class sizes – present in the other two groups of countries as well – may have some bearing on the teaching practices that we observe across countries in TALIS.
4. Within England, the size of the target class varies considerably. The averages are 18 in independent schools, 25 in maintained schools and 26 in academies. Excluding the top and bottom 1% of values, the distribution of class size ranges from 5 to 35 students.

⁷⁹ In just over half of these cases in England (and, on average, three-quarters for other countries, the teacher indicated in a preceding screening question that 30% or less of students in the target class had special needs, based on the teacher's 'personal perception'. The target class for teachers in other countries was one predominately attended by 15 year olds.

Figure 7.1 Average class size in the ‘target class’: international comparison



Source: OECD (2014) Table 2.18

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

7.1 How much class time do teachers spend teaching?

5. Chapter 2 has already analysed teachers’ total hours of work and how they spend the working week. The questions about the target class included one on time use: teachers were asked what percentage of class time is typically spent on each of the following activities:

- Administrative tasks (e.g. recording attendance, handing out school information and forms)
- Keeping order in the classroom (maintaining discipline)

- Actual teaching and learning

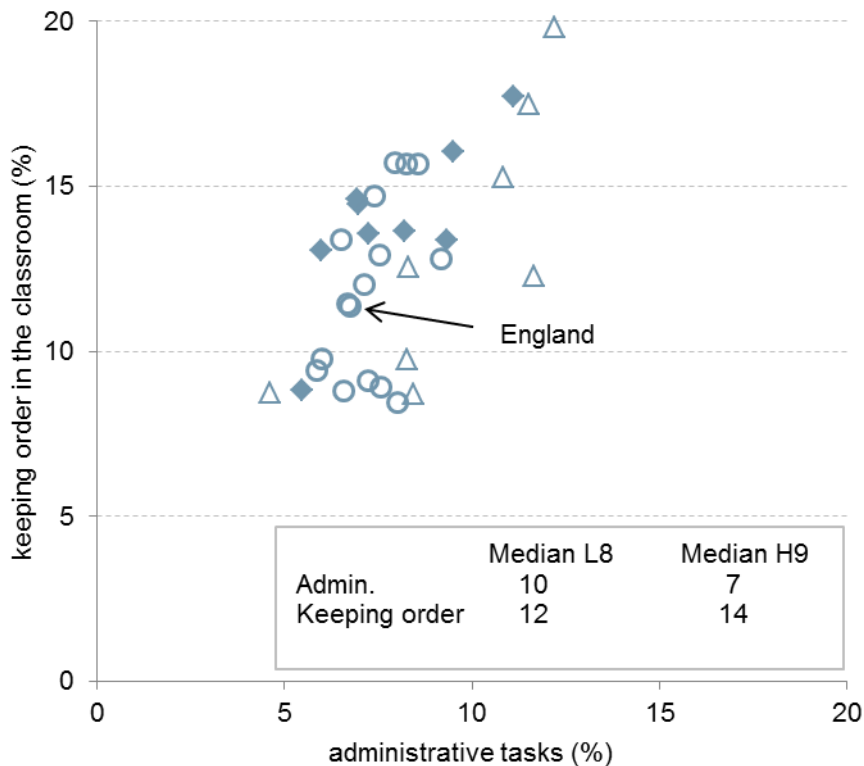
6. The results presented below are restricted to only those teachers who provided complete and valid information to this question (including the total percentage across all three options summing to 100). In England, this meant a quarter of teachers were excluded from this part of the analysis, with the main reason being that the target class was reported to be largely directed to pupils with special needs – see above.⁸⁰
7. On average, most class time in England is spent on actual teaching and learning: 82%. Only 11% is used on maintaining discipline and 7% on administrative tasks. Teachers in England lose, on average, a fifth of their class time to these two non-teaching tasks.
8. Figure 7.2 examines how this compares to other countries. The horizontal axis measures the percentage of class-time that the teacher reports spending on administrative tasks. The vertical axis refers to the percentage spent on keeping order in the class. Countries towards the top right hand corner of the diagram are in the least favourable situation – where on average a greater proportion of a teacher’s time is taken up by administration and controlling the class. Countries towards the bottom left hand corner are in the most favourable situation, where teachers spend more time on actual teaching. There is a reasonably strong cross-country correlation ($r = 0.67$) between the two measures: countries where teachers report spending more time on administration are also the countries where teachers report spending more time maintaining discipline.⁸¹
9. The situation in England compares quite favourably to that in other countries – England is one of the countries towards the bottom left hand corner of the graph. In other words, although a non-trivial amount of class time is on average dedicated to non-teaching related activities in England, the same is true in other countries and if anything the loss is somewhat larger in most of them. The figures in England are at about the level of the medians for the high performing countries.
10. There is some suggestion that low performing countries may be more towards the top-right corner of the graph (high administration burden – high classroom order burden). But there is little to suggest that the opposite holds true in the high performing countries. And in fact the mean values of the percentage of time spent on actual teaching for the two groups differ very little (77% and 78% respectively). Singapore is the high performer towards the top-right corner with larger than average amounts of time lost on maintaining discipline and administrative tasks, with the result that 71% of time on average is reported as being used for teaching, compared to the

⁸⁰ Inevitably there is a question mark over the quality of the data, which is not based on classroom observation. Unsurprisingly, there is considerable heaping in the data at values like 5% and 10%.

⁸¹ It is unclear whether there is any causal relationship between the two or whether both are indicative of something else.

82% in England. In this context it is interesting to note again that Singapore is the country in TALIS with the largest average target class size (see Figure 7.1).

Figure 7.2 Percentage of class time that teachers spend on (i) keeping order and (ii) administrative tasks: international comparison



Source: OECD (2014) Table 6.20

Notes: the nine high performing countries (H9) and eight low performing countries (L8) (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

11. How does the time spent on actually teaching vary with teacher characteristics within England? Table 7.1 addresses this question considering (i) teacher gender, (ii) teacher age and (iii) the subject taught in the target class.
12. There are no significant differences between women and men in average amounts of teaching time. However, teachers below age 35 spend more time on average doing administrative tasks (7%) and keeping order in the class (13%) than teachers above age 55 (6% and 9% respectively), and as a result spend 6% less time of their total time on teaching. There is some variation across subject although this is reasonably small. For the vast majority of the subject groups, around 80% to 85% of class time is typically spent teaching, on average, with a further 10% to 12% on keeping order, and between 5% and 10% on administrative tasks.

Table 7.1 Average percentage of time in the target class spent on administration, keeping order, and teaching, by teacher characteristics and subject taught

	administrative tasks	keeping order	actual teaching
<i>Gender</i>			
Female	7	12	81
Male	7	11	82
<i>Age</i>			
35 and below	7	13	79
36 - 55	6	10	83
56 and above	6	9	85
<i>Subject</i>			
Social studies	6	11	83
Arts	7	10	83
Modern foreign languages	6	11	82
Mathematics	6	12	82
Reading, writing, literature	7	11	82
Religion / ethics	6	12	81
Science	7	11	81
Technology	7	11	81
Physical education	10	12	79
Practical and vocational skills	9	13	78
Other	10	19	70

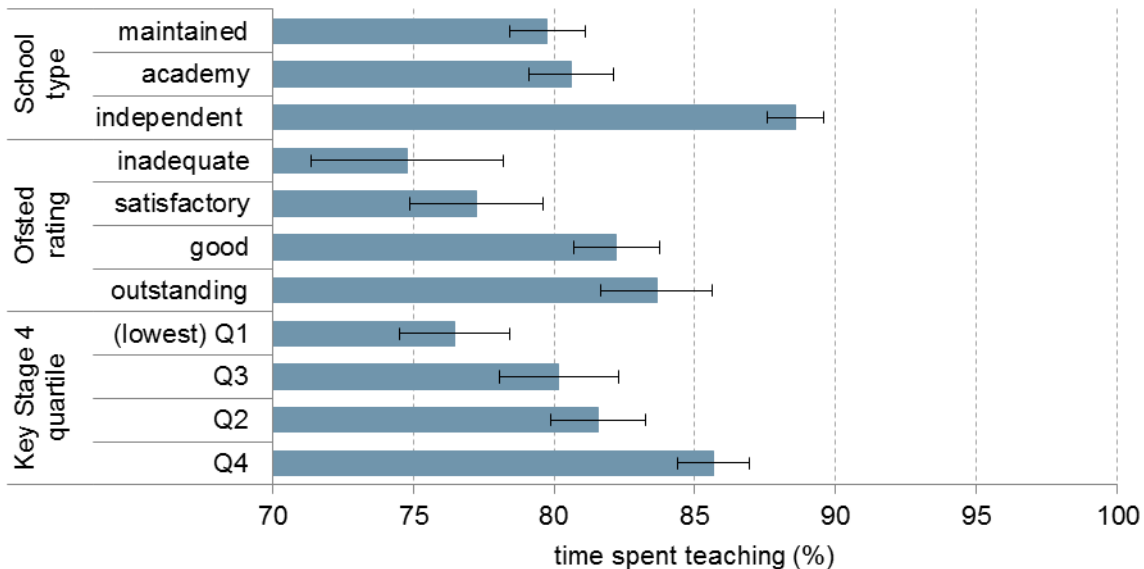
Source: TALIS database

Note: figures for Classical Greek and Latin, the subject of the target class in six cases, are not included in the table. Figures do not necessarily sum to 100 due to rounding.

13. Figure 7.3 examines how the average proportion of class time teachers actually spend teaching varies with characteristics of the school. The first set of bars gives results for school type. There is essentially no difference between academies and maintained schools – teachers report that approximately 80% of their time is taught in teaching (and 20% on administration and keeping order). In contrast, a significantly higher percentage of class time, 89%, is reported as actually spent on teaching in independent schools. This difference is driven almost entirely by a lower percentage of time being spent on maintaining order – just 5% on average.
14. The middle set of bars provides results by the school Ofsted rating. There is clear evidence that schools with lower Ofsted ratings are the ones where teachers spend less of their class time actually teaching, although the differences are not really large. On average, 75% of class time in ‘inadequate’ schools is spent on teaching, with only slightly more in ‘satisfactory’ schools: 77%. In contrast, 84% of class time is spent teaching in ‘outstanding’ schools and 82% in ‘good’ schools. The differences between the inadequate and satisfactory schools on the one hand and the good and outstanding schools on the other are well-determined. But the data do not permit any clear conclusions about the differences within these two groupings, as shown by the sizes of the margins of error included in the graph. As is the case with the independent schools just described, the differences are driven mainly by the greater

amount of time spent in maintaining order in the inadequate/satisfactory schools. Nevertheless, the average total time spent actually teaching in these schools is still above that implied for teachers in Singapore by Figure 7.2.

Figure 7.3 Average percentage of class time spent on teaching, by school characteristics



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

15. The final set of bars illustrates the association with Key Stage 4 quartile. There is a clear relationship, with a greater proportion of class time spent actually teaching in schools that achieve higher GCSE results. For instance, 77% of class time is spent on average in teaching in schools with the lowest performing pupils, compared to 86% in those with the highest. When interpreting this result, one should bear in mind that these are simply associations and do not necessarily reflect a causal relationship: we are unable to say that less class time spent on teaching is responsible for the lower performance. Moreover, we find the same relationship with pupil performance if Key Stage 2 results are used, measuring the average ability of the pupil intake of each school: in schools where the intake is on average of lower ability, less class time is spent on teaching. This suggests that poorer learning will take place in schools where pupils start from a lower ability base, which is a concern.
16. It is clear that the average percentage of their time that teachers actually spend teaching in the target class does differ across some school characteristics. But it is worth emphasising that the great majority of the recorded variation in this teaching time is within schools and not between them: more than 80%. That is, the large bulk of the variation in time spent teaching is due to teachers in each school reporting different amounts and is not due to the variation in the average values for each school.

7.2 Is thinking seen as more important than the curriculum?

17. TALIS asked teachers about their personal beliefs about teaching and learning. Teachers were asked how strongly they agreed or disagreed with the following six statements.

'My role as a teacher is to facilitate students' own inquiry'

'Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved'

'Students learn best by finding solutions to problems on their own'

'Thinking and reasoning processes are more important than specific curriculum content'

'My role includes having a secure knowledge of my subject and curriculum areas and imparting this knowledge to pupils effectively'

'My role includes keeping up to date with developments in my subject or specialism'

18. The final two statements were included only in England. Teachers gave almost universal support: 98% agreed or strongly agreed with both statements.⁸²

19. Table 7.2 shows the proportion of teachers that agreed or strongly agreed with each of the first four statements, comparing England with other countries. Teachers in England overwhelmingly believe that pupils learn best by working out problems themselves: 96% think that their role as a teacher is to facilitate independent inquiry among their pupils. The same percentage agree that students should think of solutions themselves before being shown how to solve problems. Moreover, there is little evidence of variation in these figures across the other countries in TALIS – teachers everywhere overwhelmingly agree with the first two statements. And the large majority also agree with the third (the somewhat lower figures here perhaps reflect a view that the student's struggle for a solution should not continue indefinitely).

20. However, there is evidence of more variation across countries in the agreement with the fourth statement that 'thinking and reasoning processes are more important than specific curriculum content'. In England, about a quarter of teachers either disagreed or strongly disagreed with this. In other words, this group of teachers believe that

⁸² These two statements are very similar to wording in the official guidance on teaching standards in England (Department for Education, 2013c), of which many teachers in TALIS will have been aware.

teaching pupils the specifics of what is in the curriculum is at least as important as developing their ability to think and reason independently.⁸³

Table 7.2 Percentage of teachers agreeing or strongly agreeing with different statements about teaching and learning: international comparison

Statement	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
My role is to facilitate students' own inquiry	96	96	97	99	94	95	94	94
Students should be allowed to think first of solutions themselves	96	94	94	93	93	97	93	92
Students learn best by finding solutions on their own	86	84	82	84	94	89	85	83
Thinking and reasoning are more important than curriculum content	74	81	91	71	70	95	83	84

Source: OECD (2014) Table 6.13

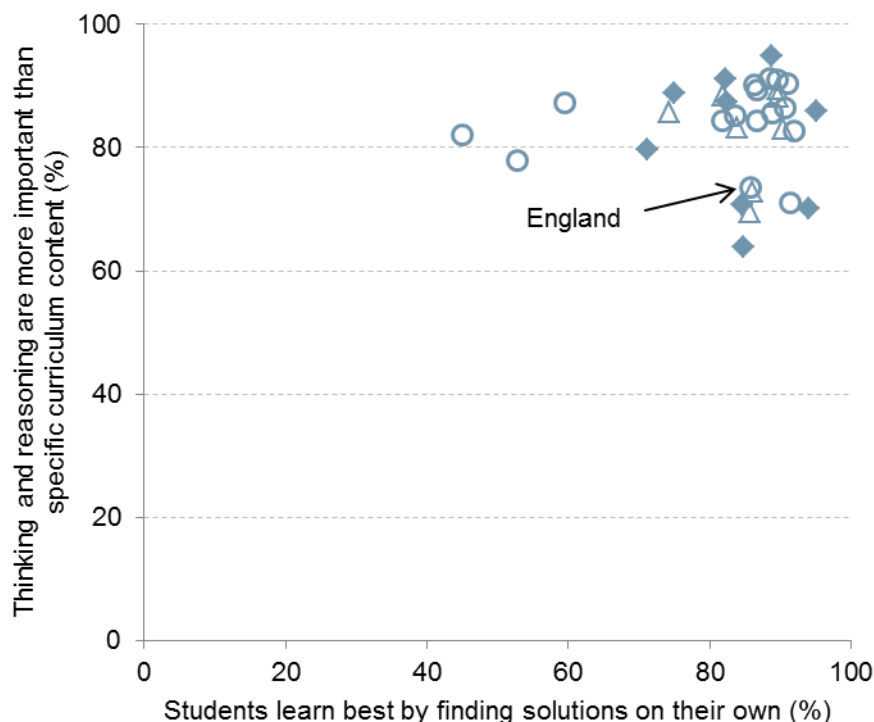
Notes: The figures for 'H9' and 'L8' are averages for the nine high performing and eight low performing countries (see Table 1.2) and 'All' is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

21. Figure 7.4 shows for all countries the percentages of teachers agreeing or strongly agreeing (i) that thinking and reasoning processes are more important than specific curriculum content, on the vertical axis, and, on the horizontal axis, (ii) that students learn best by finding solutions on their own. This provides for a fuller picture than in the summary in Table 7.2. Of the more than 30 other countries in TALIS, only five record percentages that are significantly lower than that in England for the importance of thinking and reasoning and that hence come lower down in the graph.⁸⁴ In other countries, more teachers than in England report that thinking and reasoning processes are more important than the curriculum content.
22. There is considerable variation across the high performing countries on the figures for thinking and reasoning vs. curriculum content. Some are reasonably similar to England, with just 71% of teachers in Flanders and 70% in Japan agreeing or strongly agreeing with the statement – the Netherlands is the country with the lowest value, 64%. However, other high performers have substantially higher figures: 91% of teachers agree that thinking and reasoning are more important than the curriculum in Finland and 95% in Singapore. These examples also illustrate the extent of variation even within the group of three high performing East Asian countries. (Korea comes between Japan and Singapore with a figure of 86%.)
23. The three countries more towards the left hand side of the graph are outliers on the percentage of teachers who agree or strongly agree that students learn best by finding solutions on their own. These countries are Italy (59%), Norway (53%) and Sweden (45%). England at 86% is in the middle of the pack.

⁸³ It is a matter for debate as to whether thinking processes and curriculum content can always be seen as competing, so the statement put to teachers may be more ambiguous than it might appear.

⁸⁴ The difference between England and Mexico is not statistically significant (the symbols for the two countries overlap in the graph).

Figure 7.4 Percentage of teachers who agree or strongly agree that (i) thinking and reasoning processes are more important than curriculum content and (ii) students learn best by finding solutions on their own: international comparison



Source: OECD (2014) Table 6.13

Notes: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

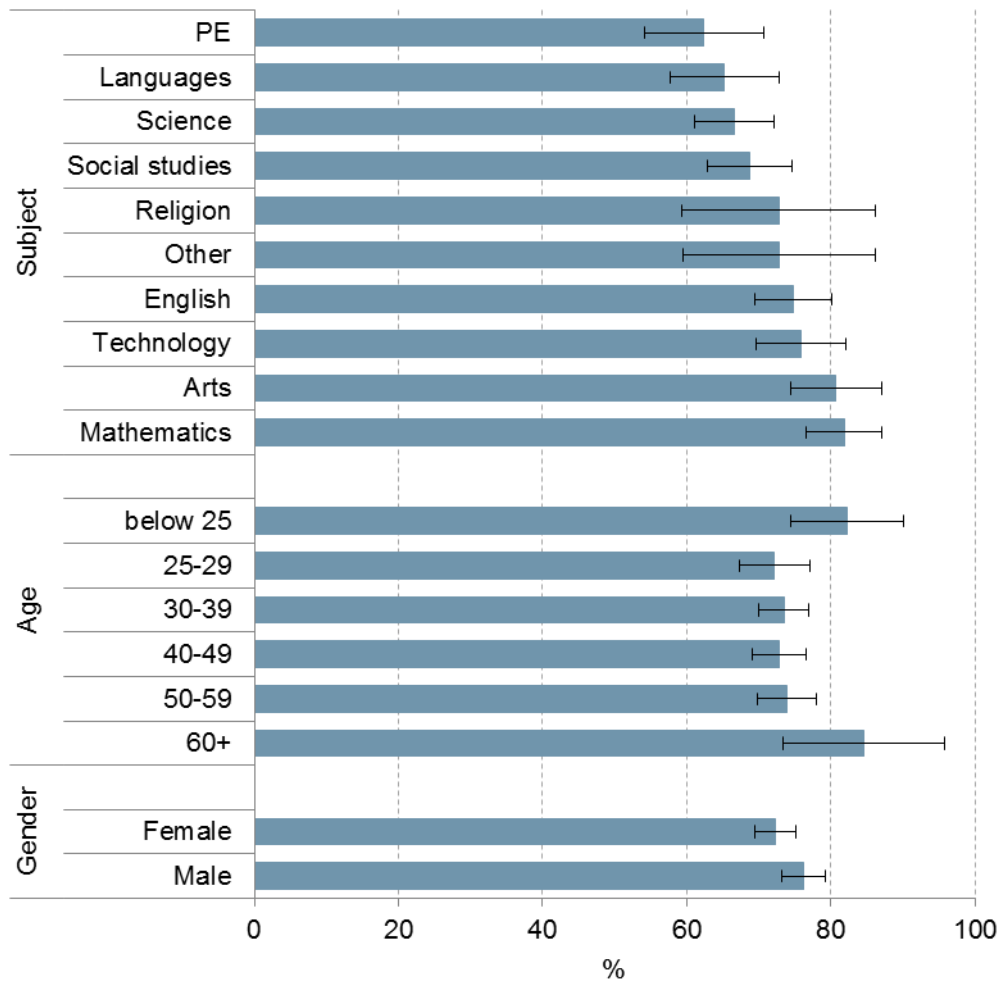
24. Within England, we examined the association between various school level characteristics and the percentage of teachers who agreed or strongly agreed that thinking and reasoning processes are more important than curriculum content. There is little evidence of any link with the school type (maintained, academy, independent), Ofsted rating, or Key Stage 4 test scores.⁸⁵

25. However, Figure 7.5 shows that there is variation across some teacher characteristics. The top set of bars examines the link with the teacher's views and the subject taught in the 'target class' analysed earlier in this chapter, taken as a proxy for the teacher's main subject specialism. Just 62% of PE teachers, 65% of modern language teachers, and 67% of science teachers believe that thinking and reasoning processes are more important than learning the specifics of the curriculum. This compares to 81% of arts subject teachers and 82% of maths teachers. The margins of error are quite large around the figures for several subjects but the differences

⁸⁵ One exception was that 81% of teachers in schools graded as 'inadequate' as Ofsted either agreed or strongly agreed with the statement, compared to 74% of those working in 'satisfactory', 'good' and 'outstanding' schools, a difference that is statistically significant ($t=3.3$) despite the sample size of teachers in the 'inadequate' schools – see Chapter 1.

between teachers in these two groups – PE/modern languages/science vs. arts/maths – are statistically significant at conventional levels.

Figure 7.5 Percentage of teachers who agree or strongly agree that thinking and reasoning processes are more important than curriculum content, by teacher characteristics



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

26. The middle sets of bars show the association with teacher age. Perhaps surprisingly, there is very little variation across the great majority of teachers, those aged 25 to 59. The small number of teachers in the youngest and the oldest age groups (about 6% in total) are more likely to agree that thinking and reasoning are more important: about another 1 in 10 agree with the statement. The final set of bars give a tentative sign of a small gender difference – 72% of women agree or strongly agree with that thinking and reasoning processes are more important, compared to 76% of men.⁸⁶

⁸⁶ This difference is statistically significant, but only at the 10% level ($p = 0.08$).

27. Finally in this section, we analyse briefly the index of ‘constructivist beliefs’ created by the OECD for the TALIS data, drawing on teachers’ responses to the four statements analysed in Table 7.2. A ‘constructivist’ view of teaching:

‘focuses on students not as passive recipients but as active participants in the process of acquiring knowledge. Teachers holding this view emphasise facilitating student inquiry, prefer to give students the chance to develop solutions to problems on their own, and allow students to play active role in instructional activities. Here, the development of thinking and reasoning processes is stressed more than the acquisition of specific knowledge’ OECD (2009: 92)

28. Higher values of the index indicate that teachers have a stronger constructivist view of teaching.⁸⁷

29. Very little of the variation in the values of this index for teachers in England is between schools: just 8%. That is, the great bulk of the variation between teachers in their reported beliefs, as summarised by the index of constructivist beliefs, is not associated with the schools that the teachers are in. All schools tend to have a mix of teachers in terms of their views of teaching. This is consistent with the lack of variation across school characteristics that we noted earlier in teachers’ agreement with the statement on thinking and reasoning processes.

7.3 How common are small group work and ‘differentiation’?

30. Teachers in TALIS were questioned about the teaching techniques they use in the target Key Stage 3 class. They were asked how often each of the following eight things happen:

‘I check my students’ exercise books or homework’

‘I present a summary of recently learned content’

‘I give different work to the students who have difficulties learning and/or to those who can advance faster’

‘I refer to a problem from everyday life or work to demonstrate why new knowledge is useful’

‘I let students practise similar tasks until I know that every student has understood the subject matter’

⁸⁷ The index has a correlation of 0.98 in England with one derived from a simple ‘sum score’: scoring each variable as ‘1’ for ‘strongly disagree’ up to ‘4’ for ‘strongly agree’ and then summing the values across the four variables.

‘Students work in small groups to come up with a joint solution to a problem or task’

‘Students work on projects that require at least one week to complete’

‘Students use ICT for projects or class work’

31. Table 7.3 shows for England and other countries the percentage of teachers reporting that they used a technique ‘frequently’ or ‘in all or nearly all lessons’ with the target class. In only two cases – working on projects taking at least a week and using ICT – do the percentages for England fall below 50%. In several cases many more teachers in England reporting using the technique than on average is the case in the high performing countries.

Table 7.3 Percentage of teachers using particular teaching techniques frequently or in all or nearly all lessons: international comparison

Technique	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Check exercise books or homework	85	64	62	53	61	84	85	72
Present a summary of recently learned content	75	69	62	60	60	67	75	73
Give different work to students with different abilities	63	32	37	28	22	21	53	44
Refer to a problem from everyday life or work	62	62	64	72	51	61	78	68
Let students practice similar tasks until they have all understood	62	57	51	59	32	67	79	67
Students work in small groups to come up with a joint solution	58	40	37	34	33	33	61	47
Students work on projects that require at least a week	38	25	14	21	14	27	38	27
Students use ICT for projects or class work	37	33	18	27	10	30	40	37

Source: OECD (2014) Table 6.1

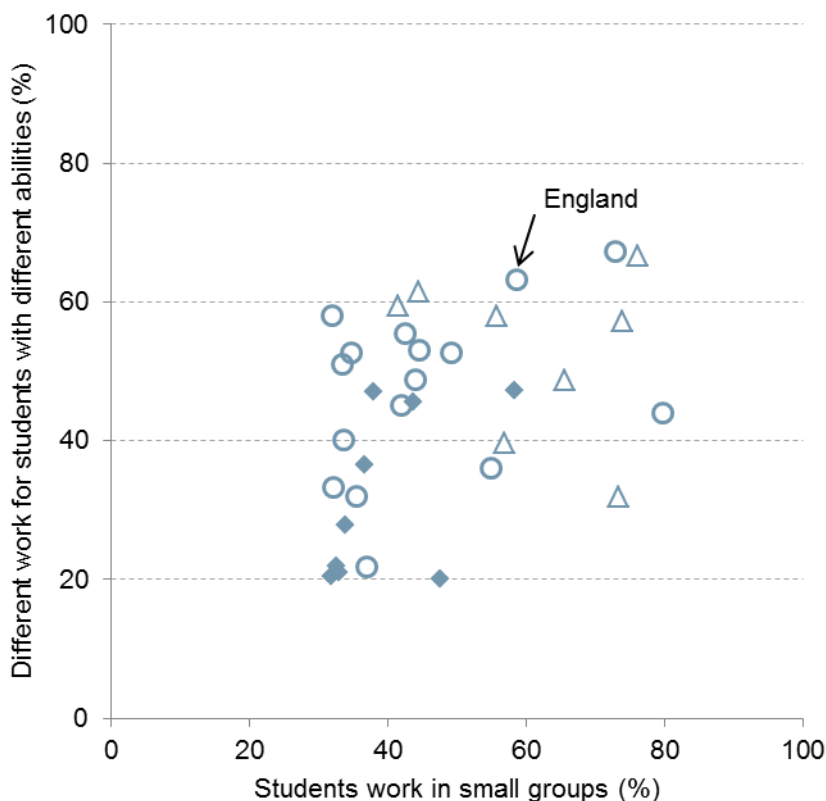
Notes: The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

32. Figure 7.6 compares the percentages for two techniques where the figure for England exceeds the average for the high performers by a large margin: students working in small groups (on the horizontal axis) and the teacher giving different work to students of different abilities (on the vertical axis) i.e. ‘differentiation’ by ability. In each case, about 60% of teachers in England say they use these techniques frequently or in nearly all lessons.

33. Only two other countries, Norway and Abu Dhabi in the top right-hand corner of the diagram, have a higher percentage of teachers who report using differentiation by ability at least frequently. Table 7.3 shows that on average only 32% of teachers report doing so in the high performing countries but this figure disguises a lot of

variation. Four of the group – Japan, Korea, Singapore, and the Netherlands – have levels at around 20% while three are at about 45-50% – Australia, Alberta (Canada), and Estonia. The three high performers (closed diamond symbols) close together in the bottom left corner of the graph are the three East Asian countries. These countries also have only about a third of teachers who report setting students to work together in small groups, although in this they are less distinctive as another six or seven countries have a similar figure.

Figure 7.6 Percentage of teachers who frequently or in all or nearly all lessons (i) get students to work in small groups and (ii) give different work to students of different abilities: international comparison



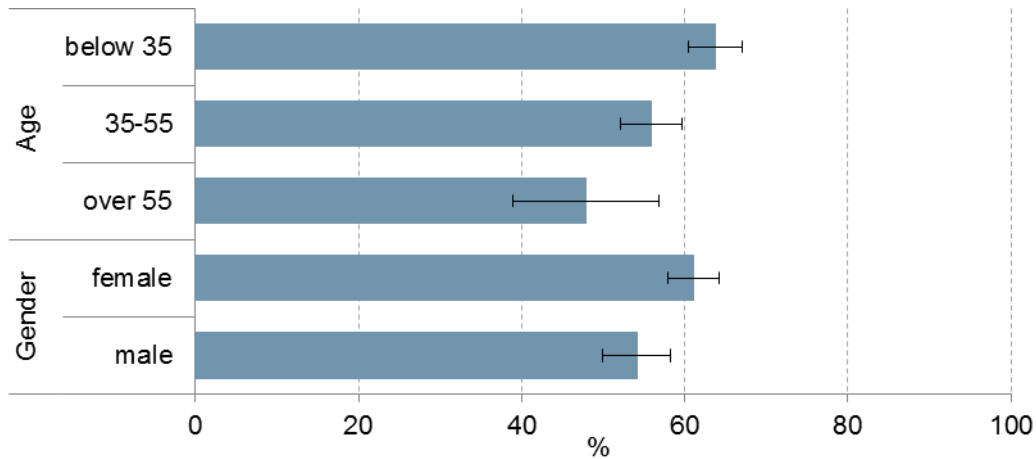
Source: OECD (2014) Table 6.1

Notes: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

34. Within England, we found no significant variation in the use of small groups across different types of schools. On average, teachers are equally likely to report setting students to work together in small groups in independent schools and state-funded schools, across schools with different Ofsted ratings, and across schools with different average Key Stage 2 score intakes or Key Stage 4 scores. However, there are differences by teacher characteristics as shown in Figure 7.7. 64% of teachers aged under 35 report using small groups, compared to 48% of teachers aged over 55. While 61% of women use this teaching technique often, rather less men do so, 54%. The probability that small group teaching is used also varies with the subject

taught in the target class (not shown in the graph). This does not explain the gender or age differences just noted. Maths, modern foreign languages, and technology stand out as subjects with less use.

Figure 7.7 Percentage of teachers who get students to work in small groups frequently or in nearly all lessons, by teacher age and gender



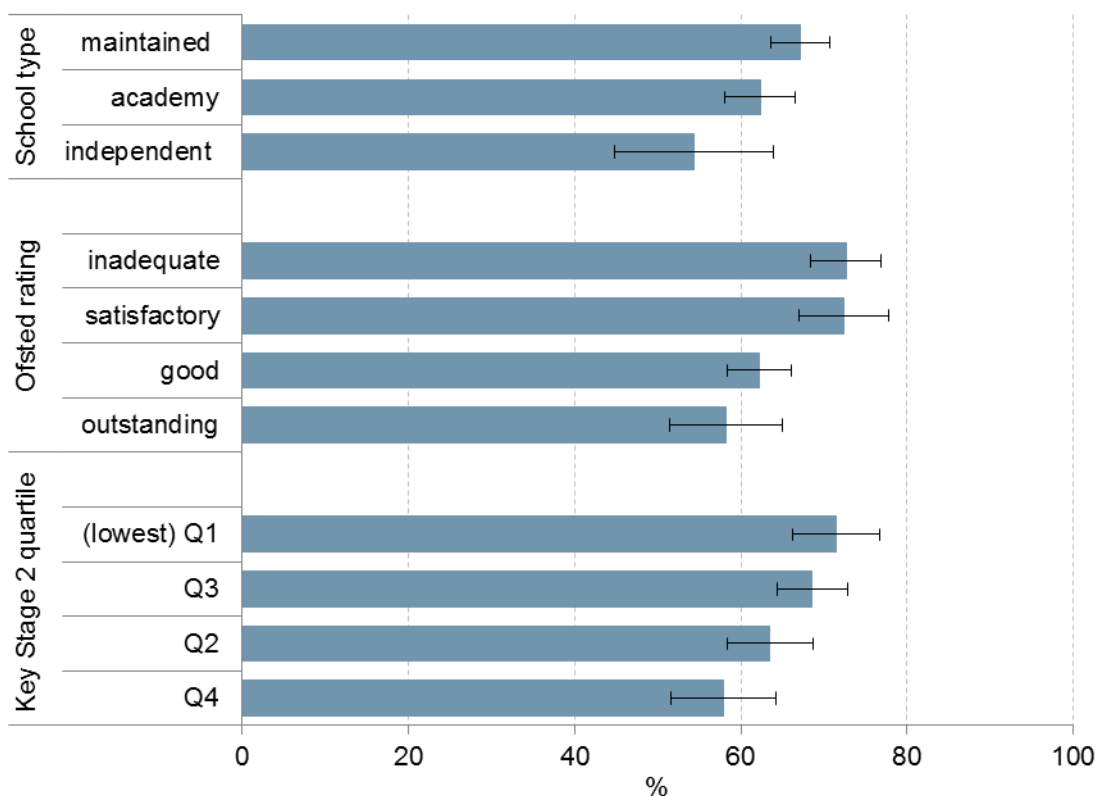
Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

35. By contrast, the systematic (and statistically significant) variation that we can detect within England in use of the other technique highlighted in Figure 7.6, differentiation by ability, is across school characteristics and not teacher characteristics – see Figure 7.8. This practice is reported by a somewhat lower percentage of teachers in independent schools, 54% compared to 62% of teachers in maintained schools and 67% of academy teachers. Within state-funded schools, it is more common in schools with lower average Key Stage 2 scores of their student intake – 72% of teachers in schools in the bottom quartile of average scores compared to 58% of teachers in schools in the top quartile. And it is more common in schools with lower Ofsted ratings.

36. The differences that we observe in the use of differentiation by ability between countries or across different schools in England may in part be driven by differences in the extent to which pupils in the same class (and school) vary in their abilities. Differentiation is likely to happen more where there is a wider range of ability, or at least teachers may perceive that they differentiate more in this situation. In countries with school systems that tend to separate pupils by ability (whether or not deliberately), either between schools or between classes, teachers should have less need to differentiate within the classroom. Further analysis of the TALIS data is needed to shed more light on this.

Figure 7.8 Percentage of teachers who give different work to students of different abilities, by school characteristics



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

7.4 What methods do teachers use to assess learning?

37. The final subject we consider in this chapter is how teachers assess student learning. Again for the target class, teachers were asked in TALIS how often the following applied:

'I observe students when working on particular tasks and provide immediate feedback'

'I provide written feedback on student work in addition to a mark or grade'

'I develop and administer my own assessment'

'I have individual students answer questions in front of the class'

'I let students evaluate their own progress'

'I administer a standardised test'

38. Table 7.4 shows the percentage of teachers reporting that they used an assessment method ‘frequently’ or ‘in all or nearly all’ lessons with the target class, comparing England with other countries. For all methods, the percentage for England exceeds both the average for the high performers and the (higher) average for all countries in TALIS, often by a large margin. (The international averages are pulled up by the averages for the low performers, which exceed those for the high performing countries in every case.) Viewed in this way, a lot of classroom assessment is taking place in England by international standards.

39. The methods where England stands out least are ‘develop and administer own assessment’ and ‘administer a standardised test’. While teachers in England clearly do a lot of both – 71% and 40% respectively – these are not apparently methods that are being used much more widely in England than, on average, elsewhere.

Table 7.4 Percentage of teachers using particular assessment methods frequently or in all or nearly all lessons: international comparison

Method	Eng	H9	Fin	Fla	Jpn	Sng	L8	All
Observe students working and provide immediate feedback	89	73	76	77	43	78	87	80
Provide written feedback on student work	82	47	25	61	23	72	59	55
Develop and administer own assessment	71	63	66	89	29	65	78	68
Individual students answer questions in front of class	69	35	11	40	53	64	61	49
Let students evaluate own progress	69	28	27	30	27	32	51	38
Administer a standardised test	40	36	28	14	33	71	50	38

Source: OECD (2014) Table 6.11

Notes: The figures for ‘H9’ and ‘L8’ are averages for the nine high performing and eight low performing countries (see Table 1.2) and ‘All’ is the mean across all TALIS countries. Eng = England, Fin = Finland, Fla = Flanders, Jpn = Japan, Sng = Singapore.

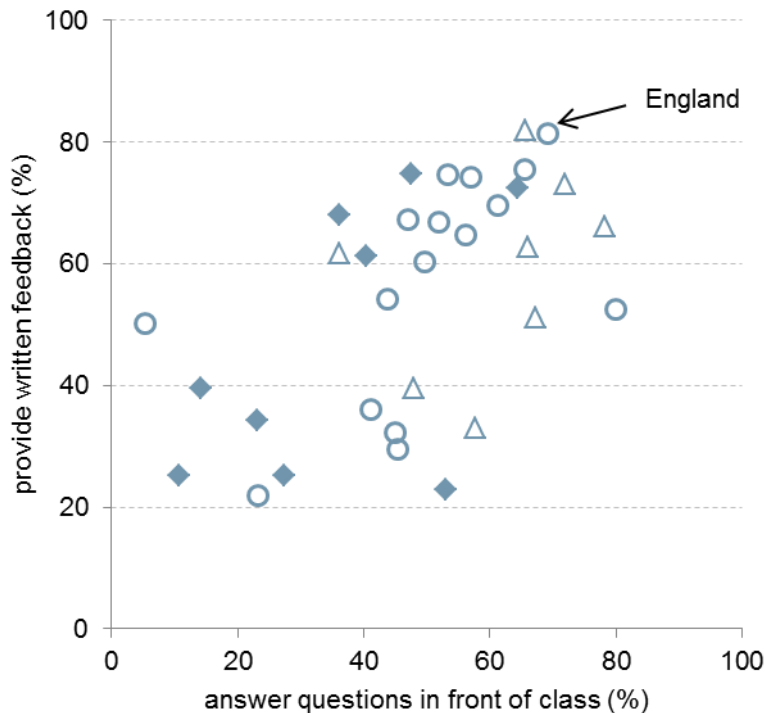
40. In Figure 7.9 we focus on two assessment methods where the figures for England are among the highest for any country: one oral method – listening to the answers pupils give to questions in front of the class (on the horizontal axis); and one written – providing written feedback beyond a mark or a grade (on the vertical axis).⁸⁸ The variation in the prevalence of both methods across the high performing countries (closed diamond symbols) is clear. A minority of teachers report use of them in the Netherlands, Estonia, Finland, Korea, and (written feedback only) Japan, while Australia and Singapore are the two high performers with higher levels of use close to those in England.⁸⁹

⁸⁸ In both cases teachers’ interpretation of the statements they are presented with may be quite broad. For example, a short phrase of encouragement alongside a mark or grade such as ‘well done, good work’ could be construed as written feedback.

⁸⁹ Abu Dhabi is the other country alongside England with over 80% of teachers reporting written feedback.

41. It is tempting to view the high level of written feedback in England as an entirely positive finding. But the opportunity cost needs to be considered. Teachers in England work long hours by international standards (see Chapter 2). If the cost of providing frequent written feedback were to be to spend less time on lesson preparation then the high level of this form of assessment could be seen in a different light.

Figure 7.9 Percentage of teachers who (i) provide written feedback on student work and (ii) get students to answer questions in front of class: international comparison

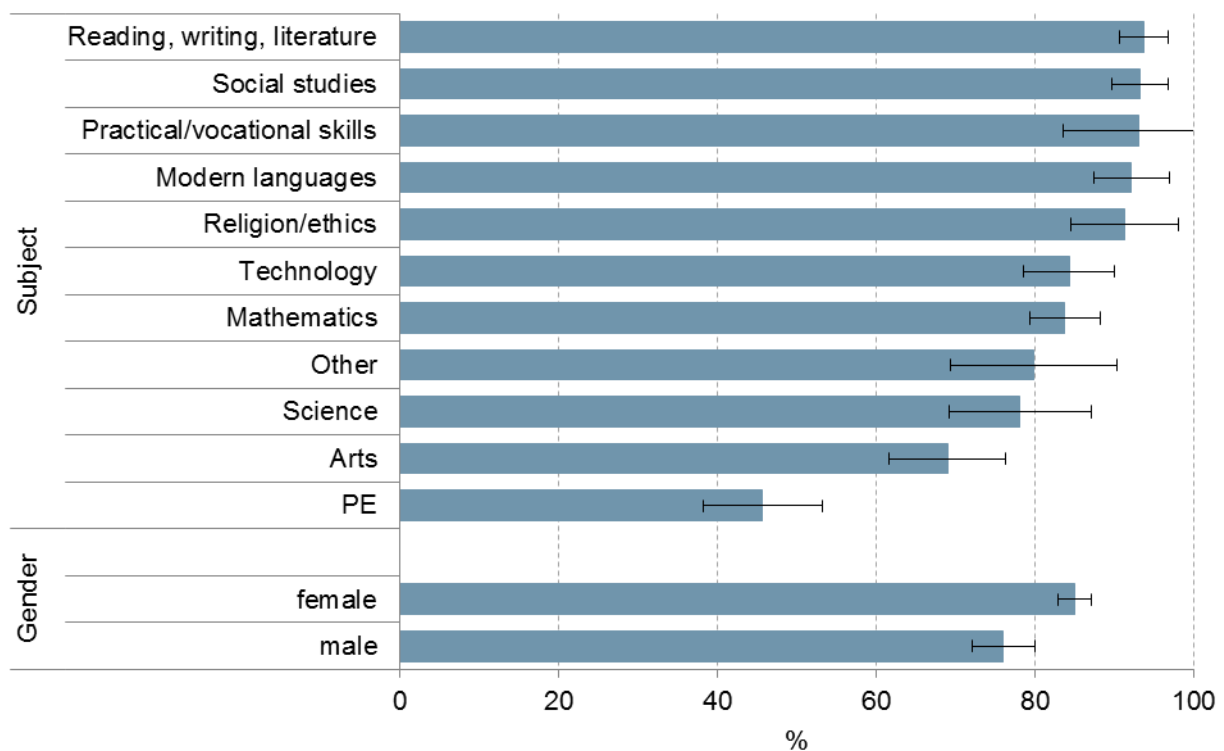


Source: OECD (2014) Table 6.11

Notes: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

42. Figure 7.10 illustrates the variation within England in the provision of written feedback. Not surprisingly perhaps, written feedback is less common in some subjects, notably physical education (PE). But over 90% of teachers report giving written feedback in five of the 11 subjects. There is also a clear difference between male and female teachers: 76% of men report giving written feedback compared to 85% of women. Further investigation showed that only a small part of this difference (two percentage points) is explained by the subject being taught in the target class (e.g. women are less likely to be PE teachers). We found no clear systematic variation with the teacher's age, type of school, or the school Ofsted rating.

Figure 7.10 Percentage of teachers giving written feedback frequently or in all or nearly all lessons, by teacher gender and by subject of the target class



Source: TALIS database

Notes: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

7.5 Summary

43. This chapter has investigated four issues concerning teachers' beliefs about teaching and their practices in and out of the classroom. Three were related to a particular class and we began by showing the wide variation across countries – including among the high performing countries – in the average size of this 'target class'. Class size can be expected to be one factor affecting what goes on in the classroom.
44. The most striking findings are probably the differences between England and other countries in the use of several teaching and assessment practices – although we also drew attention to differences within England, across different types of schools and different characteristics of teachers.
45. In particular, getting students to work together in small groups and giving different work to students with different abilities ('differentiation') are reported to be used frequently or nearly always in England by the majority of teachers but, in almost every case, by the minority in high performing countries. Providing written feedback on student work is also more common in England than in all the high performers. By contrast, broadly speaking, testing students does not seem that much more common in England.

Chapter 8 School and classroom disciplinary environment

- Serious disciplinary problems in schools in England are not frequently reported by headteachers. In all schools, use or possession of drugs or alcohol is said to occur never or rarely. Intimidation or verbal abuse of staff is also very unusual but is reported as occurring on a weekly basis by 6% of headteachers.
- Less serious disciplinary issues such as students arriving late at school and absenteeism occur on a weekly or daily basis in England in 56% and 41% respectively of schools – figures close to the middle of the range of values for all TALIS countries and below those of several high performing countries. Headteachers report unjustified absenteeism by teachers as occurring on at least a weekly basis in 11% of schools, notably more than in many other countries.
- 21% of teachers in England agree or strongly agree that they have to wait quite a long time at the start of their class for students to quieten down – less than the median for all countries of 27% and below all of the high performing countries except Japan. England is typically very close to the international average on other measures of classroom disciplinary environment.
- Classroom climate is notably better on average in independent schools than in state-funded schools and, among the latter, where Key Stage 2 intake scores are higher. But less than a fifth of the variation in classroom climate is accounted for at the school level: typically, schools do not have uniformly good or bad classroom climate.
- There is no evidence of any relationship between classroom climate and the ratio of teachers to teaching assistants in the school.
- Teachers perceive that classroom climate is better on average when there are high proportions of academically-gifted pupils in a class. Classroom climate tends to vary with teacher experience: 38% of teachers with five or less years of teaching experience agree or strongly agree that they lose quite a lot of time in the lesson due to interruptions by students but only 22% of teachers with 16 or more years of experience.

1. Schools and classrooms with more disciplinary problems are likely to be less favourable for learning, not least because school heads and teachers have to expend more time and effort in simply creating an orderly environment. As noted in Chapter 1, in England the central importance of behaviour in the classroom has been emphasised in the most recent Ofsted Annual Report and in the commentary on it by the Chief Inspector of Schools. This chapter presents evidence from TALIS on the learning climate of English schools and classrooms.
2. Headteachers in TALIS 2013 were asked a series of questions about the frequency of problematic student behaviour in their schools from lateness and absenteeism through to intimidation, abuse and the use of drugs and alcohol. And teachers were asked some questions about their perceptions of the disciplinary climate of a specific class which they taught, such as whether it took a long time for students to quieten down at the start of the lesson and whether much time was lost during the lesson due to student interruptions.
3. The chapter draws on the TALIS data to throw light on the factors associated with good school and classroom disciplinary climate and to place English experience in international context. Note that the terms 'classroom environment', 'classroom disciplinary environment' and 'classroom climate' will be used interchangeably throughout the chapter.
4. The questions to be addressed are:

Is there a favourable disciplinary climate in schools?

Is there much noise and disruption in classrooms?

Do school-level factors explain the variation in classroom climate?

What is the relationship between classroom climate and the type of class?

Are characteristics of the teacher associated with classroom climate?

8.1 Is there a favourable disciplinary climate in schools?

5. To establish the nature of school climate, headteachers were asked questions about the frequency of various problems of behaviour by pupils in their school. The data for England for their responses are summarised in Table 8.1.
6. The sample size, of around 150 schools, is small and so we need to exercise some caution in interpreting the data but the patterns are of considerable interest nonetheless. For either the overwhelming majority or else in all schools, certain types of behaviour, such as vandalism or theft and use of drugs or alcohol, were reported by school heads only rarely or never. But lesser disciplinary issues, such as pupils

arriving late at school, occurred on a weekly or more frequent basis in over half of schools, while pupil absenteeism occurred weekly or daily in over 40% of the schools in the England sample. (All reference to absenteeism in this chapter, whether of teachers or pupils, is to 'unjustified' absences.)

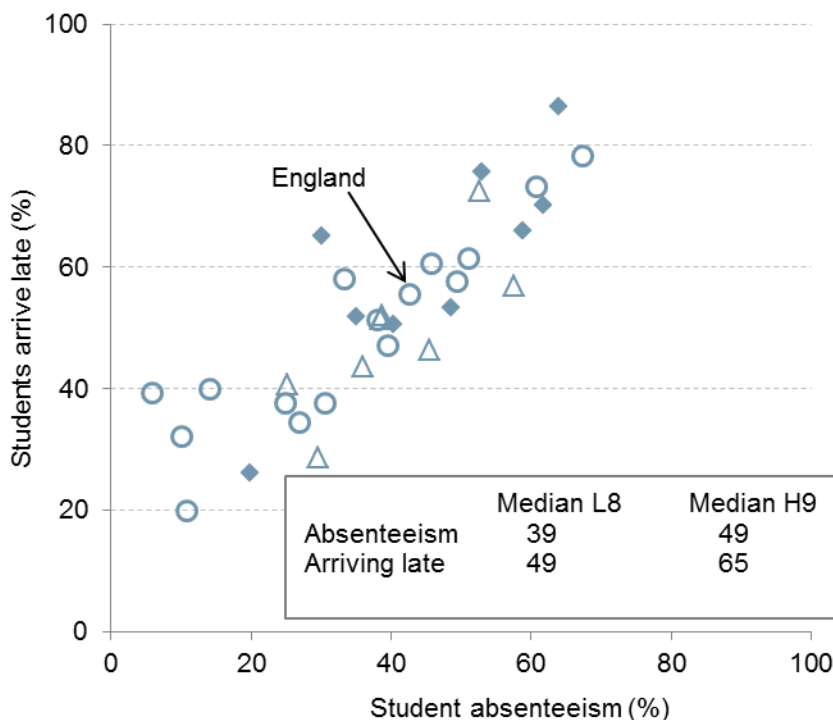
Table 8.1 Headteacher responses on the frequency of different types of pupil behaviour (percentages)

	never	rarely	monthly	weekly	daily	total
Arriving late at school	0	39	5	15	41	100
Absenteeism (unjustified)	2	49	8	16	25	100
Cheating	23	75	2	0	0	100
Vandalism and theft	8	87	3	2	0	100
Intimidation or verbal abuse among students	10	63	12	13	1	100
Physical injury caused by violence among students	24	71	5	1	0	100
Intimidation or verbal abuse of teachers or staff	31	56	8	6	0	100
Use/possession of drugs and/or alcohol in school	34	66	0	0	0	100

Source: TALIS database

Note. Headteachers were asked 'How often do the following occur?' Figures may not sum to 100 due to rounding.

Figure 8.1 Percentage of teachers in schools where the headteacher reports pupils (i) arrive late and (ii) are absent on a daily or weekly basis: international comparison



Source: OECD (2014) Table 2.20

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

7. Figure 8.1 places these percentages for late arrival of pupils and absenteeism in international perspective – the former on the vertical axis and the latter on the horizontal axis. The unit of analysis in the graph is now the teacher, rather than the school as in Table 8.1, so that the figures shown are the percentages of teachers in schools where the head reports the student behaviour concerned. The percentages shown for England are therefore slightly different from those in Table 8.1 which refer to the percentages of schools.
8. It can be seen that England is close to the middle of the distribution in terms of both absenteeism and late arrival. The four high performing countries (solid diamond symbols) with higher values on both measures are Australia, the Netherlands, Alberta and Finland (with absenteeism of 64% and late arrival of 87%). The one high performer in the bottom left of the diagram is Korea (20% for absenteeism and 26% for late arrival). As in the analyses of other chapters in this report, the high performers display substantial variation.
9. Table 8.1 shows that in 14% of schools in England headteachers stated that there was intimidation or verbal abuse among pupils on at least a weekly or daily basis. In 6% of schools there was reported to be intimidation or verbal abuse of staff by pupils with this regularity (although never daily).
10. In many countries in TALIS, the figure for weekly or daily occurrence of intimidation or verbal abuse of staff was 5% or less, and in 13 of them the difference from the figure for England is statistically significant, although it is important to emphasise that these differences are small – see Figure 8.2 where the figures for abuse among students (vertical axis) and staff (horizontal axis) are plotted. (As with Figure 8.1, the unit of analysis in this graph is now the teacher rather than the school so that the figures for England again do not correspond exactly with those in Table 8.1.) In only one country, Brazil, is the percentage significantly above that in England (the three high performing countries to the right of England are Australia, Estonia and Flanders). Focusing now on the vertical axis, it is noticeable here that six of the high performing countries have higher values for verbal abuse or intimidation among students than England. The three high performers with values below those in England are the three East Asian countries of Japan, Korea, and Singapore.
11. As part of the questions on school climate, headteachers were also asked about the behaviour of teachers in their school. The data for England are summarised in Table 8.2. Discrimination (e.g. based on gender or ethnicity) was reported to occur either only rarely or never in all the surveyed schools in England. Unjustified absenteeism by teachers was reported on at least a weekly basis in 9% of the schools and on at least a monthly basis in a fifth of them.
12. These figures for teacher absenteeism put England very much at the high end of the distribution for TALIS countries, as shown in Figure 8.3. Again, as with Figures 8.1 and 8.2, the unit of analysis in the graph is the teacher, while it is the school in Table

8.1, and this explains the slightly higher figure for England in the graph for absenteeism, 11% (compared to 9% in Table 8.2), and the lower figure for arriving late, 5% (compared to 7% in the table).

Figure 8.2 Percentage of teachers in schools where the headteacher reports intimidation or verbal abuse on a daily or weekly basis (i) among pupils (ii) by pupils of staff: international comparison



Source: OECD (2014) Table 2.20

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

Table 8.2 Headteacher responses on the frequency of different types of teacher behaviour (percentages)

	never	rarely	monthly	weekly	daily	total
Arriving late at school	15	76	2	7	0	100
Absenteeism (unjustified)	21	59	11	7	2	100
Discrimination	82	18	0	0	0	100

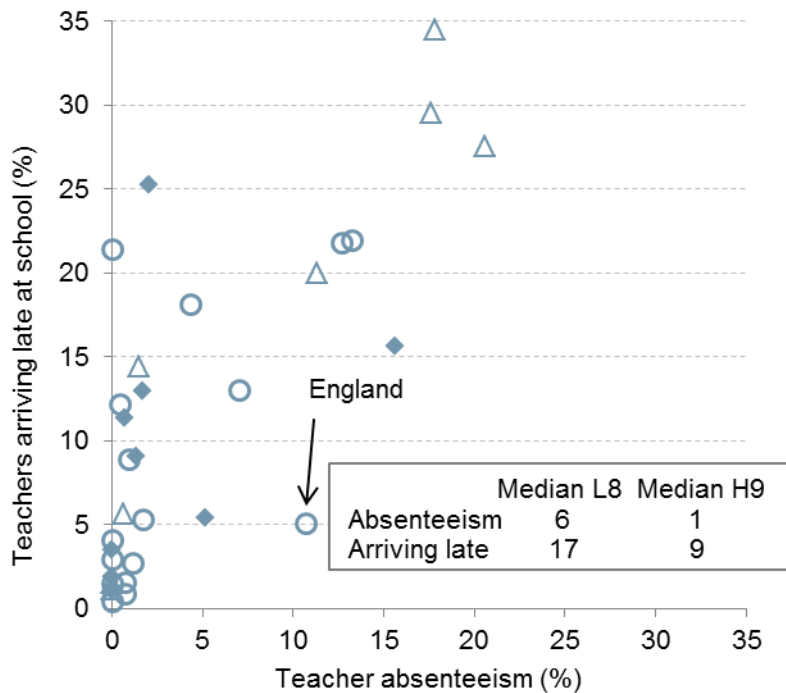
Source: TALIS database

Note. Headteachers were asked 'How often do the following occur?' Examples offered to them of discrimination were on the basis of 'gender, ethnicity, religion or disability etc'.

13. Only one of the high performing countries has a higher percentage of teacher absenteeism than England – Australia, where the figure is 16%. England does comparatively much better on teachers arriving late. Here the figure for England is 5%, lower than the median for all countries of 9%. Schools in five of the high performing countries – Australia, Finland, Flanders, the Netherlands, and Singapore – have higher proportions of late arriving teachers than England. In Flanders, as much as a quarter of teachers are in schools where heads report late arrivals on a weekly or

daily basis. Figure 8.3 also shows that a trio of the low performing countries – Brazil, Chile and Mexico – do particularly badly on both measures, with the figures for late arrivals and absenteeism each above 25%.

Figure 8.3 Percentage of teachers in schools where the headteacher reports that on a daily or weekly basis teachers (i) arrive late and (ii) are absent: international comparison



Source: OECD (2014) Table 2.21

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

14. To conclude this section, we analyse the responses to two questions that were asked only in England, one to heads and one to teachers.
15. Table 8.3 shows headteachers' views on whether they have insufficient power to deal with poor student behaviour. There is almost no concern expressed by heads of independent schools. But 29% of heads of both maintained schools and academies report that they feel they lack power in this area 'to some extent' or (very rarely) 'a lot'.

Table 8.3 Headteachers' views on whether insufficient powers to deal with poor student behaviour limit the head's effectiveness in his or her school (percentages)

	not at all	very little	to some extent	a lot	total
Maintained schools	45	26	27	2	100
Academies	47	24	26	3	100
Independent schools	85	15	0	0	100
All schools	54	23	21	2	100

Source: TALIS database

Note: headteachers were asked about their 'effectiveness as a headteacher'.

16. Table 8.4 summarises teachers' views on student behaviour, showing their reactions to the statement 'The students I teach are generally well behaved'. (The question concerned is not restricted to the 'target class' that is the focus of the next section.) There is again a marked contrast between independent schools and state-funded schools. A half of teachers in independent schools strongly agree with the statement put to them and almost all of the rest at least 'agree'. But only a fifth of teachers in maintained schools and academies strongly agree that their students are well behaved and around 1 in 6 or 1 in 7 (depending on the school type) disagree or (very rarely) strongly disagree.

Table 8.4 Teachers' views on the statement 'The students I teach are generally well behaved' (percentages)

	strongly disagree	disagree	agree	strongly agree	total
<i>School type</i>					
Maintained schools	1	16	64	19	100
Academies	1	12	67	20	100
Independent schools	1	1	47	51	100
All schools	1	12	62	25	100
<i>Key Stage 2 quartile</i>					
1 st (lowest)	2	25	62	11	100
2 nd	2	15	69	14	100
3 rd	1	9	70	20	100
4 th (highest)	1	6	61	32	100
All state-funded schools	1	14	66	20	100

Note: results by Key Stage 2 quartile refer only to maintained schools and academies. Figures may not sum to 100 due to rounding.

17. The bottom half of Table 8.4 shows results by the average Key Stage 2 scores of the pupil intakes of the state-funded schools. Teachers in schools with higher ability intakes tend to have more positive views of pupil behaviour. 93% of teachers in schools in the top quarter of average Key Stage 2 scores agree or strongly agree that their students are generally well behaved, compared to only 73% of teachers in the bottom quartile.
18. The patterns in both Tables 8.3 and 8.4 seem clear. But it is important to bear in mind that the results are based on subjective views rather than objective measures. The

point of reference for these views may depend on the context in which they are given. It is possible, for example, that what is seen as 'good behaviour' in an independent school differs from in a state-funded school, although it seems unlikely that this would explain all of the marked differences that we see.

8.2 Is there much noise and disruption in classrooms?

19. We now switch from the level of the school to that of the classroom. Classroom disciplinary environment was the focus of a specific question in TALIS. Teachers were asked to what extent they agreed with a set of statements about a particular Key Stage 3 class which the teacher takes, referred to as the 'target class' – see the start of Chapter 7 for the exact definition and for discussion of the wide variation in average target class size across countries in TALIS, which may influence classroom behaviour. The statements put to teachers were:

'When the lesson begins I have to wait quite a long time for students to quieten down'.

'Students in this class take care to create a pleasant learning atmosphere'.

'I lose quite a lot of time because of students interrupting the lesson'.

'There is a lot of disruptive noise in this classroom'.

20. The teachers responded to each of the questions on a four-point scale, from strongly disagree to strongly agree. The responses showed that:

- Nearly four-fifths (79%) of teachers either disagreed or strongly disagreed that it took quite a long time for students to quieten down at the start of the lesson.
- 74% agreed or strongly agreed that students in the lesson took care to create a pleasant learning environment.
- 73% either disagreed or strongly disagreed that they lost quite a lot of time due to students interrupting the lesson
- As for disruptive noise, 21% agreed or strongly agreed that there was a lot of noise in the classroom.

21. The detailed figures on the responses to the four questions are in Table 8.5. We might consider a class as having constituted a favourable environment for learning when teachers either disagreed or strongly disagreed with the first, third, and fourth statements and agreed or strongly agreed with the second one. On that definition some 61% of the classes surveyed in England could be regarded as a favourable environment for learning. These results suggest that in the majority of cases surveyed

there was a good disciplinary environment but that for a substantial minority of classes one or more of the following created a less than favourable environment: waiting for students to quieten down, lack of attention to a pleasant learning environment by the students, interruptions or disruptive noise.⁹⁰

Table 8.5 Teacher responses to statements on classroom climate (percentages)

	strongly agree	agree	disagree	strongly disagree	total
When the lesson begins I have to wait quite a long time for students to quieten down	4	17	48	31	100
Students in this class take care to create a pleasant learning atmosphere	19	55	21	5	100
I lose quite a lot of time because of students interrupting the lesson	6	22	44	29	100
There is a lot of disruptive noise in this classroom	4	17	46	32	100

Source: TALIS database

Note: Figures may not sum to 100 due to rounding.

22. How does England compare with other countries on classroom climate? Figure 8.4 shows on the horizontal axis the percentage of teachers who agreed or strongly agreed with 'I lose quite a lot of time because of students interrupting the lesson' and the percentage who agreed or strongly agreed with 'There is a lot of disruptive noise in the classroom' on the vertical axis.

23. The responses from teachers in England placed them close to the middle of the distribution in both cases. For disruptive noise, teachers in England are at 22% and the median for all countries is 24%, while 28% of teachers in England report losing a lot of time from interruptions, compared to the median for all countries of 29%.⁹¹ We might infer from this that classroom disciplinary climate in England, being marginally below the median on both variables, is reasonably good when compared to a range of other countries. It is notable, too, that seven out of the nine high performing countries are in worse position than England with higher percentages of teachers with lesson interruptions and disruptive noise. (The high performer in the bottom left hand corner with markedly lower percentages in both cases is Japan.)

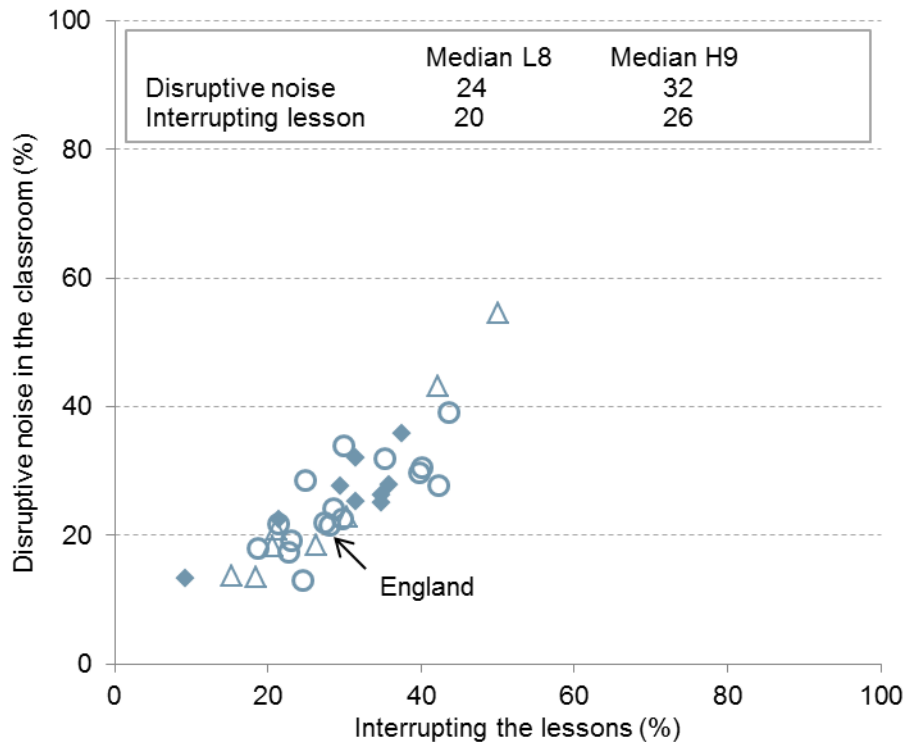
24. In Figure 8.5 the vertical axis again shows the percentage of teachers who agreed or strongly agreed that 'There is a lot of disruptive noise in the classroom' but the horizontal axis now shows the percentage who agreed or strongly agreed with the statement 'When the lesson begins I have to wait quite a long time for students to quieten down'. Teachers in England are located in a low position for waiting quite a long time at 21% compared to the median for all countries of 27%, and the high

⁹⁰ Teachers were also asked how representative the target class was of all the classes which they taught. It made little difference to the results if the analysis was confined only to those classes which the teacher stated were representative of all the classes which they taught.

⁹¹ The figure for disruptive noise in England is slightly different from that in Table 8.5 where the sample is restricted to teachers responding to all four statements.

performing countries' median of 30%. England is below all of the high performers on this measure except Japan. The high performer way out on the right hand side of the diagram is the Netherlands with a figure of 64%.

Figure 8.4 Percentage of teachers reporting that they agree or strongly agree that on a daily or weekly basis (i) there is a lot of disruptive noise in the classroom and (ii) quite a lot of time is lost through interruptions to the lesson: international comparison



Source: OECD (2014) Table 6.21

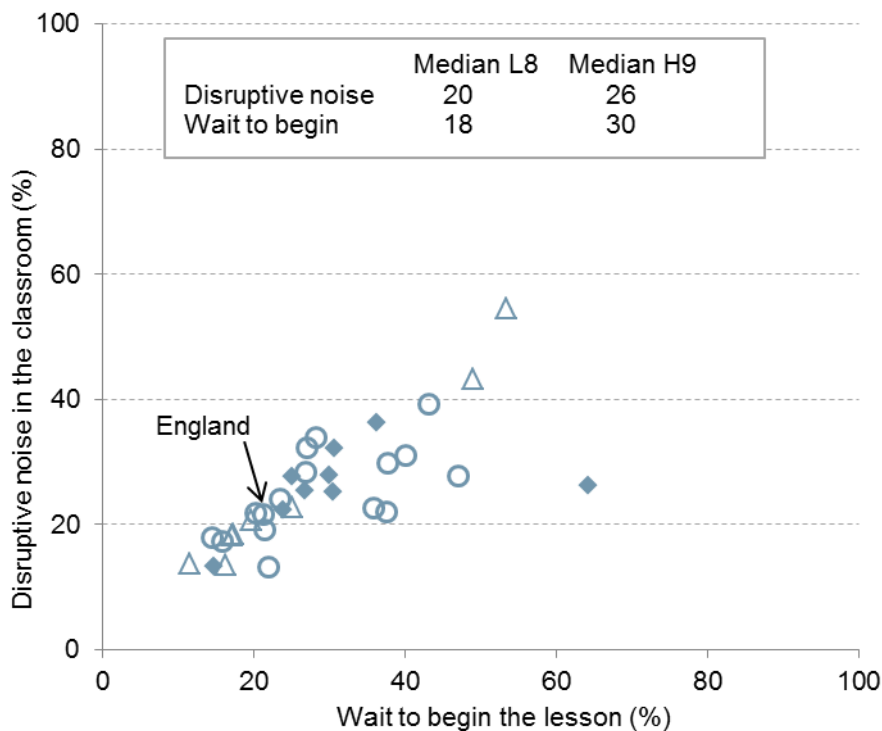
Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

25. Based on responses to the four statements, the OECD created for each country a derived index with higher scores implying a better classroom climate. The OECD advice is that the values should not be compared across countries but we can use the index values to look at differences in classroom climate within England. We standardised the measure to give a mean of zero and standard deviation of one: a score above zero implies better than average classroom climate.

26. It might be expected that in a class with a favourable disciplinary environment teachers would be able to focus on teaching, with few distractions. So we looked at the question in TALIS about the percentage of time teachers spent, in the target class,

on actual teaching.⁹² The relationship for England between classroom climate and this percentage is shown in Figure 8.6, which shows the average percentage of time spent teaching for the four quartile groups of the classroom climate index. This confirms the expected pattern, showing that in the top quarter of classroom climate an average of 90% of the time is spent on teaching compared to only 68% in classes which are in the bottom quarter for the classroom climate score.

Figure 8.5 Percentage of teachers reporting that they agree or strongly agree that on a daily or weekly basis (i) there is a lot of disruptive noise in the classroom and (ii) they wait quite a long time for students to quieten down: international comparison

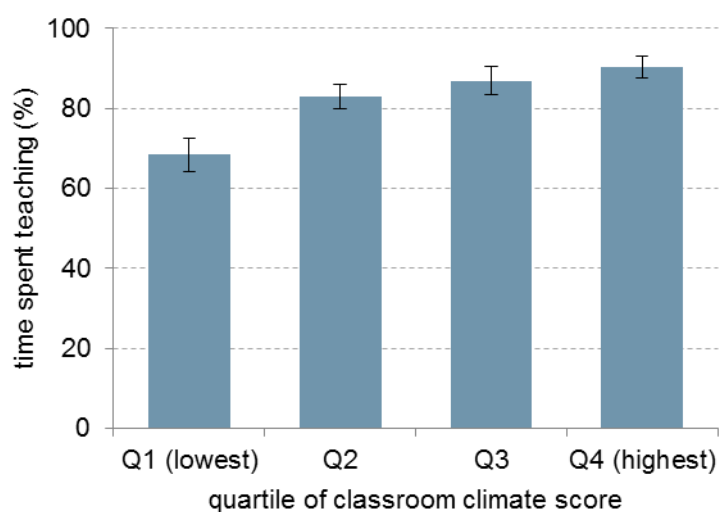


Source: OECD (2014) Table 6.21

Note: the nine high performing countries and eight low performing countries (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

⁹² As opposed to keeping order and administration. See Chapter 7 for more information on responses to this question.

Figure 8.6 Average percentage of class time spent on teaching, by quartile of classroom climate score



Source: TALIS database

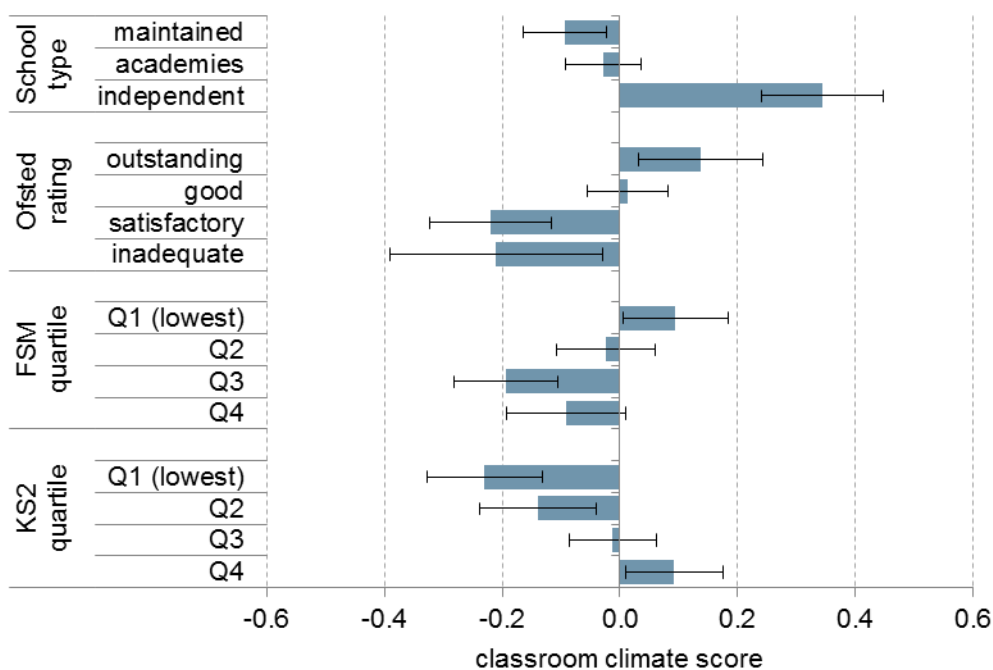
Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval.

8.3 Do school-level factors explain the variation in classroom climate?

27. How far can school-level factors explain the differences in classroom climate? A breakdown of the classroom climate score reveals that a relatively small proportion of the variation, about 18% of the total, is accounted for at the school level. Most of the variation in classroom climate is therefore associated with differences within schools in the characteristics of the pupils in the class or of the teacher. We turn to these factors below but we first investigate which observed school characteristics do help explain the variation that is accounted for at the level of the schools.

28. Distinguishing the three broad types of school – maintained, academy, and independent – there is evidence that classroom climate is significantly higher, on average, in the independent sector, consistent with our earlier results using the England-only questions. Figure 8.7 shows that the difference in average climate index scores between maintained schools and independent schools is some 0.4 of a standard deviation. This is a substantial difference and, although the number of teachers in independent schools in the TALIS sample for England is modest, the difference is clearly statistically significant. The mean classroom climate score is also slightly higher in academies than in maintained schools but this difference is small and in this case is not statistically significant.

Figure 8.7 Average classroom climate score, by characteristics of the school



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average classroom climate, scores less than zero indicate worse than average classroom climate.

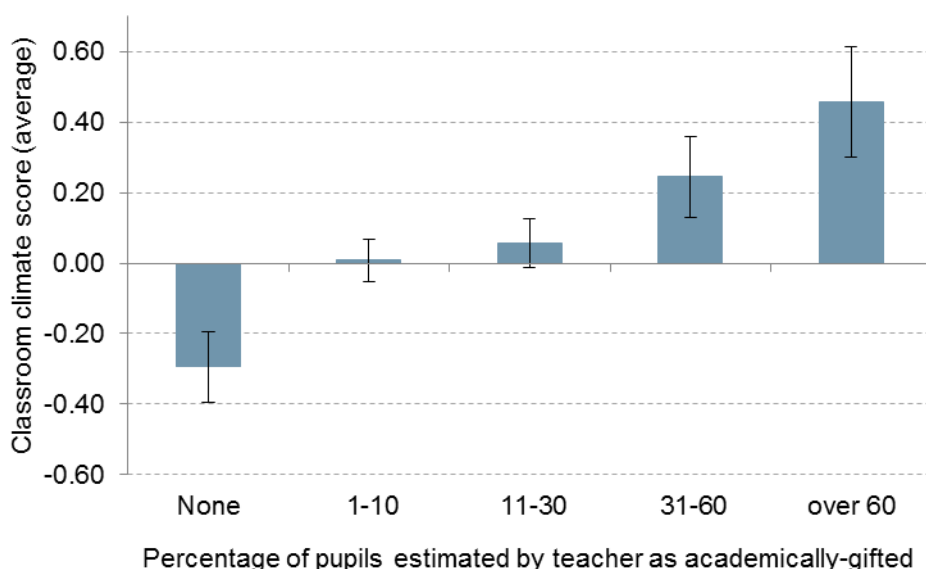
29. Compared to schools which had Ofsted ratings of ‘good’, teachers in schools which were deemed by Ofsted to be ‘satisfactory’ or ‘inadequate’ tended to report significantly worse classroom climate, as measured by the summary climate score: mean scores are over a fifth of a standard deviation lower. As for the schools with an Ofsted rating of ‘outstanding’, these had a better mean classroom climate score than the ‘good’ schools, by about 0.12 of a standard deviation, but the difference here is not statistically significant.
30. The schools in the England sample in TALIS can be divided into quartiles according to the percentage of the pupils eligible for Free School Meals (FSM). Differences in mean classroom climate score between the top and bottom quartiles of FSM are statistically significant and the gap between them is 0.19 of a standard deviation of the classroom climate score – see Figure 8.7. Note that this analysis excludes the independent schools. Figure 8.7 also shows that there are significant differences by the pupil intake of the school in terms of mean Key Stage 2 score – again these figures exclude independent schools. Relative to the top quartile, classes in schools in the bottom quartile were 0.32 of a standard deviation lower on the classroom climate score. Viewed in this way, schools with lower ability children have classroom climates that on average are less favourable to learning.
31. Chapter 2 drew attention to the unusually high use of teaching assistants in schools in England by international standards. Some schools in England had more teaching

assistants per teacher than others and this might be thought to contribute to improving the disciplinary climate in the classroom. So we investigated the hypothesis that classroom climate is more favourable in schools with a high ratio of teaching assistants per teacher. But no evidence was found to support this hypothesis. The correlation between the ratio of teachers to teaching assistants and disciplinary climate score was only 0.03 and it was not statistically significant.

8.4 What is the relationship between classroom climate and the type of class?

32. We now turn to the variation in classroom climate with the characteristics of the class. There is some evidence that classroom disciplinary environment in England is better in smaller classes. In the smallest classes, with 20 or fewer pupils, disciplinary environment is about 0.08 of a standard deviation above the overall mean of zero. However, this is no longer the case once we control for type of school (independent schools have smaller average class sizes).
33. Classroom climate tends to be more favourable when there are higher proportions of academically-gifted pupils, as reported by the teacher. This is consistent with the school-level findings on Key Stage 2 intake reported earlier in the chapter. When the teacher states that there are no academically gifted pupils in the target class, the classroom climate score is almost 0.3 of a standard deviation below the overall mean while classes with high proportions of academically gifted pupils tend to be well above the mean – see Figure 8.8.

Figure 8.8 Average classroom climate score, by percentage of academically-gifted pupils in the class (as estimated by the teacher)

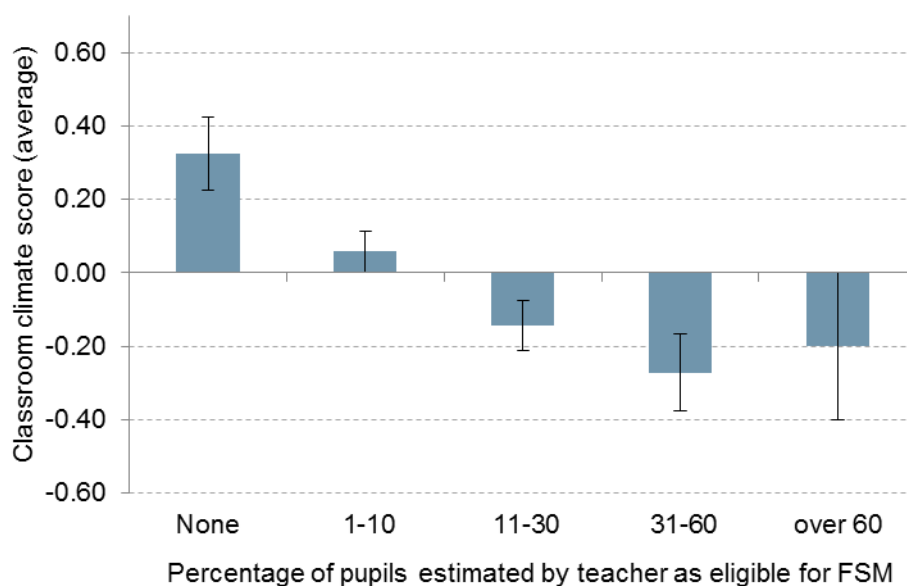


Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average classroom climate, scores less than zero indicate worse than average classroom climate.

34. Conversely, classroom climate tends to be less favourable when there are higher proportions of low academic achievers. If the teacher states that more than 60% of a class consisted of low academic achievers then the classroom climate score is almost 0.7 of a standard deviation below the overall mean (not shown in Figure 8.8).
35. There is also variation in the classroom climate score by the proportion of pupils from socio-economically disadvantaged backgrounds, as measured by FSM eligibility. Taking classes with 1-10% of pupils estimated by the teacher as eligible as the reference group, in classes where 11-30% were estimated eligible for FSM the classroom climate score is about a fifth of a standard deviation lower on average, while in classes with 31-60% of pupils thought eligible for FSM the classroom climate score is one third of a standard deviation lower on average. This is summarised in Figure 8.9. Again, this pattern of results is consistent with the school-level findings on FSM reported in the previous section (where the percentage of pupils receiving FSM in the school is taken from administrative records rather than estimated by the teacher, as here in this section for the classroom).

Figure 8.9 Average classroom climate score, by percentage of pupils in the class eligible for free school meals (as estimated by the teacher)



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average classroom climate, scores less than zero indicate worse than average classroom climate.

8.5 Are characteristics of the teacher associated with classroom climate?

36. Finally, we consider how average classroom climate in England varies according to the observed characteristics of the teacher. Results are shown in Figure 8.10 for gender, years of experience and highest qualification.

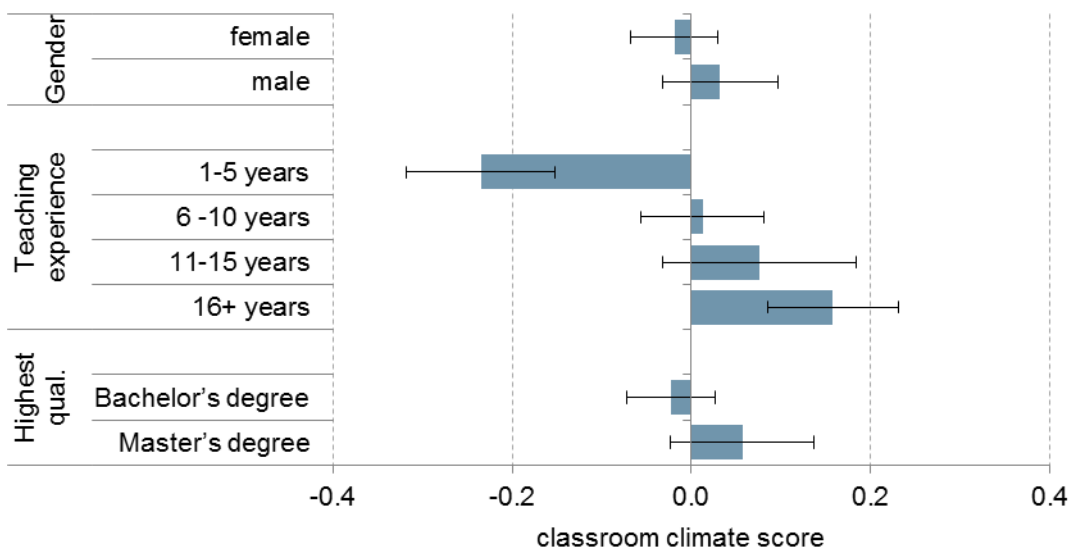
37. There are no significant differences between men and women. The average score is slightly higher for men but the large margins of error around the figures mean that this difference may just reflect the chance process in drawing the TALIS sample.

38. However, the number of years of teaching experience is strongly associated with classroom climate. The gap, on average, between the least experienced teachers (5 years or less of experience) compared to the most experienced, with 16 or more years of experience, is almost 0.4 of a standard deviation of the classroom climate score, which is quite sizeable. These differences on the overall score are also reflected in the individual items that make up the index. As discussed earlier, some 21% of teachers in England agree or strongly agree with the statement 'When the lesson begins I have to wait quite a long time for student to quieten down'. The percentage agreeing or strongly agreeing is 30% amongst the least experienced teachers but only 15% of the most experienced teachers. Also, 38% of those with 5 or less years of teaching experience agree or strongly agree that they lose time in the

lesson due to interruptions by students compared to just 22% of those with 16 or more years of teaching experience (the figure for the sample overall is 28%).

39. The bottom of the graph show the relationship between a teacher’s qualification level and classroom climate. Nearly all (over 95%) of the teachers in the TALIS sample for England are qualified to either Bachelor’s or Master’s level. Those with Master’s degrees reported slightly higher levels of classroom disciplinary climate, on average, compared to those with a Bachelor’s degree but, as in the case of gender, this difference is not statistically significant.

Figure 8.10 Average classroom climate score, by characteristics of the teacher



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average classroom climate, scores less than zero indicate worse than average classroom climate.

8.6 Summary

40. A favourable disciplinary climate, both at the school level and within the classroom, is important because it provides a framework in which learning can take place. On school climate, the evidence from TALIS suggests that serious disciplinary problems in schools in England are rare. For example, in all schools, headteachers report that problems such as the use or possession of drugs or alcohol occurred either rarely or never.

41. The intimidation or verbal abuse of staff or teachers is also very unusual. Nonetheless, a small minority of headteachers in England, some 6%, report it to occur on a weekly basis and this figure is higher than in many other countries in the survey. One other area of concern is unjustified absenteeism by teachers which is also high in

England by international standards, occurring on at least a weekly basis in 9% of surveyed schools.

42. In order to assess classroom disciplinary climate, teachers were asked about matters such as having to wait quite a long time at the start of their class for students to quieten down, and interruptions during the lesson. For the most part, the responses from teachers on these measures tend to put England close to, and sometimes slightly better than, the international average. However, with over a fifth of teachers agreeing or strongly agreeing that there was a lot of disruptive noise in the lesson, and 28% that they lose much time due to student interruptions, it is clear that classroom climate was far from ideal in a substantial minority of the lessons surveyed.
43. The data for England were used to throw some light on the factors associated with better classroom disciplinary climate. Only a small part of the variation lies at the school level – about a fifth. Classroom climate is notably better in independent schools than in state schools. Among state schools it is better on average where Key Stage 2 intake scores are higher. But the great bulk of the reported variation in classroom climate lies within schools and not between schools – it is associated with differences between characteristics of classes and teachers rather than of schools.
44. Among the more striking results is the strong association of classroom climate with the level of experience of the teacher. The percentage of teachers agreeing or strongly agreeing that they had to wait quite a long time for students to quieten down was 30% amongst the least experienced teachers but only 15% for the most experienced teachers. The composition of the class in terms of the teacher's assessment of ability and socioeconomic disadvantage was also associated with classroom climate. These results suggest fruitful avenues for further investigation with the data.

Chapter 9 Teachers' self-efficacy

- Teachers in England are reasonably confident in their own abilities by international standards – they have 'high self-efficacy'.
- 56% of teachers in England believe they are very capable of calming a disruptive student, 49% that they can craft good questions for their students, and 29% that they can motivate students who show low interest in school work – compared to median values for high performing countries of 30%, 31% and 21% respectively.
- Only a small proportion of the variation in self-efficacy in England – about one tenth of the total – occurs at the school level. The overwhelming majority of the variation is within schools rather than between schools. There is:
 - no evidence that average self-efficacy differs between maintained schools, academies and independent schools;
 - no statistically significant difference in self-efficacy by the intake of the school in terms of average Key Stage 2 scores or the proportion of pupils eligible for Free School Meals;
 - some weak evidence that self-efficacy is higher in schools with better Ofsted ratings, but this is no longer significant after controlling for other factors.
- Less experienced teachers in England – those with 5 years or less in the profession – tend to have lower self-efficacy. But differences in experience above five years do not have a significant association with self-efficacy.
- Good working relationships between teachers in England, such as better cooperation and collaboration, are strongly associated with teachers' self-efficacy.
- Positive changes which occur as a result of feedback, such as improved opportunities for career advancement or access to more or better professional development, are associated with higher self-efficacy in England.
- Better teacher-student relations are associated in England with higher self-efficacy, although it is unclear whether this is a causal relationship.

1. Self-efficacy is defined as an individual's belief that they are capable of performing a particular task successfully.⁹³ In an educational context, self-efficacy refers to the beliefs which teachers hold about their capability to influence student learning. There is a substantial body of literature on the associations between teachers' self-efficacy and a range of outcomes. For example, there is evidence that the self-efficacy of teachers is positively related to their job satisfaction. Conversely, teachers with low self-efficacy may have higher levels of work-related stress and an increased likelihood of quitting the teaching profession.⁹⁴
2. The determinants of teachers' self-efficacy have received less attention. Nonetheless, research has indicated that certain characteristics of the teacher are related to self-efficacy. Notably, years of experience as a teacher are likely to be important, with several studies finding that inexperienced teachers tend to have lower self-efficacy. Some have further maintained that the relationship between experience and self-efficacy may be non-linear, increasing across the early and middle years of teaching before declining later on.⁹⁵
3. The role of school-level factors in influencing teachers' self-efficacy is not well-established in the international literature as there has been little research on the topic.⁹⁶ There has been some work on differences in self-efficacy between middle and high school teachers, for example, but rather little on other school-level factors.
4. Since teachers operate as part of a team within the school, the working environment of the school and the sense of community among staff could influence the self-efficacy of individual teachers.⁹⁷ Teachers may enhance their own self-efficacy through learning or by being supported by their colleagues and associates. In the previous round of TALIS, in which England did not take part, it was shown that measures of cooperation with other teachers were strongly related to a measure of teachers' self-efficacy.⁹⁸ Furthermore, feedback, particularly feedback which led to positive change for the teacher, was found to be related to teachers' self-efficacy in some countries.
5. In this chapter we contribute new evidence on the factors associated with teachers' self-efficacy. The questions to be addressed are:

How confident are teachers about their abilities?

Is self-efficacy related to experience and other teacher characteristics?

Can school-level factors account for variations in self-efficacy?

⁹³ Bandura (1997).

⁹⁴ Klassen et al. (2011), Caprara et al. (2003), Skaalvik and Skaalvik (2007), Klassen and Chiu (2011).

⁹⁵ Wolters and Daugherty (2007), Klassen and Chiu (2010).

⁹⁶ Klassen and Chiu (2010).

⁹⁷ Friedman and Kass (2002), Skaalvik and Skaalvik (2007), Kelm and McIntosh (2012).

⁹⁸ OECD (2009).

Is self-efficacy affected by the feedback teachers receive?

How do working relationships with colleagues affect self-efficacy?

Is self-efficacy correlated with the quality of teacher-student relations?

9.1 How confident are teachers about their abilities?

6. Teachers in TALIS were asked a set of 12 questions about their self-perceptions of their effectiveness at teaching. Questions asked, for instance, whether the respondent could help students to value learning, whether he or she could get students to follow classroom rules, and whether the teacher was able to use a variety of assessment strategies. The responses to each question were on a four-point scale from 'not at all' to 'a lot'.
7. The responses among teachers in England to these 12 questions are summarised in Table 9.1. It is apparent that on each item the overwhelming majority of respondents gave answers towards the higher end of the scale. Over three-quarters of the responses on any item were either 'quite a bit' or 'a lot', varying from 76% who gave one or other of these responses for the item 'motivate students who show low interest in school work' (final row), to 97% for the item 'provide an alternative explanation, for example when students are confused' (second row). On each of the 12 items, 1% or less of the responses were 'not at all'.
8. Some 11% of the teachers in the English sample responded 'a lot' to all 12 of the questions about their effectiveness, i.e. they gave the highest possible response on every question. A slightly lower proportion, 10%, gave zero 'a lot' responses, so did not choose the highest response on any question. The median number of responses of 'a lot' was six.
9. A tiny proportion, less than a fifth of one per cent, of the sample of teachers in England gave the lowest possible response of 'not at all' to all 12 of the questions, while 98% of the sample did not choose this lowest category in responding to any of the questions.
10. Teachers' self-efficacy is considered to be multi-dimensional in nature. In the educational psychology literature it is common to consider it as comprising three different domains: managing students (ensuring that they follow rules, are not disruptive etc), instructing students, and motivating students to learn.⁹⁹ International comparisons based on the new TALIS data show that teachers in England scored themselves relatively highly on specific questionnaire items for each of these three components of self-efficacy.

⁹⁹ Skaalvik and Skaalvik (2007); Tschannen-Moran and Woolfolk-Hoy (2001).

Table 9.1 Teacher views on the extent to which they can do certain things in their teaching (percentages)

	not at all	to some extent	quite a bit	a lot	total
Make my expectations about student behaviour clear	0	4	27	69	100
Provide an alternative explanation	0	3	33	64	100
Get students to believe they can do well in school work	0	7	36	57	100
Get students to follow classroom rules	0	6	37	56	100
Control disruptive behaviour in the classroom	1	11	38	51	100
Craft good questions for my students	0	10	41	49	100
Help my students value learning	0	13	40	47	100
Use a variety of assessment strategies	1	9	46	45	100
Calm a student who is disruptive or noisy	1	13	43	43	100
Implement alternative instructional strategies in my classroom	1	15	46	38	100
Help students think critically	0	18	49	32	100
Motivate students who show low interest in school work	1	24	47	29	100

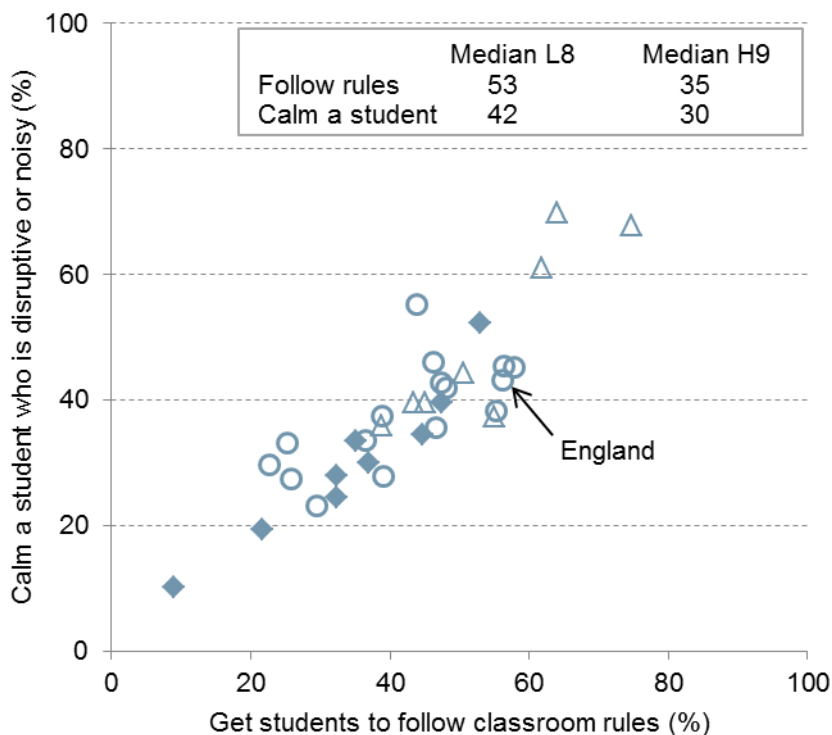
Source: TALIS database

Note: teachers were asked 'In your teaching, to what extent can you do the following?' Figures may not sum to 100 due to rounding.

11. Figure 9.1 focuses on the management of students. It shows the percentage of teachers in each country who gave the response 'a lot' when asked to what extent they could calm a disruptive student (vertical axis), and the percentage who responded 'a lot' on the extent to which they were able to get students to follow classroom rules (horizontal axis). The figures for England are 56% on following classroom rules and 43% on calming disruptive or noisy students, each well above the median for all countries of 45% and 38% respectively and above the figures for almost all the high performing countries.
12. It is also apparent from the graph that high performing countries (solid diamond symbols) are not more likely than low performing countries (open triangles) to have a high proportion of teachers who responded 'a lot' on these questions. In fact the opposite is true. On getting students to follow classroom rules, the median percentage responding 'a lot' among the high performers is only 35%, compared to 53% among the low performers. Similarly, larger proportions of teachers in low performing countries responded 'a lot' on the question about calming a disruptive or noisy student. Here the median among the low performing countries is 42% but only 30%

for the high performing countries. (The outlier in the bottom left-hand corner of the graph is Japan.)

Figure 9.1 Percentage of teachers responding ‘a lot’ on their ability to (i) calm disruptive students and (ii) get students to follow rules: international comparison



Source: OECD (2014) Table 7.1.Web

Note: the nine high performing countries ('H9') and eight low performing countries ('L8') (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

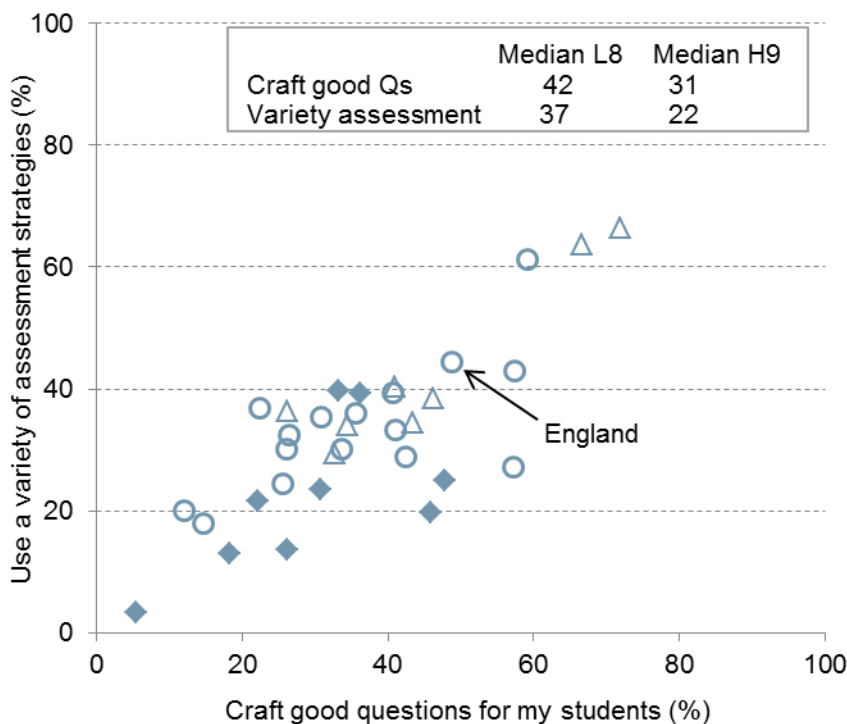
13. As for the instructional aspect of teachers' self-efficacy, this is illustrated in Figure 9.2.

In the case of England some 49% of teachers who responded to the questions in TALIS declared that the extent to which they were able to craft good questions for students was 'a lot', while 45% gave that response on the use of a variety of assessment strategies. The percentage of teachers responding 'a lot' was lower in all of the high performers than in England for both of these questions. Among this group the figure for using a variety of assessment strategies ranges from 3% in Japan to 40% in Alberta.

14. Figure 9.3 considers the student engagement aspect of teachers' self-efficacy, showing the percentages of teachers in each country who responded 'a lot' on questions concerning the extent to which they could motivate students who showed low interest in school work and on helping students value learning. There is a high correlation between these two measures (0.9). The figures for England are high on each of these questions with 47% of teachers stating that they could help students to value their learning 'a lot' – compared to the median for all countries of 37%. And while 29% of teachers in England claim that they can motivate students who show low

interest 'a lot', the median across all countries is 22%. The figures for England are again higher than for all the nine high performing countries. The pattern once again is that low performers tended to score higher on each measure than high performers. The largest proportions of responses of 'a lot' are in Abu Dhabi, with 71% of teachers there giving this response for the question about whether they could help their students value learning and 66% saying that they could motivate students who show low interest in school work. At the other end of the spectrum, just 2% of teachers in Japan gave responses of 'a lot' on each of these questions.¹⁰⁰

Figure 9.2 Percentage of teachers responding 'a lot' on their ability to (i) use a variety of assessment strategies and (ii) craft good questions: international comparison



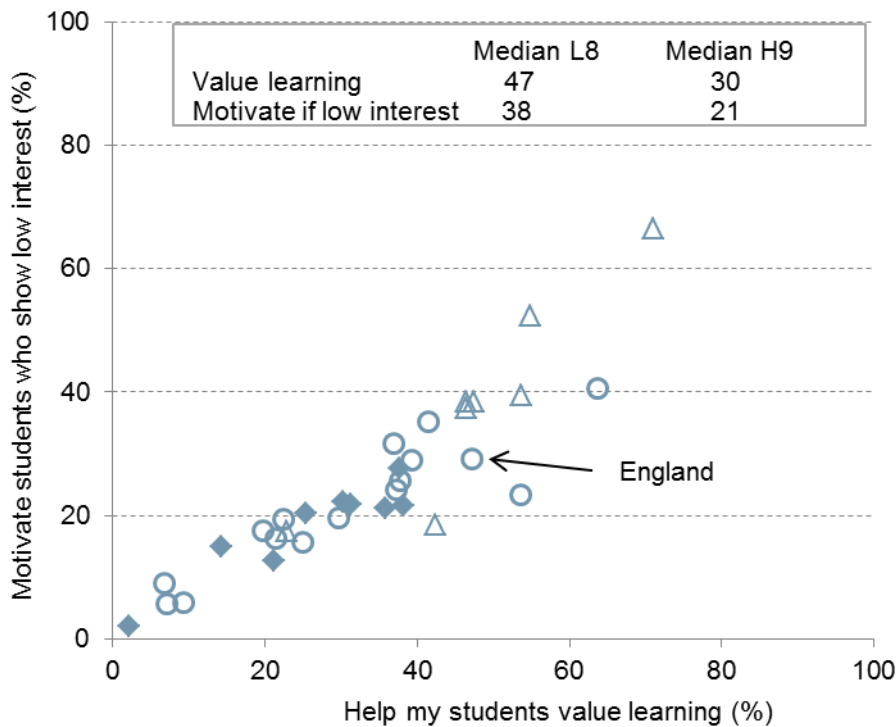
Source: OECD (2014) Table 7.1.Web

Note: the nine high performing countries ('H9') and eight low performing countries ('L8') (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

- The OECD grouped together individual items using factor analysis to derive three sub-indices of efficacy in classroom management, instruction and student engagement. They then constructed an overall index of teacher self-efficacy by summing the sub-indices and dividing by three, i.e. taking the arithmetic mean of the sub-indices. According to the OECD's analysis, the sub-indices and the overall teachers' self-efficacy score are not strictly comparable across countries (which is one of the reasons why we have focused on individual questionnaire items rather than scales in the international comparisons above).

¹⁰⁰ We cannot rule out that linguistic or cultural differences mean that the response 'a lot' is less likely in some countries than others even if teacher capacity is no different.

Figure 9.3 Percentage of teachers responding ‘a lot’ on their ability to (i) motivate students and (ii) help students value learning: international comparison



Source: OECD (2014) Table 7.1.Web

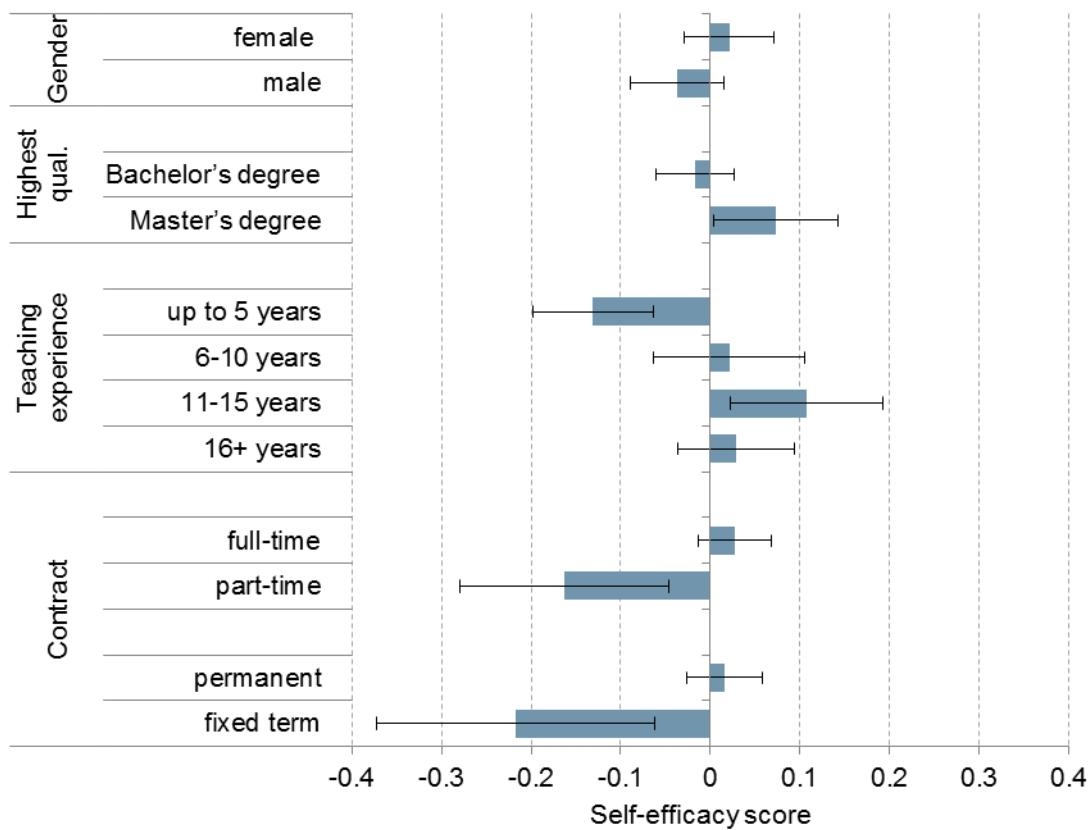
Note: the nine high performing countries ('H9') and eight low performing countries ('L8') (see Table 1.2) are plotted with closed diamonds and open triangles respectively.

16. But we can use the scales, including the overall self-efficacy score, in analysing the correlates of self-efficacy for teachers in England and this is the focus of the rest of the chapter. We standardise the overall score so that it has a mean of zero and a standard deviation of one. So, if a teacher has a positive self-efficacy score that implies that they are above the mean level of self-efficacy in the English sample and we can easily interpret how far someone is above or below the mean. For example, someone with a score of +0.2 would be a fifth of a standard deviation above the mean, while someone with a score of -0.5 would be half a standard deviation below the mean.

9.2 Is self-efficacy related to experience and other teacher characteristics?

17. Figure 9.4 shows average values of this overall measure of self-efficacy, distinguishing between different groups of teachers. Women have marginally higher scores on average (and also for each of the three sub-indices which comprised the overall self-efficacy measure) but the differences by gender are small and are not statistically significant.

Figure 9.4 Average teacher self-efficacy scores, by teacher characteristics



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average self-efficacy, scores less than zero indicate worse than average self-efficacy.

18. Some 78% of teachers in the English sample were qualified to Bachelor degree level, while 19% had Master's degrees. There are therefore only very small numbers without these qualifications and in Figure 9.4 we exclude them from the analysis. Teachers with a Master's degree report slightly higher levels of self-efficacy, on average, with the magnitude of the difference being about 0.09 of a standard deviation of the self-efficacy score and the difference is statistically significant.¹⁰¹
19. Teachers with five years or less experience tend to have lower self-efficacy scores than more experienced teachers. But differences in experience above five years are not found to have a significant association with self-efficacy.
20. We also explored whether there is a link between the type of contract on which the teacher was employed and self-efficacy. 86% of teachers in England are on full-time contracts and 14% are part-time. The mean level of self efficacy is some 0.19 of a standard deviation lower for those on part-time contracts compared to those on full-time contracts (and the difference is statistically significant).

¹⁰¹ p = 0.017.

21. Nearly 94% of teachers in the English sample are on permanent contracts while just 6% are on fixed-term contracts. Nevertheless, there is a statistically significant difference between the groups, with those on fixed term contracts having mean self-efficacy about 0.24 of a standard deviation lower, on average, than those on permanent contracts.

9.3 Can school-level factors account for variations in self-efficacy?

22. We began by decomposing the variation in teachers' self-efficacy score in England between the part that varies between schools and part that varies between teachers within schools. Only a small proportion of the variation, approximately 10% of the total, occurs at the school level. This is broadly consistent with international evidence from the previous TALIS round in 2008 (which did not include England). The analysis that produced this evidence used a somewhat different measure of teachers' self-efficacy but it also found that most of the variation occurred between teachers within the same schools rather than between schools.

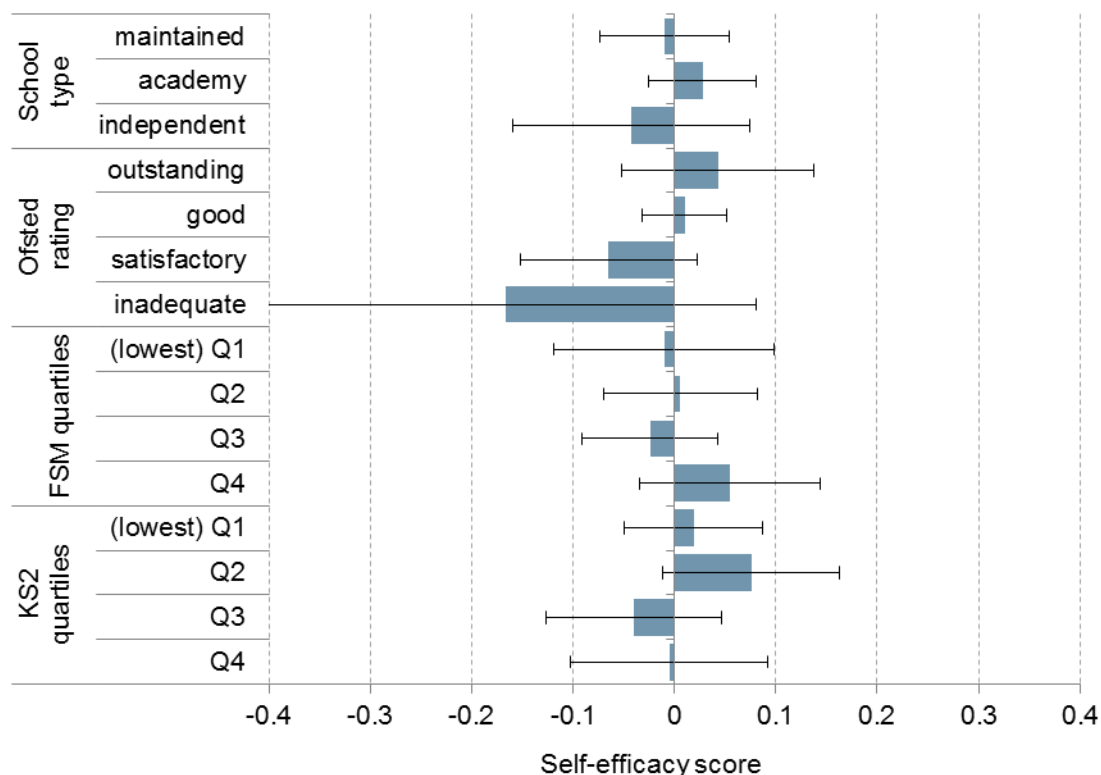
23. For the most part, in England specific school characteristics that are present in the dataset do not appear to have any association with the level of self-efficacy reported by teachers in the school – see Figure 9.5.

24. Notably, there is no evidence that average teacher self-efficacy differs between maintained schools, academies, and independent schools. There is some weak to moderate evidence that teachers who regard themselves as more effective are teaching in schools which had been given higher ratings by Ofsted. A formal test comparing teachers in the two groups of 'good' or 'outstanding' schools and those in 'satisfactory' or 'inadequate' schools showed a mean difference of 0.1 of a standard deviation in the self-efficacy score, which was statistically significant.¹⁰² However, Ofsted rating is not statistically significant in multiple regression models of teachers' self-efficacy – see section 9.6.

25. The final two characteristics in Figure 9.5 are available for state-funded schools only, maintained schools and academies. We find no statistically significant differences in average teacher self-efficacy by quartiles of Key Stage 2 scores of the pupil intake. Nor does teacher self-efficacy vary by the extent to which the pupils in the school are from deprived backgrounds, measured by the proportion eligible for Free School Meals.

¹⁰² $p = 0.038$.

Figure 9.5 Average teacher self-efficacy scores, by school characteristics



Source: TALIS database

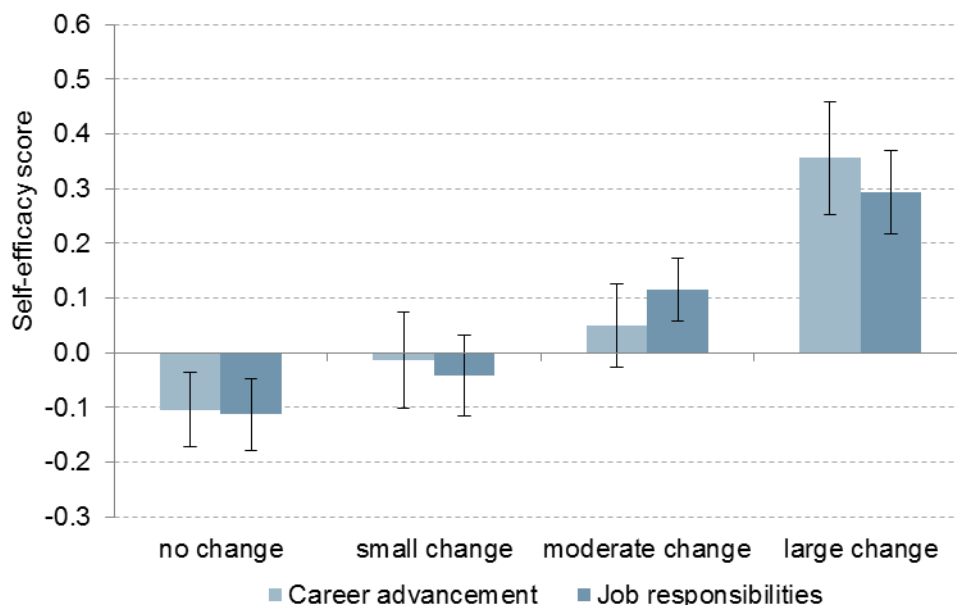
Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average self-efficacy, scores less than zero indicate worse than average self-efficacy.

9.4 Is self-efficacy affected by the feedback teachers receive?

26. In this section we report on some analyses of the TALIS data for England on the feedback received by teachers and whether this was related to their self-efficacy. As described in Chapter 5, which focuses on appraisal and feedback, teachers were asked a series of questions on whether positive change in different areas of their work, and what degree of positive change, had occurred as a result of feedback. Responses on each item were on a four point scale from 'no positive change' through to 'large change'.
27. For example, teachers were asked whether feedback had had any positive impact on their career advancement or job responsibilities. The relationship between each of these and our overall summary score of teachers' self-efficacy is shown in Figure 9.6. Those teachers who report that the feedback which they received had led to a large change in career advancement or job responsibilities also tend to have higher self-efficacy scores. Compared to teachers who state that feedback had not led to any positive changes on that item, self-efficacy scores are, on average, 0.46 and 0.41 of a

standard deviation higher for job responsibility and career advancement respectively. Moderate or only small positive changes reported in career advancement or job responsibilities as a result of feedback are associated with much smaller increases in levels of self-efficacy.

Figure 9.6 Average teacher self-efficacy scores, by whether feedback at the school led to positive change in (i) career advancement and (ii) job responsibilities

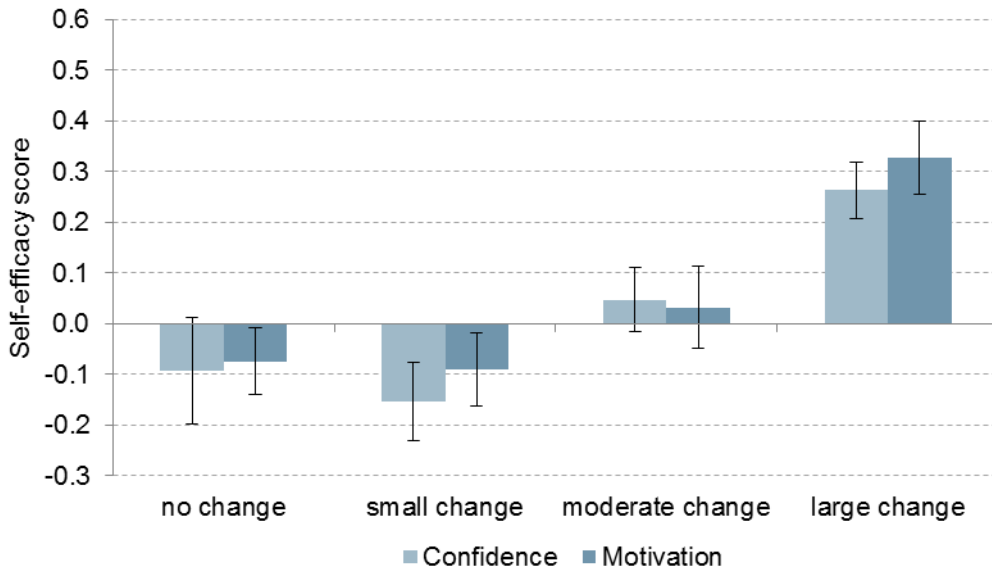


Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average self-efficacy, scores less than zero indicate worse than average self-efficacy.

28. The pattern for other changes which occurred as a result of feedback is rather similar. Large changes have a substantial association with higher self-efficacy while any impact of moderate or small changes appears limited. This can be seen in Figure 9.7, which considers whether feedback has effects on confidence as a teacher, or motivation. For example, the self-efficacy score is 0.4 of a standard deviation greater, on average, amongst those who said feedback had had a large impact on their motivation compared to those who reported no change in their motivation as a result of feedback.
29. Figure 9.8 shows that teachers reporting a large effect of feedback on the amount of professional development they undertook had an average self-efficacy score which is some 0.6 of a standard deviation higher than those who reported no change on this item. Similarly, teachers who felt that feedback had led to a large change in the type of professional development had a self-efficacy score which is some 0.5 of a standard deviation higher than those who reported no change.

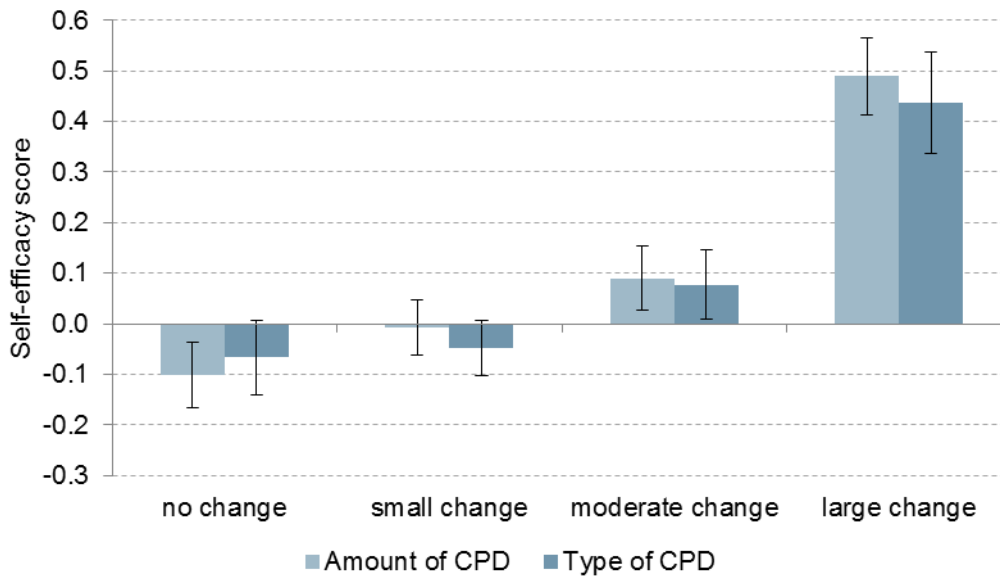
Figure 9.7 Average teacher self-efficacy scores, by whether feedback at the school led to positive change in (i) confidence as a teacher and (ii) motivation



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average self-efficacy, scores less than zero indicate worse than average self-efficacy.

Figure 9.8 Average teacher self-efficacy scores, by whether feedback at the school led to positive change in (i) amount of professional development (ii) type of professional development



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average self-efficacy, scores less than zero indicate worse than average self-efficacy.

30. Since there were a lot of these questionnaire items on the effects of feedback, it is useful to combine them into an overall measure. We created an overall score from the

six feedback variables shown in Figures 9.6 to 9.8. Each of the six variables was coded from 0 for 'no change' to 3 for 'large change' and the six were then added together. On this measure about 11% of teachers have a score of 0, implying no change on any of the six items, while 3% had the maximum score of 18, meaning that they report large changes as a result of feedback for all six items. The median on this feedback score is 6, which might be obtained, for example, by moderate change as a result of feedback on three of the six items, or large change on two out of the six.

31. We standardised the feedback summary score so that it has a mean of zero and a standard deviation of one for the sample in England. This summary variable is significantly related to teachers' self-efficacy. A one standard deviation shift in the feedback score is associated with an increase of a quarter of a standard deviation in teachers' self-efficacy score. We use this feedback summary score again in the multiple regression models later in the chapter.

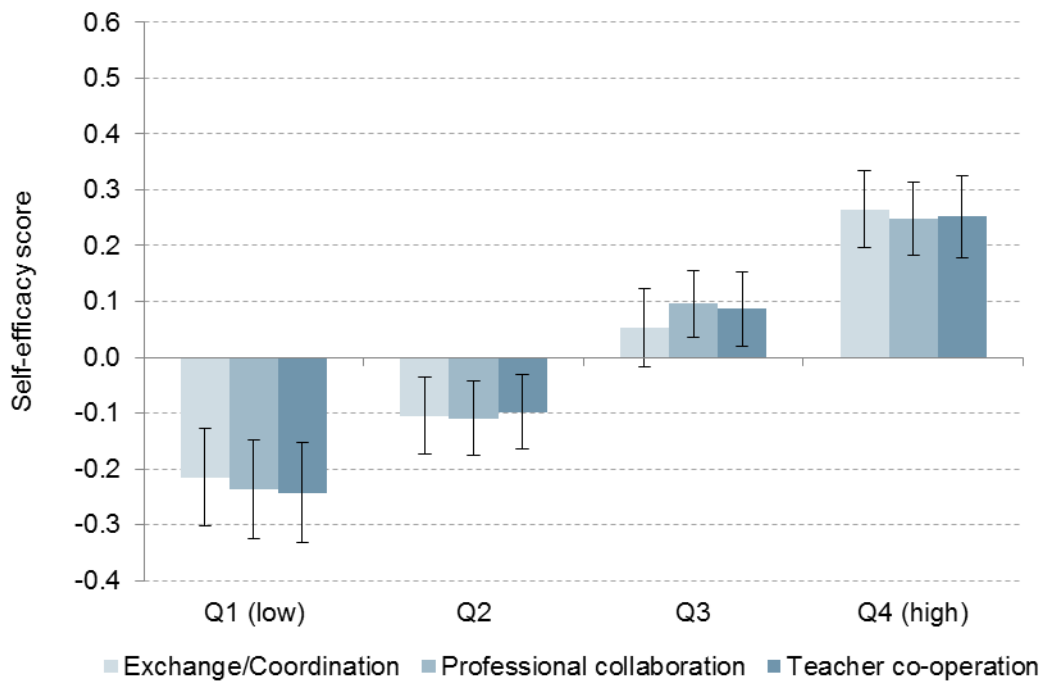
9.5 How do working relationships with colleagues affect self-efficacy?

32. TALIS included questions asking whether teachers had been involved in exchange, collaboration, and also about the extent of cooperation with other teachers. These were used by OECD to derive three indices – named as exchange/coordination for teaching, professional collaboration, and teacher cooperation. In this section we investigate whether these exchange, collaboration and cooperation indices are related to the self-efficacy of teachers. The relationship in England between each of these measures and teacher self-efficacy is summarised in Figure 9.9 which shows how the mean self-efficacy score varies across quartiles of the exchange, cooperation and collaboration variables.

33. There is clearly an association between exchange/coordination and teacher self-efficacy. Teachers who were more engaged in exchange/coordination also reported significantly higher levels of self-efficacy.

34. Similarly, there is also a positive, and statistically significant, association between the professional collaboration index and teacher self-efficacy. A one standard deviation increase in professional collaboration is associated with an increase of about 0.3 of a standard deviation in teacher self-efficacy. Teacher self-efficacy is positively associated with the measure of cooperation too. This association is statistically significant and very similar in magnitude to that for professional collaboration and teacher self-efficacy.

Figure 9.9 Average teacher self-efficacy scores by quartiles of teacher exchange, collaboration and cooperation indices



Source: TALIS database

Note: The thin black line in the centre of each bar represents the estimated 95% confidence interval. Scores greater than zero indicate better than average self-efficacy, scores less than zero indicate worse than average self-efficacy.

35. Each of the three indices, then, shows a strong statistical relationship with teacher self-efficacy. However, it should be noted that the indices of exchange/coordination for teaching, professional collaboration, and teacher cooperation are very strongly correlated with each other. While an association with teacher self-efficacy has been established in each case, it may not be the case that each of the three indices is having an independent effect on self-efficacy. This is explored further in the next section.

9.6 Is self-efficacy correlated with the quality of teacher-student relations?

36. To assess teacher-student relations, teachers in TALIS were given a series of four statements concerning the quality of interaction at their schools and were asked to what extent they agreed with them. The statements were: 'in this school, teachers and students usually get on well with each other'; 'most teachers in this school believe that students' well-being is important'; 'most teachers in this school are interested in what students have to say'; and 'if a student from this school needs extra assistance, the school provides it'.

37. Based on the answers given to these questions, the OECD derived a scale for each country measuring the quality of teacher-student relations (the scales are not comparable between countries). As with other scales we use in this chapter, we standardised the scale for England to give a mean of zero and standard deviation of one. We then investigated its correlation with teacher self-efficacy.
38. We find a significant relationship between teacher self-efficacy and quality of teacher-student relations.¹⁰³ A one standard deviation improvement in the quality of teacher-student relations is found to be associated, on average, with 0.29 of a standard deviation increase in teacher self-efficacy – a sizeable difference.
39. So a correlation between teacher-student relations and teachers' self-efficacy has been established. This could arise because these two variables are really related to each other. But it might be that they both just happen to be associated with some third variable and this is why the correlation occurs. More generally, all the analysis in this chapter so far has looked at correlations between a single variable and self-efficacy. Are the relationships which have emerged here still statistically significant once other factors are allowed for? To address questions such as this, multiple regression analysis can be used. The rationale for using this technique is that it enables us to control for other factors when analysing the relationship between each explanatory variable and teachers' self-efficacy.
40. We therefore estimated multiple regression models with the standardised teacher self-efficacy score as the outcome variable. Results from three models are reported in Table 9.2. Model 1 includes various teacher characteristics and nothing else. Model 2 adds some characteristics of the school including school type, school intake in terms of prior attainment measured by Key Stage 2 scores, the proportion of pupils on Free School Meals, and the Ofsted rating of the school. Models 2 and 3 are restricted to teachers in maintained schools and academies. Model 3 introduces some further variables which our analysis earlier in the chapter has suggested might well be important correlates of teachers' self-efficacy including measures of relations among teachers and an overall measure of feedback received by the teacher – as well as our summary score for the teacher-student relations in the school that we are particularly interested in.
41. Among the characteristics of teachers in Model 1, gender, years of teaching experience, being qualified to Master's level, and being on a part-time contract are statistically significant determinants of teachers' self-efficacy score. The least experienced teachers, those with five years or less in the profession, have lower self-efficacy and this is still the case even after controlling for many other factors in Models 2 and 3. No statistically significant differences in teachers' self-efficacy are found among those with more than five years of teaching experience. This could mean that teachers' self-efficacy improves as they gain experience up to a threshold

¹⁰³ $p < 0.001$.

of about five years. But other explanations are possible. For instance, inexperienced teachers with low self-efficacy might choose to leave the teaching profession. This selection effect could also account for differences in self-efficacy between relatively inexperienced and more experienced teachers. The lower self-efficacy of part-time teachers is also statistically significant even when further controls are added – as can be seen in the results for Models 2 and 3. However, gender differences in self-efficacy are no longer significant in these more elaborate models.

Table 9.2 Multiple regression models of teacher self-efficacy score

	Model 1		Model 2		Model 3	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
<i>Gender (ref: male)</i>						
Female	0.124	0.002	0.049	0.228	0.027	0.515
<i>Teaching experience (re.: 6 to 10 years)</i>						
5 years or less	-0.157	0.011	-0.188	0.001	-0.206	0.000
11-15 years	0.105	0.083	0.048	0.403	0.028	0.604
16+ years	0.036	0.464	0.052	0.266	0.040	0.414
<i>Highest qualification (ref: Bachelor's degree or less)</i>						
Master's degree	0.090	0.019	0.116	0.007	0.079	0.071
PhD	-0.223	0.454	-0.605	0.062	-0.474	0.040
Part-time contract	-0.257	0.000	-0.239	0.000	-0.149	0.006
Fixed-term contract	-0.144	0.089	-0.147	0.097	-0.165	0.048
<i>School type (ref: maintained)</i>						
School type: academy			0.048	0.296	0.028	0.514
<i>KS2 quartile (ref: lowest quartile)</i>						
quartile 2			0.042	0.519	0.077	0.169
quartile 3			-0.107	0.145	-0.084	0.195
quartile 4 (high KS2)			-0.095	0.177	-0.044	0.490
<i>FSM quartile (ref: high)</i>						
quartile 1 (low FSM)			-0.021	0.792	0.002	0.980
quartile 2			0.008	0.909	0.018	0.811
quartile 3			-0.030	0.630	0.023	0.706
<i>Ofsted rating (ref: good)</i>						
Outstanding			0.090	0.103	0.030	0.608
Satisfactory			-0.107	0.088	-0.090	0.115
Inadequate			-0.201	0.098	-0.035	0.709
<i>Summary indices</i>						
Teacher co-operation					0.206	0.000
Feedback score					0.155	0.000
Teacher-student relations					0.207	0.000
Constant term	-0.038	0.463	0.063	0.417	0.056	0.413
Observations	2,278		2,074		1,978	
R ²	0.032		0.050		0.156	

Source: TALIS database

Notes: the table reports estimates from multiple regression models with the standardized self-efficacy score (mean equal to zero, standard deviation equal to one) as the dependent variable. All variables are dummy variables (with the reference category indicated) other than the summary indices entered in Model 3. Models 2 and 3 are restricted to teachers in maintained schools and academies.

42. None of the school-level variables added in Model 2 is a statistically significant determinant of teachers' self-efficacy. This confirms the finding earlier in the chapter of the low importance of variables at the school level as determinants of self-efficacy. Even after incorporating a full set of individual-level and school-level variables into the analysis, the model still accounts for only about 5% of the variation in self-efficacy.
43. The inclusion of further variables in Model 3 improves the fit of the model considerably and it then accounts for nearly 16% of the variation in self-efficacy. The definitions of some of the variables in Model 3 need to be clarified. Attempts to include all three of the OECD's derived indices of exchange/coordination for teaching, professional collaboration, and teacher cooperation foundered due to the high correlations between these variables. So the professional collaboration measure was dropped and a simple average of the exchange/coordination and teacher cooperation variables was constructed and entered into the model (labelled as 'Teacher co-operation' in Table 9.2). This can be regarded as a broad representation of teacher cooperation and collaboration. In Model 3 a one standard deviation increase in this measure of cooperation among teachers at work is associated with about one fifth of a standard deviation gain in self-efficacy. It seems, then, that cooperative relationships between teachers are strongly related to teachers' self-efficacy although it is not feasible to determine exactly which aspects of these relationships at work are particularly important.
44. The standardised feedback score defined earlier is also included in Model 3. In this regression model it can be seen that the feedback score is significantly and positively associated with teachers' self-efficacy. A one standard deviation shift in the feedback score is associated with a change of some 0.16 of a standard deviation in teachers' self-efficacy.
45. What of the teacher-student relations score? It also continues to be strongly and positively associated with teachers' self-efficacy in Model 3. Each standard deviation increase in the measure of teacher-student relations is associated with an increase of just over 0.2 of a standard deviation gain in teachers' self-efficacy. This is somewhat reduced in comparison to the simple association – where it was 0.29 of a standard deviation – but it is still substantial. Controlling for a range of teacher and school characteristics has only reduced the 'effect' of teacher-student relations by a third.
46. This 'effect' may or may not be causal. Despite controlling for a substantial number of teacher and school characteristics, it may be the case that good teacher-student relations (or, to be precise, the teacher's perception that they are good) may proxy some unmeasured teacher quality that we do not observe in the data. For example, teachers with more positive attitudes to life in general may give more positive answers to both the questions underlying the self-efficacy score and the questions on student-teacher relations. Or the direction of causality may run from self-efficacy to student-teacher relations.

9.7 Summary

47. The TALIS data can tell us about how the self-efficacy of teachers in England – their confidence in their own abilities as teachers – compares with that of teachers in other countries. It can also provide insights into the factors which are related to teachers' self-efficacy.
48. International comparisons of self-efficacy have to be treated with some caution as there may be cultural differences influencing the way in which questions are answered. But, on the face of it, the results from TALIS suggest that teachers in England are confident in their abilities – their self-efficacy is quite high compared to that of teachers in other countries in the survey.
49. As for the correlates of teachers' self-efficacy, the TALIS results for England are consistent with previous research. For example, those on full-time and permanent contracts tend to have higher self-efficacy than those who are working part-time or on fixed-terms contracts. Teachers with less experience tend to have lower self-efficacy.
50. Two further themes have been highlighted in this chapter. One is that there are few indications of the type of school having a significant relationship with the self-efficacy of teachers. For example, there is no evidence that self-efficacy is higher, on average, in independent schools than in maintained schools, nor, among state-funded schools, that it varies according to the proportion of pupils from poor backgrounds in the school.
51. The second theme is that self-efficacy tends to be higher when teachers report good relations with others in the school. This includes cooperation and collaboration with colleagues, supportive feedback which is associated with positive changes in behaviour – such as the amount or type of CPD – and also good relations with students in the school. However, with cross-sectional survey data we cannot be sure about the direction of causality here. Perhaps teachers with high self-efficacy are more able to build good relations with students. But it could equally be, for instance, that by working in schools with good teacher/student relations, teachers become more confident in their abilities.
52. This last point is an appropriate one on which to conclude the report. It is a reminder of a warning that we made in Chapter 1: as a cross-section survey, there are clear limitations to what TALIS can tell us. Correlation does not imply causation. Nevertheless, as with other parts of the report, the findings in this final chapter provide more insight into under-researched areas and, where we have been able to make international comparisons, they show the situation for England in comparative context.

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Appendix A TALIS 2013 in England: administration, sampling and response

1. The objective of TALIS 2013 was to obtain a representative sample of ISCED level 2 teachers and their headteachers.¹⁰⁴ ISCED 2 translates to Key Stage 3 (age 11-14) in England.
2. The administration of TALIS 2013 was carried out internationally on behalf of OECD by a consortium formed by the International Association for the Evaluation of Educational Achievement (IEA) and Statistics Canada. The consortium worked with the TALIS National Centre within each country, through the National Project Manager (NPM). For England, RM Education and the Institute of Education (IOE), London, were the TALIS National Centre. The project was led by the NPM at RM Education (RM). RM conducted the survey.
3. National Centres were responsible for making local adaptations to instruments and manuals. RM, in consultation with IOE and the Department for Education, made appropriate adaptations to the TALIS teacher and headteacher questionnaires.
4. National Centres were also responsible for supplying the information necessary for sampling to be carried out. The sample of schools was selected by the TALIS consortium using a sampling frame supplied by RM, while teacher samples within schools were selected by RM using software supplied by the consortium and lists of teachers supplied by schools.
5. Following field trials in the Spring of 2012, countries were required to carry out the survey during late 2012 (southern hemisphere) or early 2013 (northern hemisphere). In England, TALIS was conducted during March-May 2013.
6. TALIS in England, as in other countries, had a two-stage design. At the first stage, schools were selected with probability proportional to size with a target sample of 200 schools (size was measured by the number of Key Stage 3 teachers in the school indicated in the School Workforce Census and, for independent schools, the School Level Annual School Census). At the second stage, a random sample of 20 teachers of Key Stage 3 pupils were selected in each school. Schools or teachers selected could be judged 'out of scope'. In practice, no schools were judged to be in this category, given the sampling frame of schools that was constructed (schools catering only to pupils with special needs were not part of the target population and were excluded from the sampled population). Teachers teaching only to special needs students or who were not in fact teaching Key Stage 3 pupils were out of scope – other categories are detailed in the OECD international report on TALIS 2013 (OECD,

¹⁰⁴ ISCED is the International Standard Classification of Education. Some participating countries in addition collected information on teachers of ISCED level 1 (primary) and 3 (upper secondary) pupils.

2014). There was no minimum cut-off for the amount of Key Stage 3 teaching that teachers needed to be engaged in, provided they were doing some.

7. The school sample was stratified by four categorical variables: type of school (state – local authority maintained or academy – and independent), size (whether or not the school had only one Key Stage 3 year group), region (North, Midlands, Greater London, and South), and average Key Stage 2 results of pupil intake (low, middle, high). 15 strata were formed from combinations of these four variables. Schools were sorted by size (measured by the number of teachers) within each stratum. Following the sample design laid down for all countries in TALIS, a sample of schools was drawn, together with a ‘1st replacement’ and ‘2nd replacement’ school as back-ups for each school originally sampled – the school immediately before and after the originally sampled school in each stratum.
8. The teacher sample was drawn by randomly sampling teachers in each school from lists provided by schools. There was no explicit stratification. 20 Key Stage 3 teachers were sampled by default. If a school had 30 teachers or less, all were sampled for convenience.
9. Headteachers of the sampled schools were sent a letter informing them that their school had been randomly selected to take part in TALIS 2013. Headteachers were asked to confirm their school’s participation in TALIS and to nominate a school coordinator who would act as the main contact between the National Centre (RM) and the school. School coordinators were asked to carry out a number of tasks, the first being to complete a list of Key Stage 3 teachers in their school. From this, teachers were sampled at random (see above) and then requested to complete a teacher questionnaire. The school headteacher was also asked to complete a headteacher questionnaire. The National Centre provided weekly updates to the school coordinator on which teachers had completed the questionnaires and to ask the coordinator to encourage completion by those yet to do so. Emails were sent from the National Centre direct to the sampled teachers with a link to the questionnaire and with unique login details.
10. Headteachers and teachers had the option of either filling in a paper questionnaire or responding on-line. 91% of both responding headteachers and responding teachers chose the on-line option.
11. We now turn to the issue of response.¹⁰⁵ Table A.1 shows school response by stratum. In total, 154 schools responded to TALIS and there are therefore 154 responding headteachers in the sample. This represents an unweighted school response rate of 75.1%. Two points need to be made about the definition of response

¹⁰⁵ We focus on unit response. There is also the issue of item non-response, whether among teachers or headteachers. As in most surveys, there is an element of this. For example, while all teachers responding to the survey in England responded to the first question on gender, about 7% failed to respond to much of one of the last questions on job satisfaction. Item non-response is treated by assigning a missing value for the variable concerned and the cases affected are excluded from any analysis.

underlying this calculation. First, if a school agreed to take part in the survey but less than 50% of the teachers within the school responded, TALIS rules require that this school is treated as not participating. These schools, of which there were 18 in total, are included among the non-respondents in Table A.1.¹⁰⁶ Second, the calculations ignore schools that did not respond which were replaced by a 1st or 2nd replacement school. The figure of 205 in the denominator of the calculation of the overall response rate – the ‘total’ figure at the foot of the first column – is therefore made up partly of ‘original’ schools (schools originally sampled), partly of 1st replacements and partly of 2nd replacements. Likewise, schools in the numerator of the response rate (shown in columns 2-4) included all three types of school.¹⁰⁷

12. A school response rate of 75% after use of replacements is the minimum required of a country in TALIS 2013 for its data to be included in the OECD’s international analyses without any need for an investigation of the pattern of response and resulting biases. England therefore just met this threshold.
13. The figures in the final column of Table A.1 show clearly that school response varied by stratum. For example, in none of the three strata of state schools in London did response reach 60%. Response was also lower among schools in the last two strata – independent schools. Non-response adjustment weights attached to the data by the international TALIS consortium adjust for the differences in the pattern of response across the strata that may induce biases. These weights are simply the reciprocal of the proportion of schools responding within each stratum.
14. The teacher response rate in TALIS is defined as the percentage of all teachers in responding schools – that is, excluding the schools where teacher response fell below 50% – who respond to the survey.¹⁰⁸ There were 2,992 teachers in responding schools in England who were not out of scope. Of these, 2,496 responded to the survey, resulting in an unweighted teacher response rate of 83.4%. The minimum teacher response rate required for a country to be automatically included by the OECD in its analyses of the data is 75%. The rate in England therefore easily cleared this threshold.

¹⁰⁶ Were these schools to be have been included in the calculation of school response, the response rate would have risen to 83.9%. The teacher response rate in these schools varied from zero to 45%, with an average of 19%.

¹⁰⁷ Excluding the replacements, the unweighted response rate among the originally sampled schools was 56.1%. Including the 1st replacements only, it was 69.3%.

¹⁰⁸ In effect, it is therefore the teacher response rate conditional on overall teacher response in each individual’s school exceeding 50%.

Table A.1 School sample and response

Stratum	all sampled schools	original schools	1st repl.	2nd repl.	non-responding schools	response rate (%)
1. State, small, all regions, all bands	4	1	1	0	2	50.0
2. State, not small, North, high	14	9	1	1	3	78.6
3. State, not small, North, middle	23	16	3	0	4	82.6
4. State, not small, North, low	16	9	1	1	5	68.8
5. State, not small, Midlands, high	9	6	1	0	2	77.8
6. State, not small, Midlands, middle	17	11	0	4	2	88.2
7. State, not small, Midlands, low	11	6	4	0	1	90.9
8. State, not small, London, high	7	2	2	0	3	57.1
9. State, not small, London, middle	11	6	0	0	5	54.5
10. State, not small, London, low	8	3	1	0	4	50.0
11. State, not small, South, high	19	10	2	2	5	73.7
12. State, not small, South, middle	31	21	3	2	5	83.9
13. State, not small, South, low	18	7	7	1	3	83.3
14. Private, small	4	2	0	0	2	50.0
15. Private, not small	13	6	1	1	5	61.5
Total	205	115	27	12	51	75.1

Source: TALIS international consortium weighting report for England

Note: 'State' includes Local Authority maintained schools and academies, 'private' schools are independent schools. 'Original' schools are the responding schools that were first sampled and '1st repl.' and '2nd repl.' are their first and second replacements (see text for explanation) and are also responding schools. Non-responding schools include those where the school did in fact respond but where the within-school teacher response rate fell below 50%.

15. Table A.2 provides an analysis of the pattern of response among the 2,992 teachers. We report results of a linear probability model: OLS regression of a 0/1 variable indicating non-response/response. We use unweighted data and allow for the clustering of teachers within schools when estimating standard errors.¹⁰⁹ We observe only three individual characteristics for both respondents and non-respondents, all taken from administrative records: gender, age, and main subject taught

¹⁰⁹ A logistic or probit regression would in principle be a better model for the data, restricting predicted values within the unit interval and avoiding the heteroskedasticity of the error term of the linear probability model. But the linear probability model is sufficient for our purpose here, which is to illustrate simply how average response varies with observed characteristics.

(distinguishing four groups of subjects). We also include in the model the latest Ofsted rating of the teacher's school.¹¹⁰

16. The model explains very little of the non-response, as indicated by the low r-squared value. However, holding other observed factors constant, response is on average about 3 percentage points lower for men, about 2 points lower for every increase in age of 10 years, and about 5 points higher for maths and science teachers compared to English or foreign language teachers (these differences are all statistically significant at the 5% level or less). Average response is notably lower for teachers in the small number of schools with an 'inadequate' Ofsted rating, by some 15 percentage points.

Table A.2 Linear probability model of teacher response

	Coefficient	t-statistic
<i>Demographic characteristics</i>		
Male (base = female)	-0.032	-2.4
Age ($\div 10$)	-0.019	-2.9
<i>Subject (base = English or foreign language)</i>		
Human Sciences (e.g. History, Geography)	+0.016	+0.6
Maths and Science	+0.048	+2.2
Other (e.g. Music, Art, Physical Education)	+0.034	+1.9
<i>Ofsted rating (base = outstanding)</i>		
Good	-0.028	-0.9
Satisfactory	-0.058	-1.7
Inadequate	-0.149	-2.9
Constant	+0.927	29.7
Adjusted r-squared	0.014	

Source: TALIS international consortium weighting report for England

Note: sample size = 2,992 (2,496 respondents, 496 non-respondents), unweighted data.

17. However, given the high level of response to the survey, these differences are insufficient to cause more than very minor biases in the composition of the responding sample. The following figures refer to the composition of the responding sample of 2,496 teachers and, in brackets, to the composition of the 2,992 teachers in responding schools. (All figures are based on unweighted data.) In each case the differences are very slight.

Female: 63.2% (62.5%)

Average age: 39.8 (40.0)

English or modern language teacher: 26.5% (27.2%)

Maths or science teacher: 25.7% (25.0%)

¹¹⁰ Age is proxied by 2013 minus year of birth, with six missing values set to the mean, 40. Nine missing values for subject are set to the modal group, 'Other'.

'Outstanding' Ofsted rating: 28.5% (27.5%)

'Inadequate' Ofsted rating: 3.4% (4.0%)

18. The international TALIS consortium's adjustment factor for teacher non-response (part of the final weights supplied with the data) is the reciprocal of the proportion of teachers responding in each school. It therefore allows just for the level of non-response within each school but not the pattern. However, in doing so it may help adjust for any teacher response patterns associated with school characteristics.
19. The combination of (i) high levels of response at both school (allowing for replacement) and teacher levels, (ii) school non-response adjustment factors that vary by stratum (with stratification variables that include Key Stage 2 results), and (iii) the evidence of only slight biases induced by the response pattern for teachers, implies that the achieved TALIS sample represents a reasonable basis for analysis.

Appendix B Allowing for sampling error in TALIS

1. As a sample survey, the estimates that can be obtained with TALIS are subject to sampling error due to the chance process in drawing a probability sample.¹¹¹ The standard textbook formula for the ‘margin of error’ – the confidence interval around an estimate – or for the test statistic or p-value in a hypothesis test assumes that a sample is drawn randomly, the simplest form of probability sampling.
2. The sample design of TALIS, described in Appendix A, is not one of simple random sampling. A stratified two-stage cluster design was used. The sampling of schools took place within strata at a first stage and the teachers, sampled at the second stage, must be seen as clustered within these first stage units. On the one hand, stratification improves the precision of estimates obtained with the data. On the other, clustering typically reduces it (and, in general, the clustering can be expected to dominate, resulting in a net reduction in precision). Estimates of standard errors and hence confidence intervals, test statistics, and p-values need to allow for these and other features of the survey’s complex design.
3. The method used by the OECD to do so creates a set of ‘balanced repeated replication’ (BRR) weights and is a replication method for estimation of standard errors. The gist of the method is as follows (we simplify from the procedure actually used). First, responding schools in each country are paired within the explicit strata. The statistic of interest (a mean, a proportion, a regression coefficient) is then calculated repeatedly, each time dropping one school in each pair (and reweighting the one that remains). The square root of the variance of these estimates can then be taken as the estimate of the standard error. The method for carrying out this procedure is the application of a set of weights, the BRR weights, supplied with the data. The method has the advantage of including all information on the complex sample design (notably the stratification and clustering) as well as the design and non-response adjustment weights.
4. Our analysis of the TALIS database for the report uses the Stata software, which is able to apply these BRR weights appropriately. All our estimates of sample statistics and standard errors use the BRR weights and we have checked that in doing so we can exactly replicate the OECD’s estimates of the same statistics and standard errors.¹¹²

¹¹¹ Sampling error is the difference between a sample statistic and the population parameter of which the statistic is an estimate.

¹¹² Other Stata users analysing the TALIS data may do the same by using the `svyset` command as follows in conjunction with the appropriate `svy` command for the procedure concerned, where `TCHWGT` is the final teacher weight and `TRWGT1` to `TWRGT100` are the BBR teacher weights (the command is for analysis of the teacher file and an analogous command applies for the headteacher file):
`svyset [iweight= TCHWGT], brrweight(TRWGT1 - TRWGT100) vce(brr) fay(.5) mse`
(The `mse` option, for example, means that it is the deviations of each sub-sample estimate from the full sample estimate that enter the calculation.) For more discussion, see e.g. Kreuter and Valliant (2007).

5. All bar charts in the report based on TALIS data include estimates of 95% confidence intervals that are based on standard errors calculated using the BRR weights. We sometimes refer to these as showing the 'margin of error' around an estimate. When we describe differences in means or proportions as being 'statistically significant', this refers to the appropriate statistical test with a 5% significance level, unless otherwise stated, computed with the use of the BRR weights.

Appendix C High and low performing countries

1. We identify 'high' and 'low' performing countries in TALIS on the basis of average (mean) scores for their 15 year olds in PISA (Programme of International Student Assessment). As a check, in the case of our identification of high performing countries, we also look at results for 13-14 year olds in TIMSS (Trends in International Mathematics and Science Study) and for 16-24 year olds in PIAAC (Programme for the International Assessment of Adult Competencies). We refer to the scores for relevant 'sub-national entities' – parts of countries – where appropriate in all surveys and include these sub-national entities below in our reference to 'countries'.
2. Besides the choice of survey (PISA, TIMSS or PIAAC), there are also the choices of subject (maths, science, reading), and date (for example 2012 for PISA, 2011 for TIMSS, and earlier sweeps of either). Ideally, we want to identify countries that are consistent across the different dimensions, thus avoiding an identification of high or low performance on the basis of what might be abnormal average scores in one or more of them. We might also be concerned with trend: for example when defining high performers we might prefer countries moving up over time to those moving down, but we do not take any account of this.

Low performers

3. These are the eight countries with mean scores in PISA 2012 below 450 in all three subjects (maths, science and reading): Abu Dhabi, Brazil, Bulgaria, Chile, Malaysia, Mexico, Romania, and Serbia. 450 is a low PISA score: as much as half of an international standard deviation (100) below the mean for all OECD countries (500).¹¹³ Some countries are well below this level. 450 is also far below the lowest mean score in England in 2012 (495 in maths, standard error 3.9). Of the eight countries, the six that were also present in PISA 2009 were all in the same position: scoring below 450 on all subjects and far adrift of England. The low performers are therefore defined on an absolute basis – a low average score in all subjects in PISA.¹¹⁴

High performers

4. We define high performance in relative terms from the perspective of England: high performers are countries with higher mean scores than England with the difference being statistically significant at the 5% level or less. There are nine countries that outperform England on this basis in at least two subjects in PISA in both 2012 and 2009: Japan, Korea, Singapore, Finland, Estonia, The Netherlands, Flanders

¹¹³ The means and standard deviations for each subject are set at 500 and 100 among OECD countries the first time that subject is the focus of a PISA round, e.g. 2003 in the case of maths.

¹¹⁴ We exclude Cyprus from our analysis in this report – see footnote 18 in Chapter 1. Were we to have included Cyprus, this country would also have been classified as a low performer.

(Belgium), Alberta (Canada) and Australia. Of these nine, five have significantly higher scores in both years on all three subjects. In 2012, England's mean differed from that of the median country in this group by 28 points (maths), 23 points (science), and 24 points (reading) i.e. by about a quarter of an international standard deviation.

5. TIMSS scores for 2011 and 2007 for both maths and science give strong support for classifying Japan, Korea, and Singapore as high performers (as defined here). Support is reasonable for Finland and Alberta (Canada): mean scores significantly above England in one subject in 2011 (neither country was present in 2007). The support for Australia is weak – significantly below England in three of the four cases across the two years (but sometimes only just). Nevertheless we retain Australia in our high performing group. Netherlands and Flanders (Belgium) were not present in TIMSS in either year.
6. All nine high performers took part in PIAAC in 2011-12, except Singapore. All had significantly higher mean scores for 16-24 year olds in both literacy and numeracy than England. This was not hard as England's mean performance was particularly weak in PIAAC, but most of these eight countries are also above the OECD average.
7. Our definitions of high and low performance are limited in at least two ways. First, they focus only on average scores. We take no account of the degree of inequality in scores, in particular the length of the lower tail of the distribution. Second, in focusing only on scores in achievement tests the definitions take no account of other aspects of the performance of an educational system in developing a country's young people.



Department
for Education

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Reference: DFE-RR302

ISBN: 978-1-78105-367-6

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