



Department  
for Education

# **Evidence to the STRB: the case for change**

**16 May 2012**

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## Introduction

1. The Secretary of State for Education's remit letter to the School Teachers' Review Body (STRB) on 21 February 2012 set out his objective of reforming teachers' pay in order to raise the status of the profession and contribute to improving the standard of teaching in our schools. He invited the STRB to review the current provisions for teachers' pay and referred the following matters:
  - how the pay framework for teachers should best be made more market facing in local areas
  - how the pay scales, including the main and upper pay scales, should be reformed to more effectively link pay and performance, including arrangements for progression
  - what other reforms should be made to teachers' pay and conditions in order to raise the status of the profession and best support the recruitment and retention of high-quality teachers in all schools
2. Given the importance of teachers and school leaders in improving standards and attainment, the Secretary of State's objectives for reform of teachers' pay are:
  - to develop arrangements for teachers' pay which reward good performance and attract the highest performing graduates and professionals into the profession
  - to give schools as much freedom as possible to spend their money as they see fit to meet their pupils' needs
  - to ensure the best teachers are incentivised to work in the most challenging schools
  - to provide the best value for money for the tax payer and to ensure that the individual decisions of head teachers and governing bodies do not result in overall cost inflation in the system and that there are arrangements to maintain propriety in these decisions
3. This document provides the Secretary of State's evidence to support the STRB's consideration of these issues.

## The importance of improving the quality of the teaching workforce

4. The quality of an education system cannot exceed the quality of its teachers or school leaders. The available evidence suggests that the main driver of variation in student achievement at school is the quality of the teachers. Analysis of English data by Slater, Davies and Burgess (2009) showed that being taught by a high-quality teacher rather than a low-quality teacher adds 0.425 of a GCSE point per subject to a pupil's attainment<sup>1</sup>. Furthermore, a Department for Education and Skills (DfES) study (Day et al., 2006) found that in Years 6 and 9, 15-30 per cent of the variance in pupils' progress in mathematics and English was associated with the teacher, after controlling for pupil background and prior attainment. In terms of pupil progress, the influence of the teacher was more important than pupils' background characteristics.
5. Barber and Mourshed (2007) suggest good leaders employ good teachers and facilitate the development of their skills. Research also suggests that 'school leadership is second only to classroom teaching as an influence on pupil learning' (Leithwood et al, 2006). It indicates that without an effective head teacher, a school is unlikely to have a culture of high expectations or strive for continuous improvement.
6. The effects of high-quality teaching are especially significant for pupils from disadvantaged backgrounds: over a school year, these pupils gain 1.5 years' worth of education with very effective teachers, compared with 0.5 years with poorly performing teachers. In other words, for poor pupils, the difference between a very good teacher and a bad teacher may be a whole year's worth of education (The Sutton Trust, 2011).
7. International evidence (Annex E) shows the top-performing school systems consistently attract more able people into the teaching profession, leading to better pupil outcomes (Barber and Mourshed, 2007). They do this by making entry to teacher training highly selective, developing effective processes for selecting the right applicants to become teachers, and paying appropriate starting compensation. Getting these essentials right drives up the status of the teaching profession, enabling it to attract even better candidates.
8. OECD evidence (Schleicher, 2011) suggests that teacher quality is improved where appraisal feedback systems which provide effective incentives to teachers, reward good performance and provide development opportunities are supported by the school's leadership. Performance management of this kind (used for example in Finland and Ontario) improves teachers' practices by identifying strengths and weaknesses requiring further professional development, allowing teachers to reflect on their practice. It also serves to hold teachers accountable for enhancing pupils' education.
9. Improving the quality of both new and existing teachers is therefore a priority in the drive to raise educational standards in our schools.

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<sup>1</sup> To put this into context, 6 points is the difference between one GCSE grade in one subject i.e. the difference between an A-grade and a B-grade in mathematics or the difference between a D-grade and an E-grade in history.

## The case for change

10. Reform of the current pay system for teachers is fundamental to driving up teacher quality. The current pay system is rigid, complex and difficult to navigate and does not support schools to recruit and retain the high-quality teachers or leaders they need to address specific shortages and benefit their pupils.
11. Ensuring there are enough teachers, and that those teachers are of the best quality, is critical to driving up standards in our schools. To achieve this, the Government sets targets at a national level for recruitment of the very best graduates to Initial Teacher Training (ITT) and is strengthening the arrangements for managing teachers' performance.
12. It is, however, the decisions taken by schools, governors and head teachers which have the biggest impact on the supply and demand for teachers. The existing national system of teachers' pay does not routinely support schools to recruit the high-quality teachers they need to meet the needs of their pupils.

## The current system and its effect on teacher quality

### Rewarding good performance

13. The current arrangements for pay progression set out in Annex A limit a school's ability to use its pay bill effectively and creatively to raise standards. In a system where pay progression is awarded to the great majority of teachers, the association between performance and reward is weak.
14. Equally, under the current system pay progression becomes primarily a reward for time served. This could undermine the efforts of those teachers who innovate, are high performing and drive improvement in the quality of education in our schools.
15. Teachers' pay in maintained schools in England and Wales is currently set at a national level with four area pay bands as set out in the School Teachers' Pay and Conditions Document (STPCD). Annex A describes a range of pay scales and allowances which relevant bodies use.
16. The overall level of teachers' pay varies between schools as the evidence in Annex B demonstrates. However, almost every teacher on the main pay scale in the current pay system progresses to a higher spine point each year. ORC Research (2009) on behalf of the Office of Manpower Economics (OME) found that virtually all full time classroom teachers on the main pay scale in primary schools progressed to the next point and a similar pattern was found for secondary school teachers. 49 per cent of qualified classroom teachers across all pay scales were on a higher spine point than in the previous year.
17. Given that high quality teachers drive up pupils' achievement, it is crucial that the pay system enables head teachers to reward the best teachers who can have the biggest impact on pupil outcomes.
18. The introduction from 1 September 2012 of the new Appraisal Regulations and the Teachers' Standards will provide a better framework for schools to make decisions about rewarding teacher performance. Under the new arrangements, teachers will

have to be assessed each year against the relevant standards and their objectives.

19. The second report of the independent Teachers' Standards Review Group recommended that the existing standards for post-threshold, Excellent Teachers (ETs) and Advanced Skills Teachers should be discontinued and that a new Master Teacher Standard should be introduced. The Review Group did not envisage that the Master Teacher Standard should be linked to pay. However, the removal of the existing higher level pay standards and the introduction of a minimum and an aspirational standard describing those top performing teachers should give schools greater freedom to use their professional judgement to determine how they reward teacher performance in the context of their objectives and their wider contribution to the school. The STRB is invited to consider the removal of the existing standards in making its recommendations on the options for greater flexibility in the system.

## Recruiting the best

20. Interest amongst good graduates in teaching careers is improving. The latest figures for recruitment to ITT forecast that in 2012/13 we are on course to meet recruitment targets in all subjects for the first time. There are numerous factors that affect the supply of teachers and the demand for their professional services. The pool of potential trainee teachers is influenced by economic factors such as the state of the wider economy, pay and conditions relative to other professional occupations, and perceptions of the challenges of being a teacher, such as managing pupil behaviour. Pay is one of a number of factors that are known to influence whether individuals choose to enter the teaching profession and continue to work as teachers. Offering salaries in line with other graduate professions is critical to ensuring that high-quality graduates are attracted into and retained within the teaching profession.
21. Annex C highlights the issue of teacher shortages across different regions of the country, within local authority areas and within the teaching of specific subjects. There are also variable rates of teacher unemployment across different regions of the country. Research highlighted in Annex C suggests that vacancy rates are associated with the public-private pay differentials and that the current pay system creates inequality in relative pay.
22. Recruitment and retention issues have a direct impact on the quality of education experienced by children and young people, particularly in challenging schools. The Education Select Committee report (2003-2004) stated "*high turnover, and the inability of some schools to recruit sufficient high calibre teachers, has a knock on effect on the achievement of pupils in those schools. Turnover within the profession may not be a significant issue for schools in general; but for those schools in the most 'challenging' circumstances it can exacerbate an already difficult situation.*"
23. Allowing head teachers to use the pay system to attract high-quality teachers is particularly important given the effects high-quality teaching can have on pupil outcomes. It is crucial that schools have the ability to respond to local labour markets to attract and retain good teachers.
24. The Pupil Premium is worth £1.25bn in 2012-13, or £600 per eligible pupil, and will rise to £2.5bn by 2014-15. It is targeted at pupils from disadvantaged backgrounds, who generally have lower levels of educational attainment. Head

teachers can decide how to use the Pupil Premium to support these children and to reduce educational inequalities. Giving schools greater flexibilities over how they use their budgets would give head teachers the opportunity to incentivise and reward the best teachers to work in the most disadvantaged schools to help raise the attainment of these pupils.

25. Attracting and retaining the best head teachers is also crucial to achieving improvements in schools. The 2010 School Workforce Census found that 0.1 per cent of head teacher posts were vacant and 2.4 per cent of head teacher posts were filled on a temporary basis. As the 'baby boomer generation' reach retirement age some one in four heads will be eligible to retire over the next four years and over half in the next ten years. In 2010, 30 per cent of heads were aged 55 plus compared to 19 per cent in 2002. This shows that there is an urgent need to address the recruitment and retention of high-quality school leaders in the coming years.
26. The re-advertisement rate in the primary sector was 28 per cent in 2010-11 (NAHT, 2011). It has been high for a number of years. It is higher in primary schools than in secondary schools (19 per cent). The overall re-advertisement rate for Roman Catholic Schools is 40 per cent and 27 per cent for Church of England schools. Faith schools experience difficulty at all stages of the recruitment process; this is especially true for many Roman Catholic schools, where the appointment rates were lower than any other school type. All figures have increased from the previous year, suggesting that more schools are having problems finding new head teachers.
27. The current national pay scales mean schools in some parts of the country struggle to recruit and retain good teachers and head teachers. 52 per cent of head teachers in research conducted by ORC International (2011) on behalf of the Office of Manpower Economics (OME) felt that the current allowances do not sufficiently cater for the need to reward high performance. Although there is some flexibility in the existing pay arrangements, as outlined in Annex B, more than one third of head teachers in maintained schools in England do not make use of any.
28. Academies have greater freedom over how they use their budgets. They have the ability to set their own pay and conditions for staff and do not have to comply with the STPCD. Despite this, Bassett et al (2012) found that 65 per cent of Academies have not altered staff terms and conditions and have no plans to do so. This may not be due to a lack of appetite for pay flexibility.
29. There is limited evidence on how independent schools pay teachers. We would welcome any additional research the STRB can do in this area.
30. Freeing up the pay system in a way which enables decisions to be taken at a more local level would allow head teachers to allocate resources more efficiently and attract the right teachers.

## Achieving the best value for money

31. The current pay system does not allow for local circumstances, either those of the school or the local labour market, to influence rates of pay. The Government's evidence on the 'Economics of Local Pay' sets out the existence of pay premia which suggest that the public sector sometimes pays more than is necessary to recruit, retain and motivate staff in some areas. Across regions there are variable pay premia which have an impact on teacher vacancy rates. This suggests that teachers are less attracted to areas where pay is low in comparison to the private

sector and where the cost of living is high. Annexes C and D show that teacher vacancy rates are commensurately higher in such areas.

32. National pay scales mean schools in some parts of the country struggle to recruit and retain good teachers, while others may be paying salaries which are significantly above local professional pay levels. The current four area pay bands do not help schools with this problem but rather contribute to local variations in supply and demand (as shown in Annex C).
33. Within the national teacher labour market, there are a number of overlapping teacher labour markets. These overlapping teacher labour markets vary locally, as well as between different groups in the teaching workforce (such as primary and secondary teachers).
34. The mismatch between the national system and local labour market conditions means that pay is unlikely to reflect those conditions. This can potentially lead to a teacher shortage in some areas and an over-supply of teachers in others. This can be illustrated by regional data on vacancy rates, turnover rates and unemployment rates for teachers relative to other graduates shown in Annex C.
35. Vacancy rates suggest that there is significant variation not only at regional level but also between schools within the same local authority area as illustrated in Annex C. The majority of local authorities have schools that have very low vacancy rates *and* individual schools that have very high vacancy rates. A small number of local authorities experience extreme polarisation, with the majority of schools having very low vacancy rates but a minority of schools within the same local authority having very high vacancy rates, suggesting the existence of challenges at an individual school level in recruiting and retaining teachers which are not being addressed.
36. This variance in teacher vacancy rates not only across regions, but also across schools in a single local authority area, suggests that a more flexible local-facing pay structure could support more effective recruitment and retention of teachers. It is also possible that a greater degree of local-facing pay might encourage greater movement of good teachers into areas experiencing high levels of vacancies or vacancies in particular subject areas. This is particularly important for schools in challenging circumstances that can struggle to attract the best quality teachers who can make the greatest difference to their pupils.
37. Regional variations in the unemployment rate amongst teachers can also be used as an indicator of regional variations in supply and demand. For example, the gap between unemployment rates amongst teachers and other degree holders varies markedly across regions (Annex C). This also suggests that there is an under-supply of teachers in some areas and an over-supply in others. The evidence in Annex D highlights that it is harder to recruit and retain teachers in areas where the pay is lower relative to that of private sector professionals and where costs of living are higher.
38. As shown in Annex D, there are disparities between teachers' pay and private sector pay which vary widely across local authorities, with pay levels for teachers appearing generous relative to private sector professionals in some local authorities and not comparing favourably in others.
39. Differences in the cost of living between regions as set out in Annex D may make some regions more attractive to teach in than others. This can lead to teacher shortages in areas with a high cost of living, as under a national framework teachers' pay cannot adjust accordingly. Evidence in Annex D shows that teachers



working in local authorities closer to London earn relatively lower salaries with respect to the cost of living compared to those in the Rest of England and Wales pay band (although there are some exceptions within the Rest of England).

40. The East of England, London and the South East have had above average turnover rates in recent years. The North East has consistently had the lowest staff turnover rates (evidence in Annex C).
41. A competitive salary, in line with other local graduate professions, is critical to ensuring that high-quality graduates are attracted into and retained within the teaching profession across the country. In areas where teachers' pay is low compared to private sector professionals and the local cost of living, there is a risk that those considering teaching will not enter the profession, or enter and then leave to take up higher-paying non-teaching posts. In either case, this does not make best use of resources, both by failing to attract the potential high-quality teachers that are required to raise standards and by wasting the resources invested in teacher training.
42. Although pay is not the main or only motivation for teaching, it seems that unless the school system offers salaries in line with other local graduate salaries, the same graduates do not enter teaching.

## Options

43. The table below describes five potential models for teachers' pay, each of which has a number of variants. These include:
  - the level of prescription in national pay arrangements
  - whether to set a minimum and or maximum pay level
  - if there should be local pay zones, and if so:
    - whether to retain the current four pay areas
    - whether to define additional pay zones
    - whether to define "hotspots" where disparities exist between and within local areas
44. The STRB should consider these with reference to the Secretary of State's objectives for reform of teachers' pay and the need to ensure equity and fairness.
45. These options encompass flexibility across all pay scales, including leadership scales, and all provisions in the School Teachers' Pay and Conditions Document, except non-pay related conditions of employment.

## Local pay areas and "hotspots"

46. In considering zones and "hotspots", we believe it will be necessary for the STRB to consider appropriate boundaries and for those zones and hotspots to be subject to a programme of review. The frequency of review would depend on identifying and agreeing a suitable trigger; and on identifying robust data to support a review.
47. In considering a new zonal pay structure alongside the identification of appropriate boundaries, the following matters would need to be considered and addressed:
  - How revised/new zones may impact on those neighbouring areas that are within daily travel to work distance of any higher-salaried zones or hotspots (cliff edges) and whether there is a need for additional 'fringe' areas around areas that have higher salary ranges.
  - Consideration of appropriate frequency for review of zones and hotspots or factors that would trigger a review e.g. de-minimus limits that if breached would prompt a review and consideration of how any model can be future proofed to accommodate changes resulting from demographics of teachers and pupils.
  - The great diversity amongst the 23,000+ maintained schools which serve a wide range of local communities in rural, suburban and inner-city areas, with significantly different numbers of pupils and budgets.
48. Analysis of regional variations in the local pay section (Annex B) identifies areas where potential disparities exist between and within local areas (and these are subject to change over time). This provides an indication of the number of zones/hotspots that may be required to address these disparities. It also acknowledges that the use of a zonal model may not address all local market requirements at school level.

## Capacity and governance

49. The STRB is asked, in considering all the options to reform the pay system, to have particular regard to considerations that include the need to make all recommendations affordable and the need to encourage consistent and reasonable pay arrangements. The degree to which different reforms to the pay system would meet those needs will depend on:
  - (a) **effective school governance arrangements**, which support governing bodies and head teachers to make decisions about pay and progression and ensure propriety is maintained
  - (b) the **support** required by governing bodies and head teachers to make decisions about pay which represent value for money
50. While the STRB has not been asked to make explicit recommendations about whether Government should change its approach in either of these areas of policy, the STRB may wish to consider the implications for governance and support as part of its considerations of the various options for pay reform.

Model		Description	Advantages	Disadvantages
1 Deregulation	1A Complete deregulation including the removal of existing area pay bands	Would remove all provisions in the STPCD that relate to remuneration.	<p>Would provide head teachers and governing bodies with complete freedom and flexibility in setting the levels of all types of remuneration</p> <p>Would grant schools ultimate capacity to adapt pay arrangements to accommodate local market-facing pay fluctuations and any school specific issues that may impact on the school's ability to attract and retain high quality teachers</p>	<p>Could not oblige all schools to take account of the local labour market</p> <p>Some schools could fail to innovate</p> <p>Schools could pay qualified teachers at a significantly reduced rate</p>
	1B Deregulation within minimum and maximum pay levels	Would provide head teachers and governing bodies with significant degree of pay flexibility but within the existing minimum of the pay scale for unqualified teachers in England and Wales and the maximum of the leadership group in Inner London. In addition, the STRB would need to consider if this minimum and maximum remain appropriate, and whether there should be circumstances in which schools should be allowed to exceed the maximum.	<p>Would create maximum potential to free up budgets and allows schools to manage them more effectively.</p> <p>Would allow schools that experience higher vacancy rates to redress the balance by offering salary rates that would attract suitable applicants</p> <p>Would remove the current rules around progression, allowing head teachers and governing bodies to make decisions that are better linked to performance</p> <p>The need for a prescriptive set of allowances and payments in addition to the pay scale would be removed</p>	<p>Schools could need support to move from a prescriptive system to one which is so flexible, as capability to make fair, equitable and value for money pay decisions could be variable</p> <p>Individual schools could interpret this model quite differently which could lead to wide-ranging differences in pay between the lowest and highest paid staff</p> <p>Could lead to excessive wage inflation if the appraisal system is not used robustly and there is no upper pay limit; if resources are not managed effectively at a school level; and/or as a result of competition between schools for staff</p> <p>Could require more transparent pay data than is currently used so schools can access relevant comparative data in order to set appropriate market-facing salary levels and account for their decisions</p>
	1C Deregulation within minimum pay level	Further variant of 1B but with no maximum.	<p>Schools could pay good teachers more, much earlier in their career</p> <p>Schools could utilise innovative pay options such as rewarding a team's performance</p> <p>Schools would not be constrained by the unqualified teachers' pay scale in setting the pay of skilled professionals who do not hold QTS</p> <p>1B would provide a measure of control over any salary inflation to ensure a level of Value for Money and cost control in the setting of the highest levels of pay</p> <p>1B &amp; 1C would retain a minimum, which evidence suggests is important for the status of the profession and ensuring a sufficient supply of quality graduates into teaching</p>	<p>Could lead to excessive wage inflation if the appraisal system is not used robustly and there is no upper pay limit; if resources are not managed effectively at a school level; and/or as a result of competition between schools for staff</p> <p>Could require more transparent pay data than is currently used so schools can access relevant comparative data in order to set appropriate market-facing salary levels and account for their decisions</p> <p>1B's maximum pay level would not accommodate the salaries of those members of the leadership group who earn more than the maximum of the Inner London pay scale</p> <p>1B's maximum pay level would be higher for all except those who work in Inner London which could lead to unrelated pay increases</p>
2	2A Deregulation	Would provide head teachers	Advantages are similar to Model 1. In addition...	Disadvantages are similar to Model 1. In addition...

Deregulation with pay zones	within set minima and maxima pay levels of the current area pay bands	and governing bodies with a large degree of pay flexibility but within salary boundaries that are familiar to schools.	2A would mitigate the risk that there may be pay increases as a result of a new zonal pay structure that are unrelated to performance, by retaining the current pay band areas	2A would have less flexibility and may be less likely to respond to local needs 2A would not resolve known issues with pay within and across all areas
	2B New pay zones and hot spots with deregulation in between the set minima and maxima pay levels	Would provide head teachers and governing bodies with a large degree of pay flexibility. The Review Body would need to review the composition of existing pay bands; consider the need for new pay zones; determine the minima and maxima, and identify appropriate hot spots.	2B would ensure that schools have a framework within which to set locally appropriate levels of pay, minimising the risks of there being insufficient capability and information  Introducing higher minima in areas with a high cost of living and private sector wages would raise the status of the profession and improve recruitment	2B would introduce new cliff edges which require a programme of review  2B would introduce new maxima, which if higher in any areas could be seen as a target and lead to pressure to increase salary regardless of performance  Implementation of 2B could be costly if schools are required to review their zoning 'position' and their staff's salaries  Introduction of greater number of pay zones could be divisive e.g. where a head teacher manages multiple schools in different pay zones
3 Three pay scales with deregulation in between	3A Three pay scales with set minima and maxima pay levels with deregulation in between and retain existing pay band areas	As Model 2A. Additionally would retain separate and distinct ranges for unqualified teachers, classroom teachers and the leadership group. The STRB would need to consider whether a classroom teachers' pay range as in this model should incorporate the potential discontinuation of the Advanced Skills Teachers' and Excellent Teachers' designations as recommended by the independent Teachers' Standards Review Group.	Advantages are similar to model 2. In addition...  Retaining a separate unqualified teachers' pay range would help to address concern about model 1 that some qualified teachers may be paid less than they are currently paid  Retaining a separate leadership group pay range would reinforce the difference in classroom teachers' and school leaders' roles and responsibilities and retains a career structure  Having maxima for different pay scales would be more likely to limit overall cost inflation for teachers at all salary levels  3B could help to address the concern that existing pay ranges may not be sufficiently flexible in all local labour market circumstances  3C would avoid the issue of cliff-edges where pay zones meet	Disadvantages are similar to model 2. In addition...  Could require some additional pay flexibilities for governing bodies to exceed the stated maxima. Eg a non consolidated payment or allowance  Retaining separate pay scales could limit the potential to innovate and reward the best, regardless of role  Would need to consider transition issues if Threshold, AST, ET designations were removed. If they were retained the associated bureaucracy of assessment would be retained
	3B Three pay scales with set minima and maxima pay levels with deregulation in between and new pay zones and hot spots	Very similar to Model 2B and 3A.		
	3C – three pay scales, no pay zones	As for 3A, and 1.		

4 Three pay scales with spine points	4A Three pay scales with spine points between set minima and maxima existing pay levels and existing pay band areas	Builds on 3A and would retain the defined pay scale points between the minima and maxima of the separate unqualified teachers', classroom teachers' and leadership group pay scales. Head teachers would need to make the decision on when teachers should move through the spine points.	<p>Advantages are similar to models 2 and 3. In addition...</p> <p>Would provide a degree of reassurance to some head teachers and governing bodies who may have difficulty implementing some of the more flexible models without a statutory framework to operate within</p> <p>The presence of a framework with defined reference points could potentially avoid some of the risks of equal pay considerations</p>	<p>Disadvantages are similar to models 2 and 3. In addition...</p> <p>Would increase the risk of some schools failing to innovate and would simply mirror the previous pay arrangements which would restrict a relevant body's ability to gain best value for money from the school's budget</p>
	4B Three pay scales with spine points between set minima and maxima existing pay levels and new pay zones and hotspots	The same as 4A but with the addition of new pay zones and hot spots areas.		
5 Minimum change		Builds upon 4B by largely keeping a simplified version of the 'status quo'. At a minimum, progression arrangements would still need to be reformed to ensure there is a more effective link between progression and performance. We would still welcome the STRB's views on what other reforms should be made to teachers' pay and conditions in order to raise the status of the profession and best support the recruitment and retention of high quality teachers in all schools. The Review Body would still need to consider the second report of the independent Teachers' Standards Review Group and the need for new pay zones. The current system of allowances and benefits would need to be reviewed to improve	<p>Advantages build on those in model 4. In addition...</p> <p>A relatively familiar structure could provide a degree of reassurance to some head teachers and governing bodies</p> <p>Fear of legal challenge and the prevailing dependence upon the statutory framework could mean that many head teachers and governing bodies are unlikely to utilise freedoms and instead need statutory support to implement changes</p>	<p>Disadvantages build on those in model 4. In addition...</p> <p>Would largely mirror previous pay arrangements and prevent schools from innovating</p>

	<p>take up; and the STRB would need to make recommendations on other reforms which would raise the status of the profession and support the recruitment and retention of high quality teachers</p>		
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## Annex A – The Current System

A1 This annex describes the current pay system for teachers and the existing links between teachers' pay, performance and career progression. The scope of the Secretary of State's evidence covers all pay scales, allowances and all provisions in the School Teachers' Pay and Conditions Document, other than those relating directly to non-pay conditions of employment.

### Area pay bands

A2 There are currently four area pay bands that emanate from London - London inner, outer London, the fringe and the remainder of England and Wales. The current pay bands have rigid boundaries, which at the point they were devised took account of areas that historically had higher teacher vacancy rates and costs of living.

A3 There is no flexibility for a school, or group of schools, to 'opt' in or out of their allocated band. They do not correspond with local authority boundaries in all cases and some local authorities span two area pay bands. This can create 'cliff edges' where the pay bands meet geographically, and may result in schools in the lower value area pay band having to offer additional payments in order to recruit teachers.

A4 In 2003 when the current bands were recommended (in the STRB's 13<sup>th</sup> Report Part One), the STRB acknowledged that there was variation within inner London in the extent of the problem of recruiting enough teachers and that there were similar difficulties in locations beyond.

A5 Area pay bands may have contributed to the successful overall reduction of teacher shortages at a national level, but it is difficult to assess the extent to which the existing pay bands have actually driven this change. Annex C describes the scope for pay to become more responsive to local labour markets.

### Pay scales and flexibilities

A6 The School Teachers' Pay and Conditions Document (STPCD) sets out a range of pay scales and allowances. Relevant bodies<sup>2</sup> must use these, in the context of their pay policy and staffing structure, to determine a teacher's salary.

A7 In summary the teachers' pay system is made up of the following:

- Unqualified teachers' pay scale
- Main scale for classroom teachers
- Upper pay scale
- Excellent Teacher pay range
- Advanced Skills Teacher pay spine
- Leadership group pay spine

A8 Progress through the points of the main pay scale for classroom teachers is on the basis of a teacher completing a satisfactory year of employment. The current Core Standards provide a reference point for schools that sets out what is expected of all teachers from the point of successful completion of statutory induction throughout

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<sup>2</sup> 'Relevant body' for this purpose is either the local authority or the school's governing body.



their careers. There is some evidence that some schools have used the current framework of professional standards in this way as part of the annual performance management process but there is no requirement to do so. If a teacher's performance has been deemed as unsatisfactory, the relevant body still has the discretion to progress a teacher through the main pay scale. The relevant body may also advance a teacher by two points, in total, if their performance is judged to be excellent.

- A9 Once a point is awarded to a classroom teacher on the main or upper pay scale, it is permanent. The only exception to this is where a teacher has been paid as an Excellent Teacher (ET) or Advanced Skills Teacher (AST - see below) and they move to a post that was not an ET or AST post. In these instances, their pay is adjusted to reflect the change in their role and responsibilities.
- A10 Under the current arrangements, when teachers' performance is reviewed, those who are eligible for pay progression under the STPCD are entitled to a recommendation on pay progression. Previous guidance on performance management has stated that reviewers did not need to make recommendations in support of annual increments.
- A11 Schools may employ 'unqualified' teachers who are paid on a separate pay scale. The progression arrangements and the awarding of points operate in a similar way to that of the main pay scale. The relevant body may pay an additional allowance for sustained additional responsibility to an unqualified teacher, the amount of which it decides in the context of its pay policy.

## Upper pay scale

- A12 In 2000 the 'Threshold' was introduced as a new career structure for teachers which would reward effective performance. The Threshold gives teachers at the top of the main pay scale the option of applying to progress to the upper pay scale. Initially this was a five-point pay scale; in 2004 it was reduced to a three-point upper pay scale. Progression to the upper pay scale is dependent on a teacher being able to demonstrate that they have met the Post-Threshold Standards set out in the current Framework of Professional Standards for Teachers. These standards specify the attributes, knowledge and skills expected of Post-Threshold teachers. Decisions about whether or not these standards have been met are made by head teachers based on the evidence provided by the performance management process.
- A13 Currently teachers should not normally progress through the three-point upper pay scale more frequently than every two years. Progress through the upper pay scale is performance-related with the relevant body needing to satisfy itself that the teacher's achievements and contribution to the school have been 'substantial and sustained'.

## Excellent Teachers and Advanced Skills Teachers

- A14 Excellent Teachers use and share their skills in classroom teaching for the benefit of professional development of other teachers within their school. Advanced Skills Teachers play a more strategic role, disseminating good practice to schools other than their own.
- A15 Teachers on either the main or upper pay scale may move onto the AST pay spine only when they have both passed a national assessment against the relevant standards, and taken up an AST post (not all schools have AST posts). The relevant body must determine a five-point range for an AST from the 18-point pay spine

(which is equivalent to the first 18 points of the leadership pay spine). Progress through the AST pay range is on the basis of up to two spine points per year – where there has been sustained high quality performance against identified performance criteria.

A16 Teachers who have been on the top of the upper pay scale for a minimum of two years may be paid as an ET if they have both passed a national assessment against the relevant standards and have taken up an ET post (not all schools have ETs – indeed there are fewer than 100 posts). The relevant body must determine a ‘spot’ salary on the ET pay range which takes account of the nature of the work to be undertaken and the degree of challenge of the role.

## Head teachers, deputy heads and assistant heads

A17 Currently head teachers’ pay is calculated with reference to the number and age of a school’s pupils and the number of pupils with special educational needs. This enables a head teacher’s pay group from 1 to 8 to be determined and within which governors have discretion to identify a seven-point pay range for the head teacher from the 43-point leadership pay spine. The STRB’s 20th Report resulted in a 25 per cent limit being introduced to any discretionary payments made to head teachers in the 2011 STPCD. The 25 per cent limit is based on a head teacher’s current point on their individual school range.

A18 Deputy and assistant head teachers’ salaries must consist of five consecutive spine points on the leadership group pay spine. There must be differentiation between a deputy head’s, assistant head’s and the highest paid classroom teacher’s salaries.

A19 Currently progression through an individual’s pay range is dependent on ‘sustained high quality performance’ against identified objectives. For exceptional performance governors may award a two point increase.

## Other pay and provisions

A20 The STPCD contains a number of additional payments, benefits, allowances and incentives which the relevant body may use to reward teachers and members of the leadership group. There is no provision within the STPCD for the payment of bonuses or honoraria to teachers. The main payments and flexibilities are set out below.

A21 **Teaching and Learning Responsibility (TLR) payments** – the relevant body may award a TLR to a classroom teacher who occupies a post in which they have ‘sustained additional responsibility’ for ‘ensuring the continued delivery of high-quality teaching and learning’. There are two TLR ranges – TLR1 (£7,323 to £12,393) and (TLR2 £2,535 to £6,197) with criteria being attached to the awarding of a TLR payment. There has been some interest from other consultees in reviewing TLRs – with the aim, for example, of making them temporary or fixed term.

A22 **Special Educational Needs (SEN) allowance** – teachers of pupils with special needs may receive an allowance of between £2,001 and £3,954 per annum subject to meeting the criteria set out in the STPCD. The relevant body must determine the spot value of the allowance, taking into account the structure of the school’s SEN provision and other factors.

A23 **Recruitment and retention incentives and benefits** – the relevant body can make extra payments or offer other benefits to teachers for recruitment and retention

purposes and can decide the amounts themselves (with the exception of payments to head teachers, which must be within the 25 per cent limit on discretionary payments and which may only be exceeded in 'wholly exceptional circumstances'). These may be awarded for a fixed period not exceeding three years. In exceptional cases awards for retention purposes may be renewed.

- A24 **Flexibility over the starting salary of Newly Qualified Teachers (NQTs)** - In addition to the pay allowances available to existing teachers, there is flexibility to start NQTs above the bottom rung of the pay scale.
- A25 **Chartered London Teachers (CLT)** – the CLT status was launched in September 2004 to help improve the quality, recruitment and retention of the teaching workforce in London schools. To qualify for the CLT status a teacher must have worked in London state schools for at least four years, be above the main pay scale, have evidence to demonstrate all of the CLT standards and have been registered on the CLT programme for at least two years. The programme rewards teachers who have remained in London and completed the CLT standards with a Master's credit and a one-off payment of £1,000.
- A26 **Other additional payments** – the relevant body may make additional payments as they see fit to classroom teachers for: professional development undertaken outside the school day; activities relating to the provision of initial teacher training; and participation in out-of-school hours activity.
- A27 **Other discretionary payments to head teachers** – the relevant body may also make a payment to a head teacher where: the school is causing concern; it is considered that without such payment the school would have either substantial difficulty filling the vacant head teacher post or substantial difficulty retaining the existing head teacher; or the head teacher is appointed as a temporary head of one or more additional schools. In addition, head teachers may also be awarded a payment for raising educational standards in one or more additional schools (these payments would fall within the 25 per cent limit as described above).
- A28 **Residential allowance** – the relevant body may pay an allowance for residential duties, the amount of which it decides, in the context of its pay policy.
- A29 **Acting allowance** – the relevant body may pay an allowance to a teacher for assuming the duties of a head teacher, deputy or assistant head teacher, the amount of which it decides, in the context of its pay policy.
- A30 **Performance payment** – the relevant body may award a lump sum to a teacher if they are seconded to a post as a head teacher in a school which is causing concern.

## Safeguarded payments

- A31 The STPCD contains a number of complex provisions related to safeguarding teachers' salaries for up to three years if, as a result of changes to the school's staffing structure or pay policy, a teacher (or a member of the leadership group) is to receive a reduction in salary. So for example if a school decides to remove a post which attracts a TLR payment, then the school must compare the post holder's salary entitlement on the day before the change occurs, with the new entitlement after the change, and for the difference to be paid as a safeguarded sum. If the safeguarded sum totals more than £500, the school must review the teacher's assigned duties and allocate such additional duties as they consider appropriate during the time that it is in payment.

A32 The STPCD also contains separate safeguarding provisions which relate to teachers who have lost their post due to the closure or reorganisation of an educational establishment or school on or before 31 December 2005, and on or after 1 January 2006.

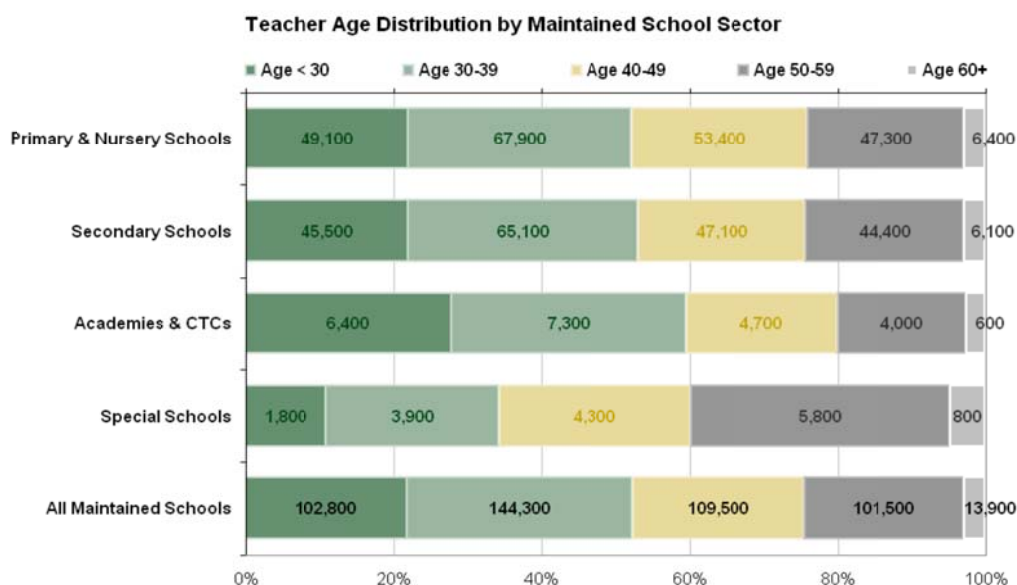
## Annex B: Application of the current system

B1 This section presents analysis of how the current pay system is applied. It includes analysis of how teachers progress through the pay scales and shows that there is little to suggest that a link exists between pay progression and school performance. It goes on to describe the extent to which existing pay flexibilities are utilised by different types of school, including academies.

### Analysis of pay by school sector

B2 DfE's analysis of the 2010 School Workforce Census shows that the overall level of pay varies between school sectors. As illustrated in figure 1B, teachers in academies tend to be younger than in maintained schools, and age can broadly be related to teaching experience, which impacts upon pay. The distribution of teaching experience is reflected in figure 2B which shows sponsor-led academies, on average, pay less<sup>3</sup> to classroom teachers than all secondary schools across the pay areas. Converter academies have lower mean classroom teacher salaries than all secondary schools<sup>4</sup> in Inner and Outer London, but similar pay outside of London.

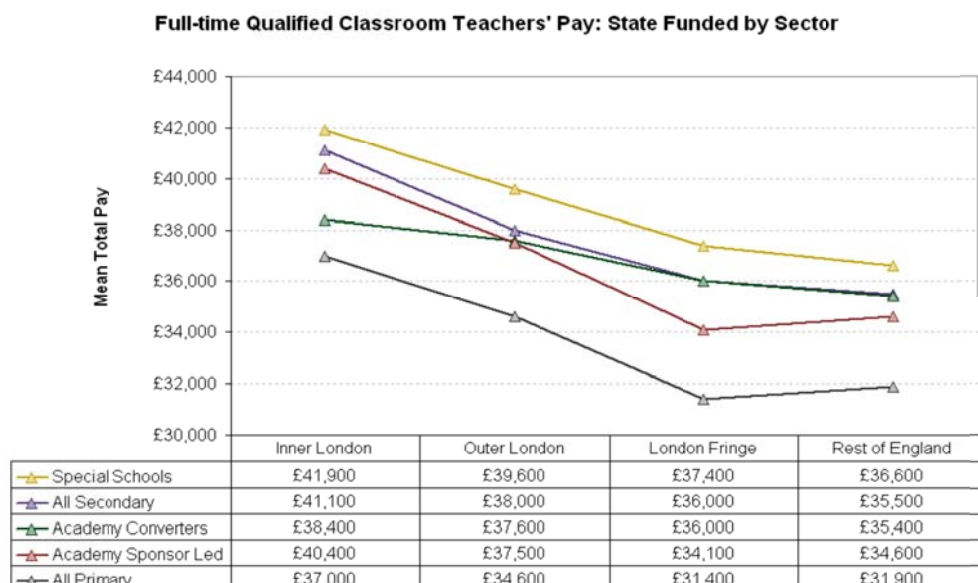
Figure 1B



<sup>3</sup> Generally, salaries diverging by more than £300 have been considered to be 'more'/'less'.

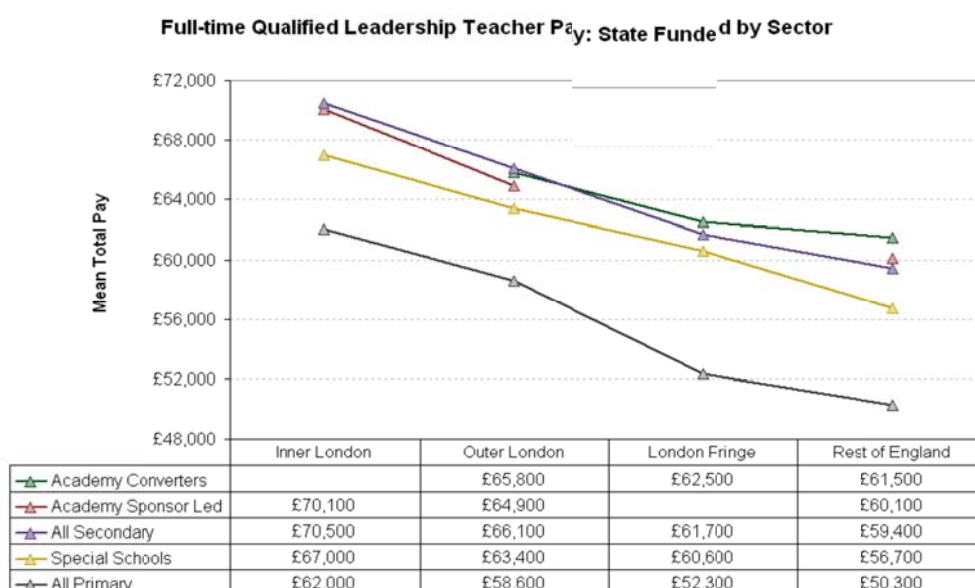
<sup>4</sup> The 'All Secondary Schools' category includes teachers in academies from whom a spine point from the STPCD was reported via the workforce census; this covers around 75per cent of teachers in academies.

**Figure 2B**



B3 Figure 3B shows that converter academies paid higher leadership salaries than the 'all secondary schools' group outside of London and paid similar salaries in the Outer London pay area. Sponsor-led academies paid less than all secondary schools in Inner and Outer London, but more in the Rest of England pay area. There were insufficient data points for London Fringe sponsor-led academies and Inner London converter academies.

**Figure 3B**

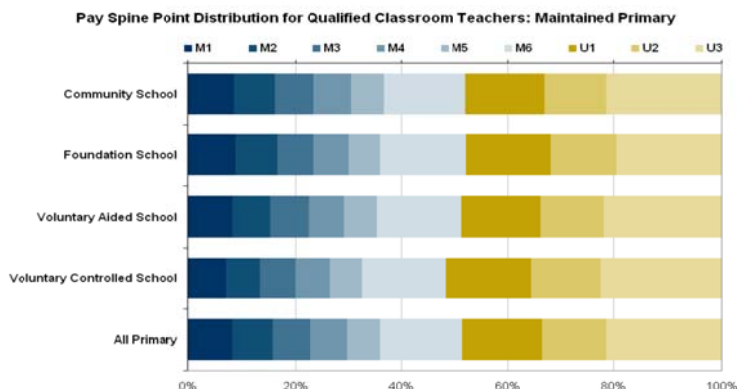


B4 DfE analysis of the 2010 School Workforce Census<sup>5</sup> provides a distribution of all classroom teachers in the maintained sector across current pay spines. Figure 4B below suggests that just under 50 per cent of those teaching in primary schools are on the upper pay scale with some slight variation across school type.

<sup>5</sup> DfE Analysis of 2010 School Workforce Census. Includes all teachers, including those working part time.

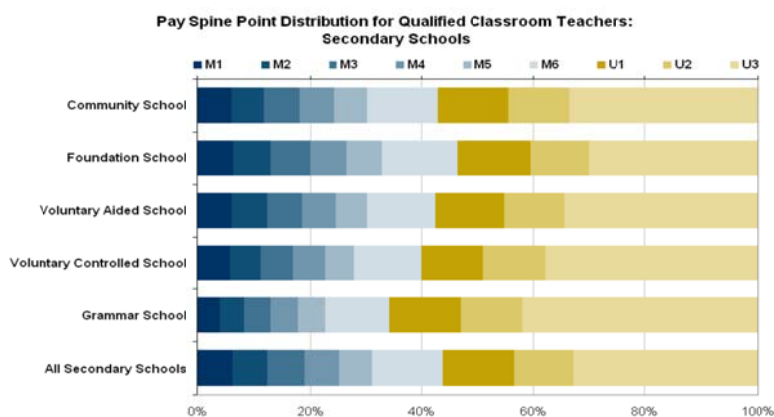
# Progression

## Figure 4B



B5 Figure 5B suggests the proportion was higher for secondary schools with over 50 per cent of teachers at this stage on the upper pay scale. This varied across school type to a greater extent than in primary schools.

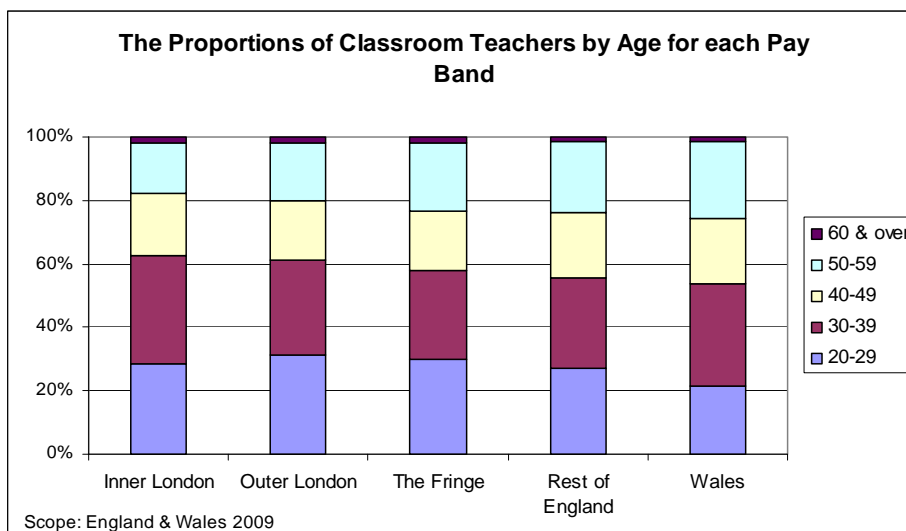
## Figure 5B



B6 The distribution across pay spines mimics the age distribution of classroom teachers shown in Figure 6B, although the age data is from 2008-09.



**Figure 6B**



B7 The DfE School Workforce Census doesn't currently enable monitoring of progress across pay spines.<sup>6</sup> However a survey conducted by ORC International on behalf of the Office of Manpower Economics (OME) in 2008/09 sampled schools across local authorities in England and Wales (Byrne *et al*, 2009)<sup>7</sup> and investigated the extent to which progression was being utilised. This research appears to suggest a similar distribution of qualified classroom teachers across the pay scales as obtained from DfE 2010 analysis. It supplements DfE evidence highlighting that there are variations in the distribution for full and part-time teachers; with a higher proportion (66 per cent) of part-time qualified teachers being on the upper pay scale than full-time qualified teachers (52 per cent).

B8 Looking specifically at full-time qualified teachers and their progression up the pay scales the ORC research suggests that 49 per cent of qualified classroom teachers were on a higher spine point in 2008/09 than in the previous year. In primary schools 53 per cent of classroom teachers progressed by at least one spine point and in secondary schools 47 per cent progressed.

B9 Figure 7B compares progression of primary and secondary phase classroom teachers. This suggests that for full-time primary school classroom teachers:

- virtually all teachers on the main pay scale (M1 to M5) progressed to the next point
- 45 per cent of those on M6 progressed to U1
- 38 per cent of those on U1 progressed to U2
- 32 per cent of those on U2 progressed to U3

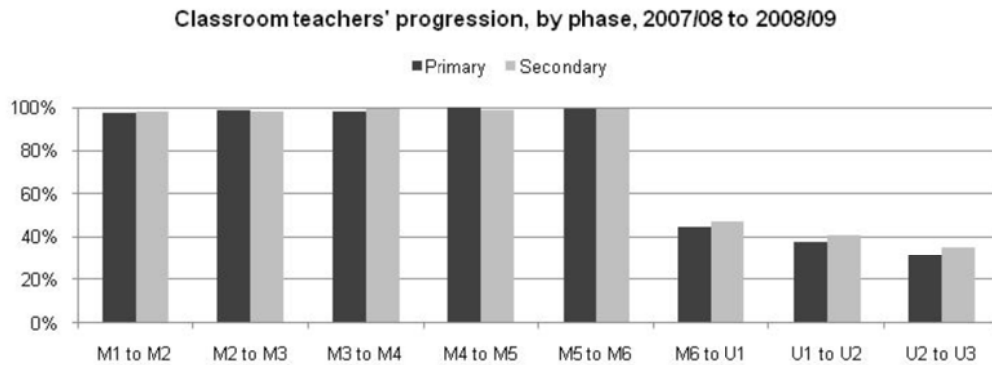
B10 Primary and secondary teachers showed a similar pattern of progression up the main scale, but a smaller proportion of teachers progressed on to the upper pay scale in primary than in the secondary phase.

<sup>6</sup> DfE plan to investigate the feasibility of linking future School Workforce Census returns to enable longitudinal Analysis going forward.

<sup>7</sup> 3000 schools across all 172 local authorities were sampled based on phase and school size. A total of 1090 (36 per cent) of schools and 74 (43 per cent) of local authorities completed the questionnaire

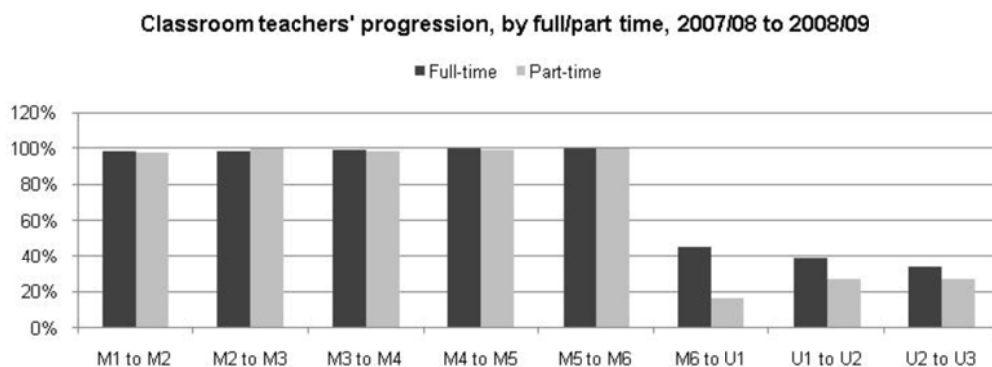


**Figure 7B**

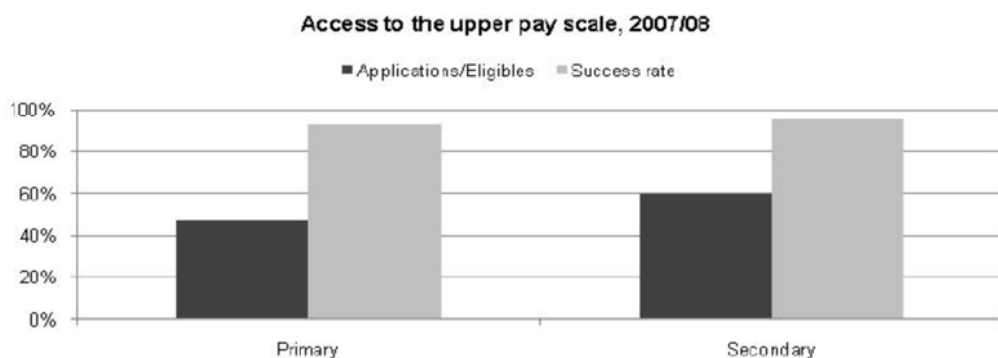


B11 The analysis detailed in Figure 8B also shows some variation according to working pattern. Whilst the pattern for full-time and part-time teachers progressing on the main pay scale between 2007/08 and 2008/09 was similar, within the upper pay scale the proportion of part-time teachers progressing was lower than full-time. Approximately 15 per cent of part time teachers progressed from M6 to U1 compared with 45 per cent of full time teachers.

**Figure 8B**



**Figure 9B**



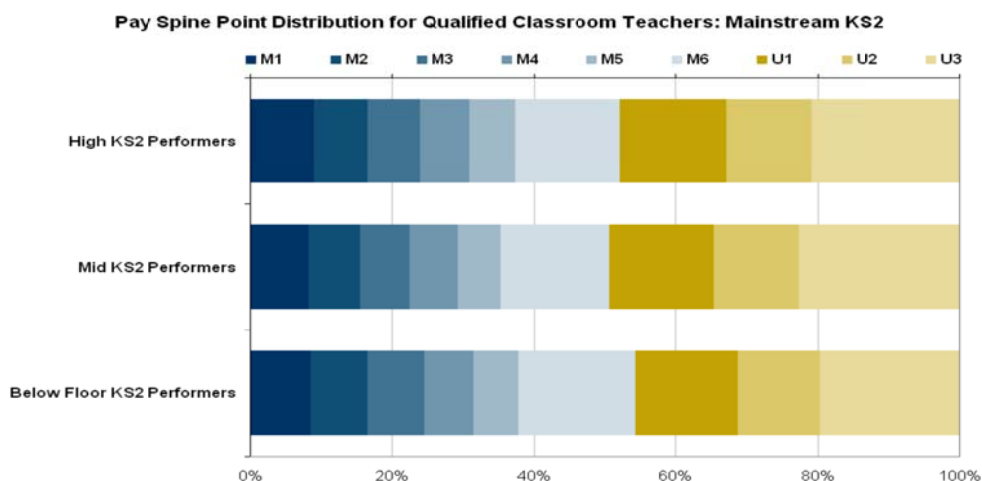
B12 Figure 9B provides information about the proportions of eligible teachers applying to access the upper pay scale and their success rates. The figure illustrates that the proportion of eligible teachers applying to access the upper pay scale was lower in primary than in secondary phase (47 per cent and 60 per cent respectively). For those that did apply, the success rate was over 90 per cent (92 per cent primary and 96 per cent secondary).

- B13 Overall applications for progression to the upper pay scale appear to have reduced over the years. The ORC report also confirms that a lower proportion of qualified teachers progressed from the main pay scale to upper pay scale in 2008/09 than the two years previously.
- B14 Reporting on a study of the introduction of performance related pay, Wragg *et al* in 2003/4 noted that the success rate was 86 per cent of all teachers eligible to apply for the upper pay scale and 97 per cent of those who actually applied. This suggests that success rates have remained fairly constant over time.

## Pay scale progression and performance

- B15 DfE published analysis (DFE-RR 151) covering the distribution of teachers across pay scales against outcomes achieved, as measured by Key Stage results, shows no clear link between the distribution of teachers across the pay-scales nationally and the performance of the schools in which they work.

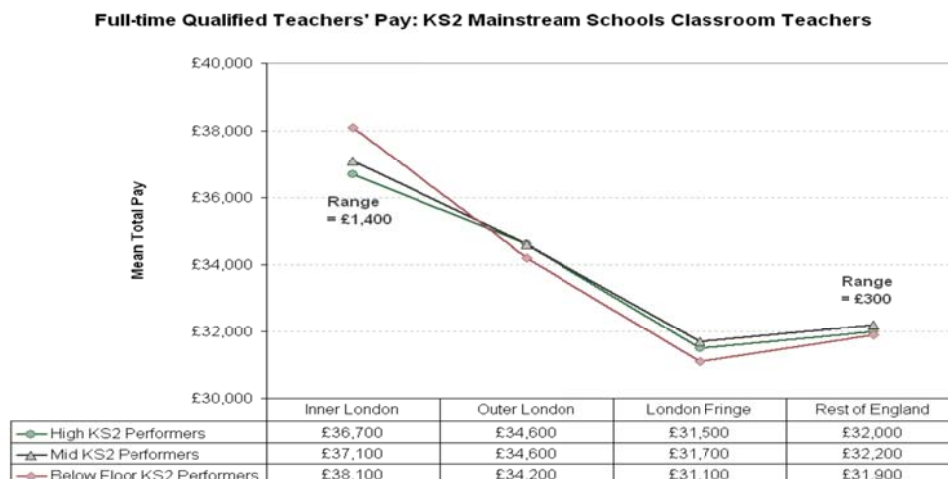
Figure 10B<sup>8</sup>



- B16 However, the national picture hides variation across regions. Recent DfE analysis of mean salaries by area in England revealed that classroom teachers were typically paid more in below-floor schools in Inner London than in mid-performing or high-performing schools in the same area. However, classroom teachers in below-floor schools outside of Inner London were paid less on average than those in other KS2 schools.

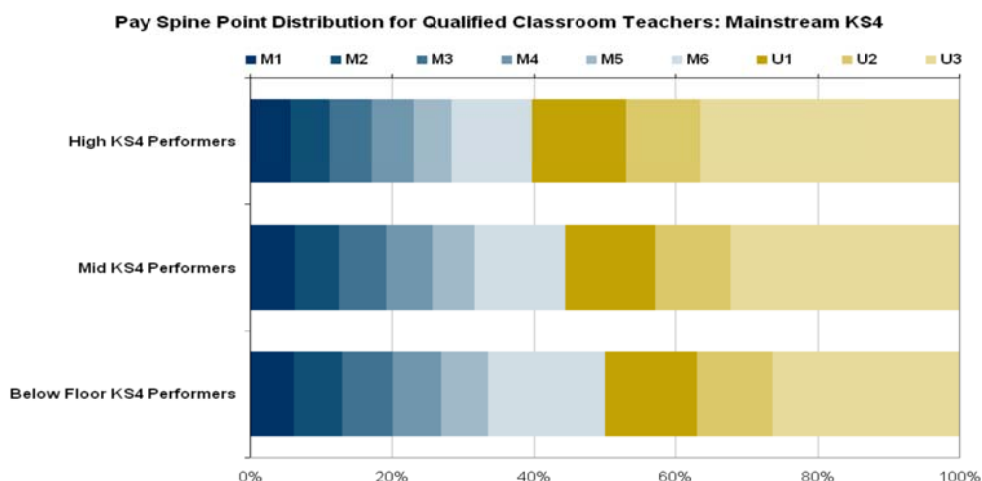
<sup>8</sup> Schools are defined as being below the floor at KS2 if less than 60 per cent of pupils are achieving level 4 or above in English and mathematics combined, they are below the England median for progression by two levels in English, and they are below the England median for progression by two levels in mathematics.

Figure 11B



B17 In secondary schools the differences were more distinct, with approximately 50 per cent of teachers below the Key Stage 4 (KS4) floor targets on the upper pay scale compared to 60 per cent with the highest KS4 results.

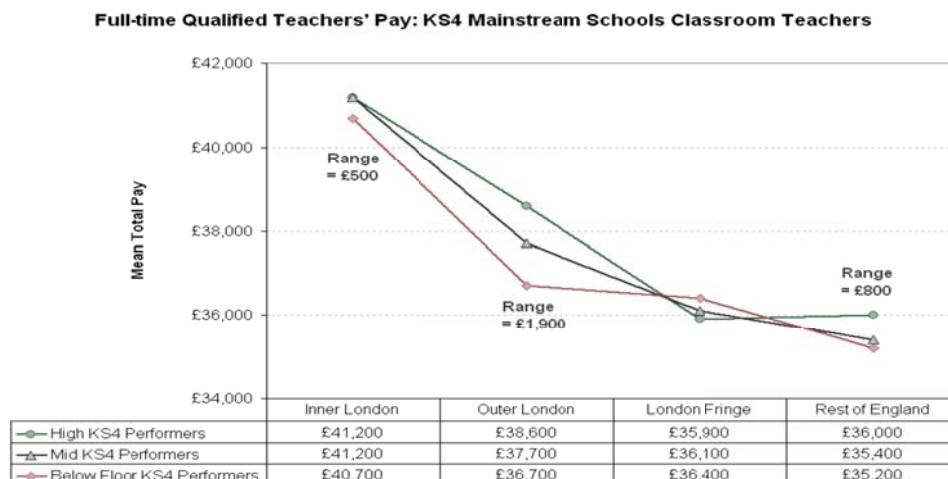
Figure 12B<sup>9</sup>



B18 Again this national picture masked variation across regions. Classroom teachers in below-floor schools were paid less on average than those in other schools in Inner and Outer London. However, similarly to those in mid-performing schools in the London Fringe and Rest of England pay areas, those in high-performing schools were paid more than those in mid-performing schools in the London Fringe and Rest of England.

<sup>9</sup> Schools are defined as being below the floor at KS4 if less than 35 per cent of pupils at the end of Key Stage 4 (KS4) are achieving five or more GCSEs A\*-C (or equivalents) including English and mathematics GCSE, and they have below average percent of pupils at the end of KS4 making expected progress in English, and they have below average percent of pupils at the end of KS4 making expected progress in mathematics.

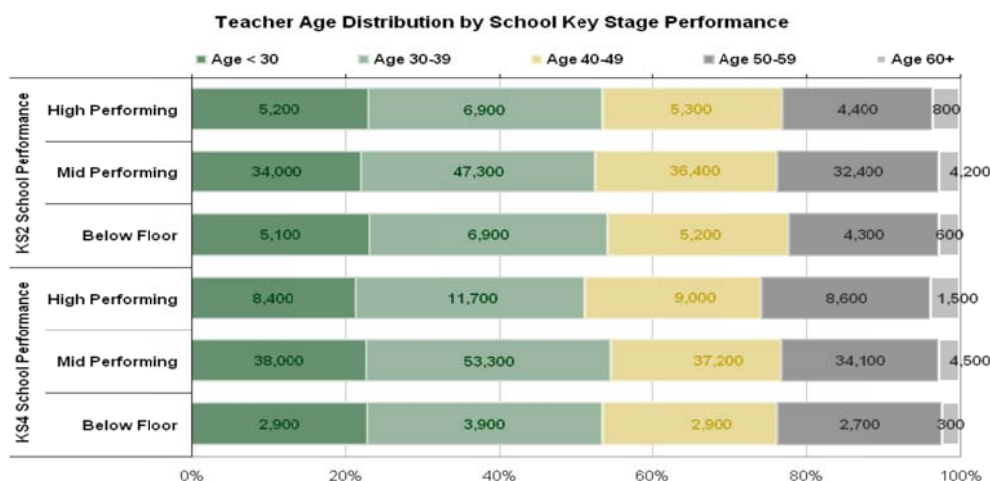
Figure 13B



B19 There is a range of factors that this analysis does not take into account which could be driving the outcomes achieved in terms of pupil performance or value added scores. The research evidence (Alexander, 2010) suggests that this complex and interrelated range of factors includes: teachers' level of experience, deep subject knowledge and degree of autonomy in the classroom; and pupil characteristics such as parental education level, family socio-economic status, gender, ethnicity and special educational needs. According to the OECD (2005a), 'Student learning is influenced by many factors, including: students' skills, expectations, motivation and behaviour; family resources, attitudes and support; peer group skills, attitudes and behaviour; school organisation, resources and climate; curriculum structure and content; and teacher skills, knowledge, attitudes and practices.'

B20 So for example, in practice – given that progression in the current system is very much linked to teacher length of experience and age – it is possible that it is the increased experience of those in the upper pay band, rather than pay, which is responsible for higher performance at Key Stage 4. DfE's published analysis (DFE-RR-151) indicated that those high-performing schools at KS4 and those with 'good' or 'outstanding' behaviour both had slightly older than typical teacher age profiles. Figure 14B shows that high-performing Key Stage 4 schools had a larger proportion of teachers aged 40 or above; mid-performing and below-floor schools had similar teacher age distributions. However, there were no noteworthy differences in the teacher age profile according to Key Stage 2 performance.

Figure 14B



## Use of pay flexibilities

- B21 Analysis of the School Workforce Census (November 2010)<sup>10</sup> suggests 62 per cent of maintained schools in England made use of at least one of the following four pay flexibilities<sup>11</sup>: recruitment and retention payments, TLR payments, SEN payments and placing NQTs above pay spine point M1 (see Table 1B). Secondary schools were most likely to make use of pay flexibilities, and nursery and primary schools were least likely (85 per cent compared to 57 per cent).
- B22 Table 1B shows that in 2010:
- 9 per cent of maintained schools used recruitment and retention payments (RR).
  - 58 per cent used TLR payments.
  - 10 per cent used SEN payments.
  - 3 per cent placed NQTs above pay spine point M1.
- B23 There has been a steep decline in registrations to Chartered London Teacher status since the scheme was launched in 2004. A total of 37,000 teachers registered over the first eighteen months up to March 2006. Currently the numbers are significantly lower, with just 422 teachers completing the programme to meet the CLT standards within this financial year.
- B24 The Office for Manpower Economics commissioned research on the use of formal and informal flexibilities (OME 2011). Their report is based on survey responses from 610 head teachers and 181 chairs of governors from a representative mix (of 791 schools)<sup>12</sup> across school size, phase and region of England and Wales<sup>13</sup>. The fieldwork was conducted in Autumn 2010.
- B25 Overall, this research found 81 per cent of schools surveyed used TLR payments, 40 per cent used SEN allowances and 22 per cent used RR payments, with 12 per cent of surveyed schools using none of these. These percentages are

<sup>10</sup> Using an updated dataset to that available at the time of the School Workforce Census publication. The publication can be accessed at: <http://www.education.gov.uk/rsgateway/DB/SFR/s000997/index.shtml>

<sup>11</sup> A school is counted if they are paying a pay flexibility to at least one full-time qualified classroom teacher.

<sup>12</sup> Stratified single-stage sampling design by region, type of school and school size. Sample allocation to the strata was disproportional to compensate for anticipated differential response rates in some strata and to achieve minimum sample sizes for groups of schools within domains of interest.

<sup>13</sup> To mitigate the risk of non-response bias within achieved sample, weights were applied to the survey records.

considerably higher than those resulting from the School Workforce Census analysis. Importantly, the OME sample was drawn to be representative of the school population and the questionnaire asked head teachers to focus on use of current flexibilities for staff, which will include part-time staff and unqualified teachers. The Census analysis, however, only considers pay flexibilities awarded to full-time qualified teachers. Taken together, these sources indicate the significant use of pay flexibilities for a number of part-time and unqualified teachers.

- B26 The OME's research survey also explored the attitudes of head teachers to the pay flexibilities that are currently available to them:
- 56 per cent of head teachers said they were very familiar with the allowances, but fewer than one in five (17 per cent) chairs of governors were.
  - 52 per cent of head teachers did not believe that existing allowances sufficiently cater for the need to reward high performance.
  - Many head teachers did not believe that Teaching and Learning Responsibilities (TLR), Special Educational Needs (SEN) and Recruitment and Retention (RR) allowances are sufficiently flexible (37 per cent, 24 per cent and 25 per cent respectively).
- B27 The survey prompted those who were not satisfied with the current reward system for their views on alternative flexibilities:
- 71 per cent head teachers agreed with proposals for enabling time-limited payments.
  - 67 per cent supported enabling greater flexibility in the size of the reward.
  - 62 per cent wanted the provision to share payments between teachers.

## Use of pay flexibility by school type

- B28 The analysis of the School Workforce Census showed that use of flexibilities varied by phase and type of payment. Maintained secondary schools made the most use of both recruitment and retention allowances and TLR payments, with 37 per cent of schools in this phase reported at least one full-time qualified classroom teacher receiving an RR payment and 79 per cent using TLR payments. Special schools led the way on SEN payments with 69 per cent of maintained special schools reporting use of the SEN payment. Finally, 13 per cent of secondary schools chose to place at least 1 NQT above pay spine point M1 compared to only 2 per cent of nursery and primary schools.

**Table 1B: Pay flexibilities by school phase**

Phase of school	Total number of schools	Schools using RR payments		Schools using TLR payments		Schools using SEN payments		Schools placing NQTs above M1		Schools using any of the pay flexibilities	
		As % of schools in phase		As % of schools in phase		As % of schools in phase		As % of schools in phase		As % of schools in phase	
		Number		Number		Number		Number		Number	
Nursery and Primary	17,207	772	4.5%	9,211	53.5%	1,142	6.6%	295	1.7%	9,770	56.8%
Secondary	2,935	1,089	37.1%	2,312	78.8%	389	13.3%	396	13.5%	2,502	85.2%
Special	955	72	7.5%	621	65.0%	657	68.8%	13	1.4%	775	81.2%
<b>Total</b>	<b>21,097</b>	<b>1,933</b>	<b>9.2%</b>	<b>12,144</b>	<b>57.6%</b>	<b>2,188</b>	<b>10.4%</b>	<b>704</b>	<b>3.3%</b>	<b>13,047</b>	<b>61.8%</b>

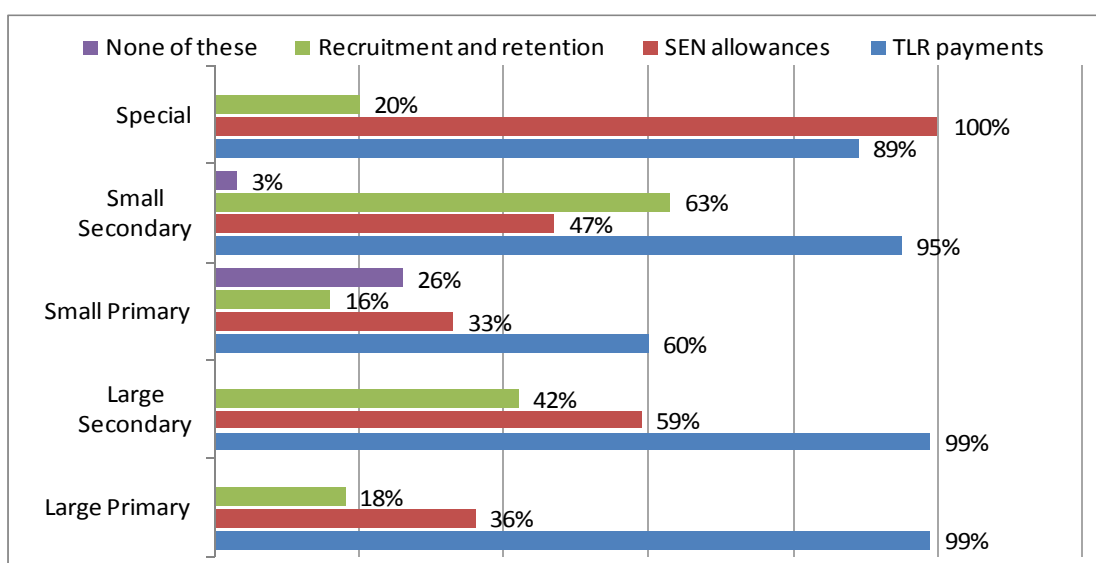
Source: School Workforce Census, November 2010

Coverage: Maintained schools with at least one full-time qualified classroom teacher receiving pay flexibilities, by type

B29 The OME survey also explored how use of flexibility varied by school type, as shown in Figure 15B below. This supports general findings from the School Workforce Census and shows:

- Small primary schools made the least use of allowances: 26 per cent of them used none of the allowances.
- RR payments were most likely to be used in secondary schools (63 per cent of the small secondary schools surveyed and 42 per cent of the large secondary schools reviewed).
- TLR payments were used in the vast majority of schools, with a slightly lower percentage in special schools (89 per cent).

**Figure 15B: Allowances used by type of school<sup>14</sup>**



## Recruitment and retention (RR) payments

B30 Building on the data presented in Table 1B, Departmental analysis of 2010 School Workforce Census data showed maintained secondary schools in England paid more in RR payments than secondary academies, except for qualified classroom teachers<sup>15</sup>. However, the analysis on academies here should be treated with some caution and will only offer an indication; this is because (i) there were only 350 academies at the time of the 2010 School Workforce Census, compared to over

<sup>14</sup> All heads; Specials (148), small secondary (101), small primary (141), large secondary (92), large primary (128). Multicode. Weighted data Source OME (2011) Teachers' pay survey, accessed at

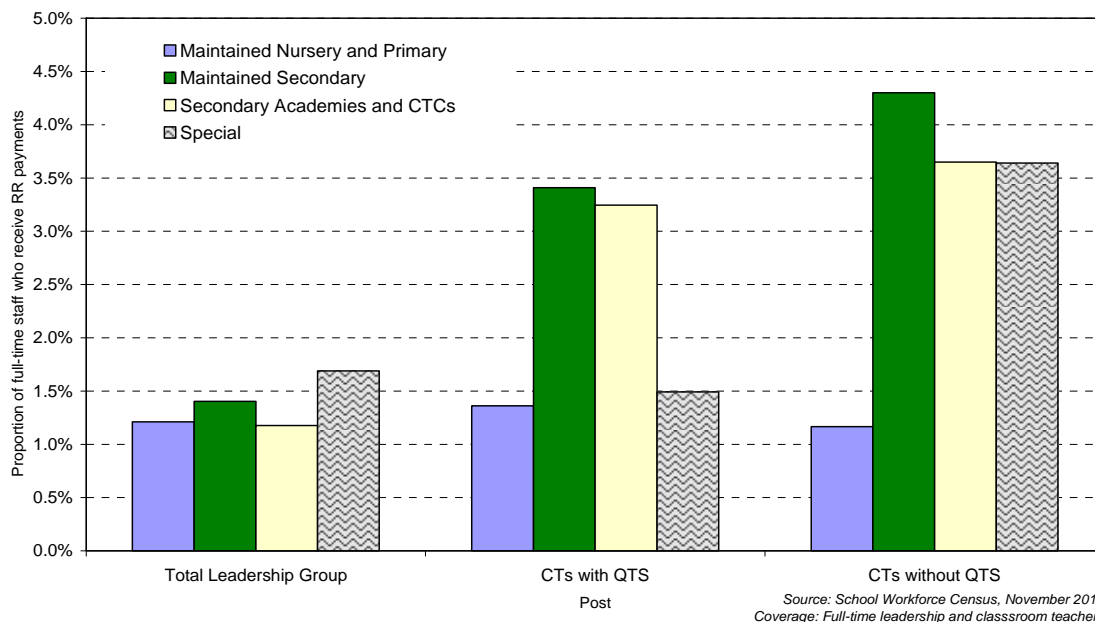
<sup>15</sup> The geography of academies has not been controlled for in this case due to small numbers. Similarly, primary and all-through academies and centrally employed staff are not shown. In addition, the leadership group have been combined. However, the numbers are still small; there are 21 cases of leadership group teachers in secondary academies and CTCs who receive RR payments. Statistics based on RR payments to the leadership group in secondary academies should therefore be treated with caution.



1,750 now and (ii) for those academies with a predecessor school, it is likely many of their staff transferred on existing terms and conditions.

- B31 Of those who received RR payments, unqualified teachers in maintained secondary schools received the most; this can be seen from Figures 16B and 17B below<sup>16</sup>. This also supports the survey finding from the OME (2011) survey, which showed RR allowances were most likely to be used in secondary schools.
- B32 Figure 16B shows maintained secondary schools award a higher proportion of staff RR payments than secondary academies and City Technology Colleges (CTCs). This is true for all grades. The difference is greater for unqualified teachers and it is this group that receives the highest proportion of RR payments. This is the case for all school types with the exception of maintained nursery and primary schools.

**Figure 16B: Proportion of full-time teachers who receive recruitment and retention payments by post and phase/sector**

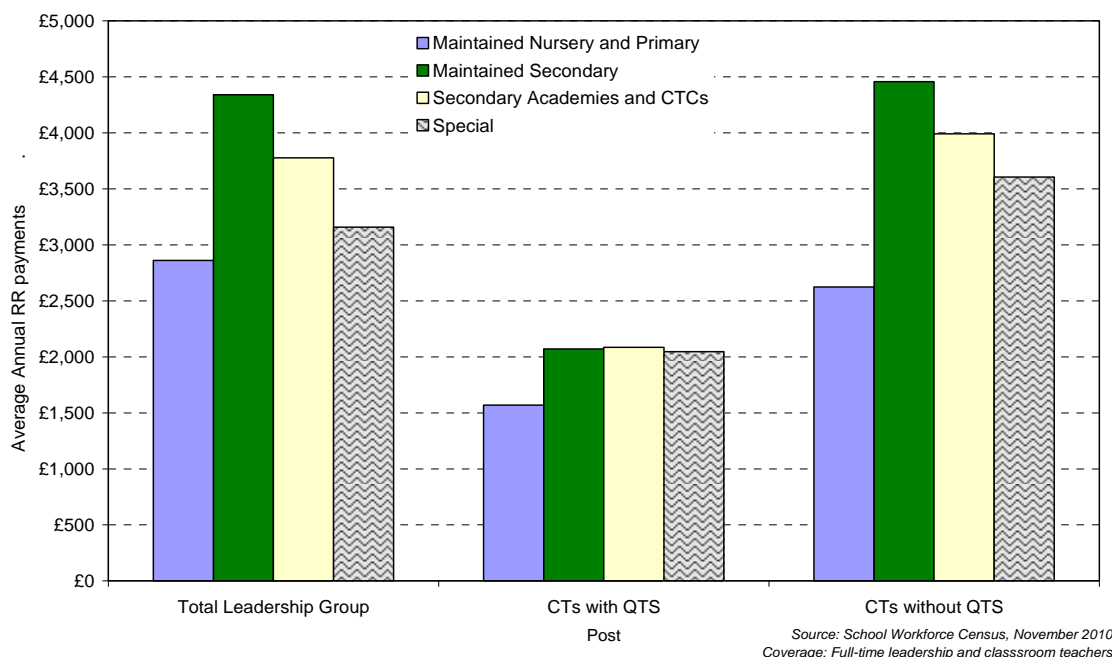


- B33 Figure 17B shows the average annual RR payments by post and phase/sector. This shows maintained secondary schools and secondary academies pay similar amounts in RR, but maintained secondary schools pay slightly more (an additional £450) to unqualified teachers and the leadership group (£550).

<sup>16</sup> Region was not controlled for in this analysis.



**Figure 17B: Average annual recruitment and retention payments to full-time teachers who receive them by post and phase/sector**



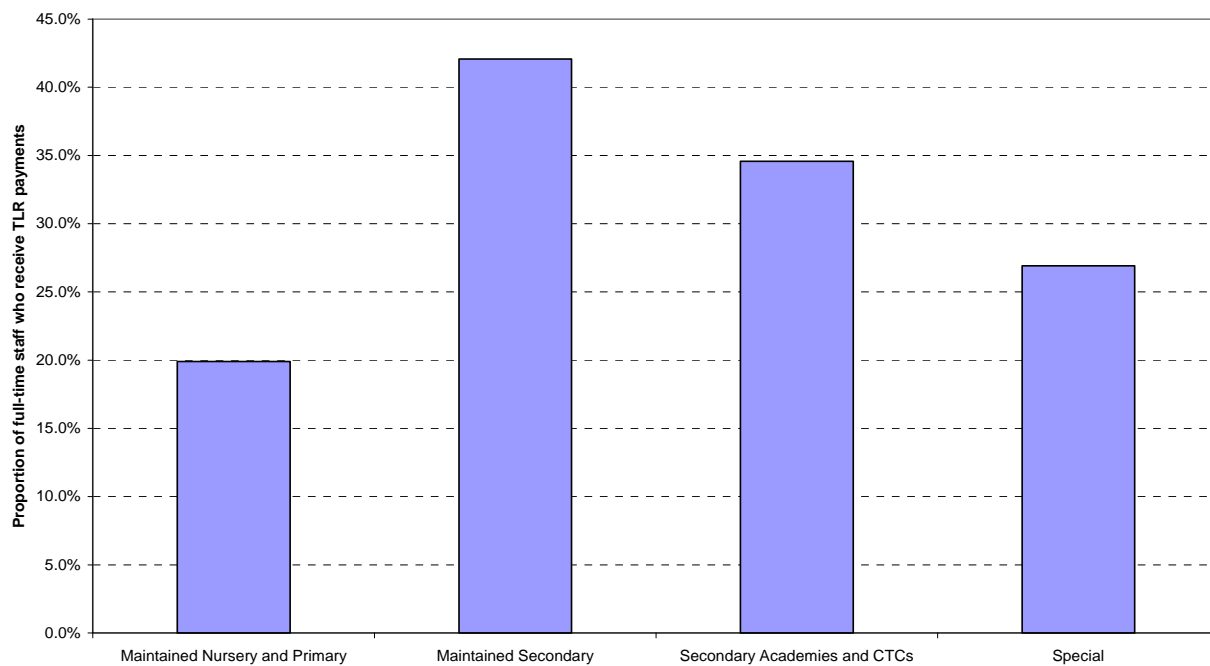
## Teaching and learning responsibility (TLR) payments

B34 Departmental analysis of 2010 School Workforce Census data showed there are a greater number of posts attracting a TLR payment<sup>17</sup> in maintained secondary schools compared to secondary academies<sup>18</sup>. As can be seen from Figure 18B below, 42 per cent of qualified teachers in maintained secondary schools received a TLR payment as opposed to 35 per cent of qualified teachers in secondary academies and CTCs. Maintained nursery and primary schools make the least use of TLR payments to their qualified classroom teachers.

<sup>17</sup> For TLRs, it is important to note it is the post rather than the teacher that attracts the payment. This analysis is based on the TLR posts held by full-time qualified teachers only.

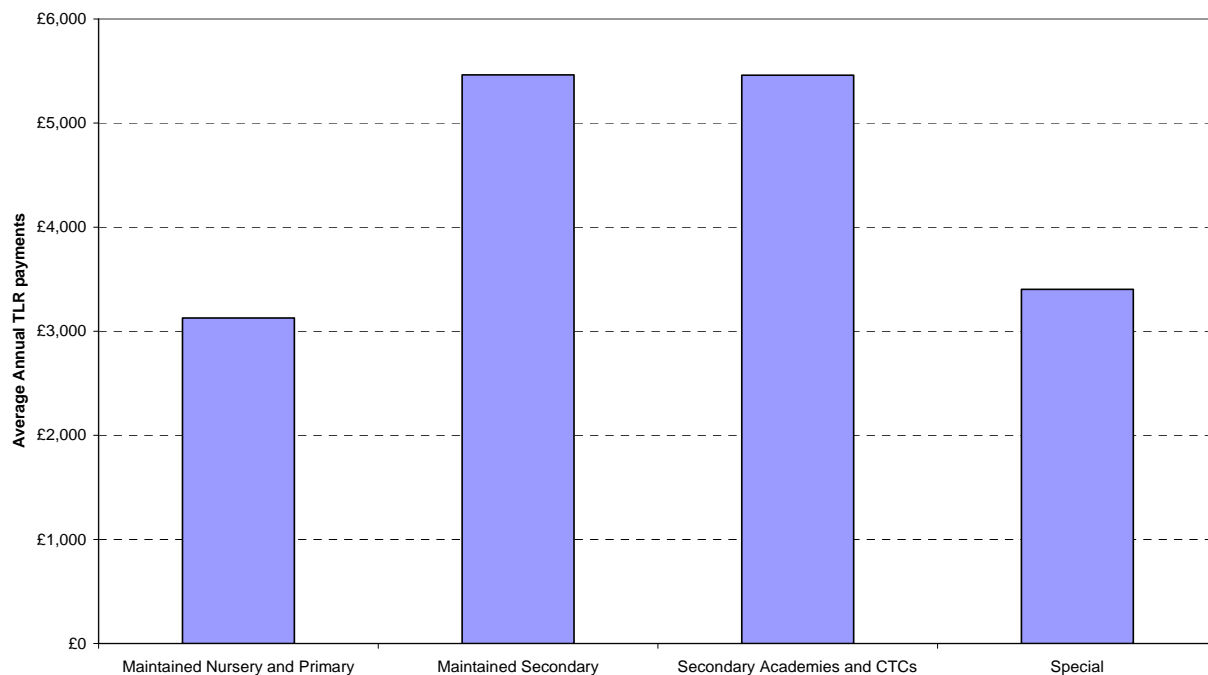
<sup>18</sup> Region was not controlled for in this analysis.

**Figure 18B: Proportion of full-time teachers who receive who receive TLR payments by phase/sector**



Source: School Workforce Census, November 2010  
Coverage: Full-time qualified classroom teachers

**Figure 19B: Average annual TLR payments to full-time teachers who receive them by phase/sector**



Source: School Workforce Census, November 2010  
Coverage: Full-time qualified classroom teachers

B35 Figure 19B shows the average annual TLR payments by phase/sector. This shows maintained secondary schools and secondary academies pay similar amounts in TLR to qualified teachers (both around £5,500).

## SEN payments

B36 School Workforce Census analysis shows SEN payments are primarily used in special schools. In maintained special schools 63 per cent of qualified classroom teachers receive an SEN payment, with an average value of £2,600 for those in receipt of them. Just 1 per cent of qualified classroom teachers in maintained nursery and primary schools, 0.5 per cent in maintained secondary schools and 0.3 per cent in secondary academies and CTCs receive the payments. These have an average value of around £2,400 in maintained nursery and primary schools, £2,300 in maintained secondary schools and £2,500 in secondary academies and CTCs (although again this is based on less than 50 teachers receiving the payment).

## Use of pay flexibility in academies

B37 Academies have greater freedom over how they use their budgets, have the ability to set their own pay and conditions for staff and do not have to comply with the STPCD. In March 2012 the Schools Network and Reform published the results of a survey of 478 Academies – around 1/3 of the total number at the time. 73 per cent of those surveyed said that financial autonomy was one of the reasons that they chose to become an Academy, with 22 per cent specifically citing flexibility over pay and conditions as influencing their decision.

B38 When asked whether they had used the freedoms over terms and conditions, including but not limited to pay, 25 per cent said that they either had or planned to do so. Those that had used these freedoms had done so in various ways, including:

- Creating new posts and responsibilities which fall outside of existing frameworks.
- Introducing performance related pay to attract the best staff.
- Altering pay scales across the board for teachers and support staff to help with staff retention.

B39 There were a large proportion of Academies (65 per cent) that had no plans to use these flexibilities. Of all academies surveyed:

- 60 per cent said that the existence of national pay and conditions makes it difficult for them to vary pay and conditions in their school.
- 30 per cent said that TUPE regulations prevented them from making changes.
- 20 per cent said union opposition makes it difficult to vary pay and conditions.

B40 There are a number of notable cases of the use of pay flexibilities in Academies. Harris Federation has used its flexibilities to make it easier to transfer staff to support neighbouring schools and to allow them to appoint outstanding staff to work across more than one school. They use a range of financial incentives and bonuses for good performance, including for attendance and examination performance. The ARK Schools' contract allows them to offer teachers an

additional 2.5 per cent above the schools teachers' pay and conditions in order to give them the flexibility to deploy teachers flexibly within certain hours, whilst the Capital City Academy rewards its staff financially for running extra-curricular classes.

## Use of pay flexibility by region

- B41** The OME survey found head teachers in London were significantly more likely than those from other regions to use TLRs (95 per cent compared with 81 per cent nationally). Head teachers in London were also more likely to use RR incentives than those in other regions (33 per cent compared to 22 per cent). There was little difference in the use of SEN allowances across regions.
- B42** Internal DfE analysis from 2010 School Workforce Census data found that London schools made the greatest use of pay flexibilities – with 78 per cent of Outer London and 71 per cent of Inner London schools using at least one type of pay flexibility in 2010. Conversely, less than half (47 per cent) of maintained schools in the South West made use of pay flexibilities, much lower than the average of 62 per cent. Inner and Outer London schools exceeded the other regions for use of all four types of pay flexibility. South West schools were least likely to make use of RR and TLR payments, while West Midlands were least likely to use SEN payments and the North West were least likely to place NQTs above M1. Table 2B below shows the percentage of maintained schools (not including academies) in each region making use of each type of pay flexibility.

**Table 2B: Pay flexibilities by region**

Region of school	Total number of maintained schools in region	Schools using RR payments		Schools using TLR payments		Schools using SEN payments		Schools placing NQTs above M1		Schools using any of the pay flexibilities	
		Number	As % of schools in region	Number	As % of schools in region	Number	As % of schools in region	Number	As % of schools in region	Number	As % of schools in phase
North East	1,153	93	8.1%	693	60.1%	109	9.5%	25	2.2%	720	62.4%
South West	2,257	80	3.5%	946	41.9%	235	10.4%	56	2.5%	1,062	47.1%
North West	3,056	155	5.1%	1,792	58.6%	340	11.1%	35	1.1%	1,878	61.5%
Yorkshire and The Humber	2,209	191	8.6%	1,235	55.9%	158	7.2%	52	2.4%	1,334	60.4%
East Midlands	2,007	165	8.2%	1,267	63.1%	231	11.5%	37	1.8%	1,346	67.1%
West Midlands	2,302	266	11.6%	1,460	63.4%	144	6.3%	78	3.4%	1,530	66.5%
East of England	2,514	276	11.0%	1,224	48.7%	264	10.5%	82	3.3%	1,399	55.6%
Inner London	905	200	22.1%	621	68.6%	140	15.5%	67	7.4%	646	71.4%
Outer London	1,432	170	11.9%	1,075	75.1%	189	13.2%	135	9.4%	1,119	78.1%
South East	3,262	337	10.3%	1,831	56.1%	378	11.6%	137	4.2%	2,013	61.7%
<b>Total</b>	<b>21,097</b>	<b>1,933</b>	<b>9.2%</b>	<b>12,144</b>	<b>57.6%</b>	<b>2,188</b>	<b>10.4%</b>	<b>704</b>	<b>3.3%</b>	<b>13,047</b>	<b>61.8%</b>

Source: School Workforce Census, November 2010

Coverage: Maintained schools with at least one full-time qualified classroom teacher receiving pay flexibilities, by type and region

## Annex C: The teacher labour market

- C1 This annex presents analysis of the teacher labour market and the significant variety that exists within it. Using vacancy rates as a measure of supply and demand it highlights the variety that exists between regions, between local authorities and between schools within local authorities. It also highlights significantly different levels of vacancies across different subjects.

### National trends in interest in teaching careers

- C2 The proportion of trainees undertaking Initial Teacher Training (ITT) who are good graduates (holding a 2:1 or above) is improving (TDA Performance Profiles, 2001/02 – 2009/10). The latest figures for course registrations to ITT forecast that overall targets for Primary and Secondary in 2011/12 will be met, with recruitment for five subjects forecasted to be below targets (ITT Trainee Numbers Census).
- C3 The DfE estimates the future demand for teachers taking into consideration a variety of factors, including the projected number of pupils in schools, the number of teachers required to implement policy initiatives and the assumed class sizes (Pupil Teacher Ratios). It also takes into account other factors such as the number of teachers leaving the profession (wastage) and retiring, as well as those expected to return to teaching in the state-funded sector. Whilst the Department aims to estimate future teacher demand, it is the decisions taken at school level, including about recruitment, which determine the actual number of teachers required.
- C4 In order to meet the estimated level of demand as closely as possible the Department sets targets for recruitment to ITT courses, which since April 2012 has been the responsibility of the Teaching Agency. Teacher trainee places are then allocated to training providers on a national basis with regard given to the provider's record on student recruitment, trainee employment and Ofsted inspection results of provider quality.
- C5 Of all 44,300 entrants to teaching in publicly-funded schools in England in 2009-10; 51 per cent were newly qualified entrants; 29 per cent were new to the publicly-funded sector (qualified before 2009); and 20 per cent were returners to the publicly-funded sector (having previously taught in the publicly funded sector). In the same year, there were 39,900 leavers from teaching, of which 72 per cent moved out of the publicly funded sector and 28 per cent retired.

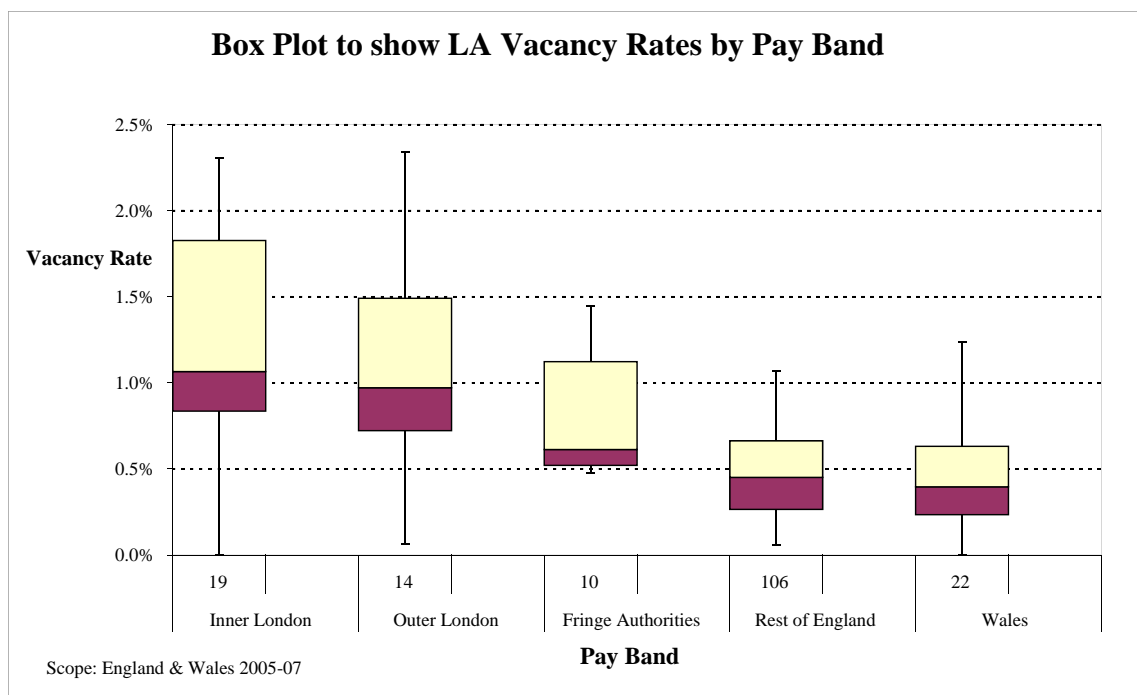
### Variations in the teacher labour market

- C6 Within the national teacher labour market there are a number of overlapping teacher labour markets. These overlapping teacher labour markets vary locally as well as between different groups in the teaching workforce (such as primary and secondary teachers).
- C7 These multiple variations mean that pay, which is currently set using a national framework, is unlikely to reflect the local conditions of the teacher labour market. This can potentially lead to a teacher shortage in some areas and an over-supply of teachers in others. Teacher shortages or over-supply can be indicated by data on vacancy rates, turnover rates and unemployment rates for teachers relative to other graduates.

## Variation in vacancy rates<sup>19</sup> across pay bands

C8 The analysis of vacancy rates across existing pay bands, as presented in Figure 1C, shows a marked geographical pattern. The median vacancy rate decreases with distance from Inner London. Vacancy rates in Inner London and Outer London are highly variable when compared to the rest of the country. There are also variations within the remaining pay band areas; a small number of authorities covered by the Rest of England and Wales pay bands show higher vacancy rates than some local authorities covered within the Fringe, Outer London or Inner London pay bands. The 2009 data is consistent with this, with the exception that vacancy rates and the gap between Inner London and other pay band areas had reduced.

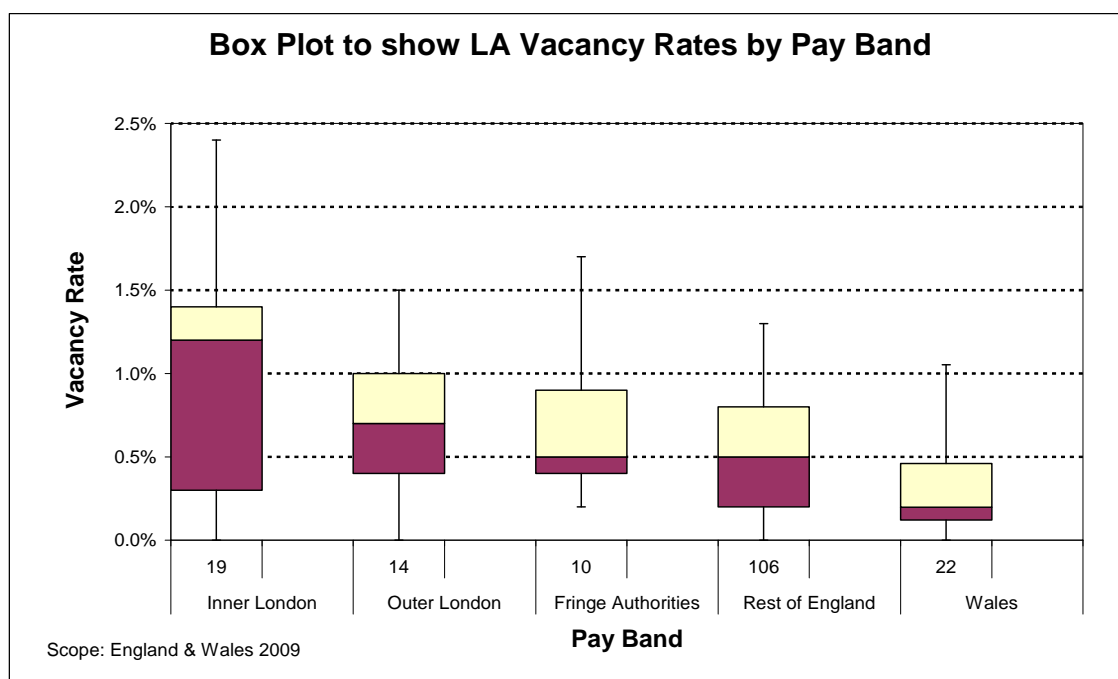
**Figure 1C<sup>20</sup>: 2005-07**



<sup>19</sup> Data are from 618G survey. Footnote 2 to paragraph D2 of annex D clarifies the reasoning for the time period used in the analysis.

<sup>20</sup> In each pay band, 90 per cent of the LAs lie within the range of the vertical bars. 50 per cent of the LAs lie within the range of the box. The median is the horizontal line within the box.

Figure 2C: 2009



## Regional variations in vacancy rates

Table 1C: Vacancies in England by government office region<sup>21</sup>

GOR	Vacancy rate (percentage of posts vacant)									
	Jan 2001	Jan 2002	Jan 2003	Jan 2004	Jan 2005	Jan 2006	Jan 2007	Jan 2008	Jan 2009	Jan 2010
North East	0.8	0.6	0.7	0.5	0.4	0.4	0.4	0.5	0.4	0.5
North West	0.5	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3
Yorkshire and the Humber	0.5	0.9	0.6	0.5	0.6	0.5	0.5	0.7	0.5	0.4
East Midlands	0.7	0.9	0.5	0.4	0.4	0.4	0.3	0.5	0.5	0.3
West Midlands	0.9	1.1	0.8	0.7	0.7	0.6	0.6	0.9	0.9	0.6
East of England	1.7	1.7	1.2	0.9	0.8	0.8	0.7	0.8	0.9	0.5
London	3.5	2.7	2.1	1.4	1.3	1.2	1.0	1.1	0.9	0.6
South East	2.0	1.4	1.2	0.8	0.7	0.7	0.6	0.8	0.6	0.4
South West	0.6	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.2
<b>England</b>	<b>1.4</b>	<b>1.2</b>	<b>0.9</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.4</b>
<b>England (excl. London)</b>	<b>1.0</b>	<b>1.0</b>	<b>0.8</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>	<b>0.4</b>

Source: 618g Survey and School Workforce Census

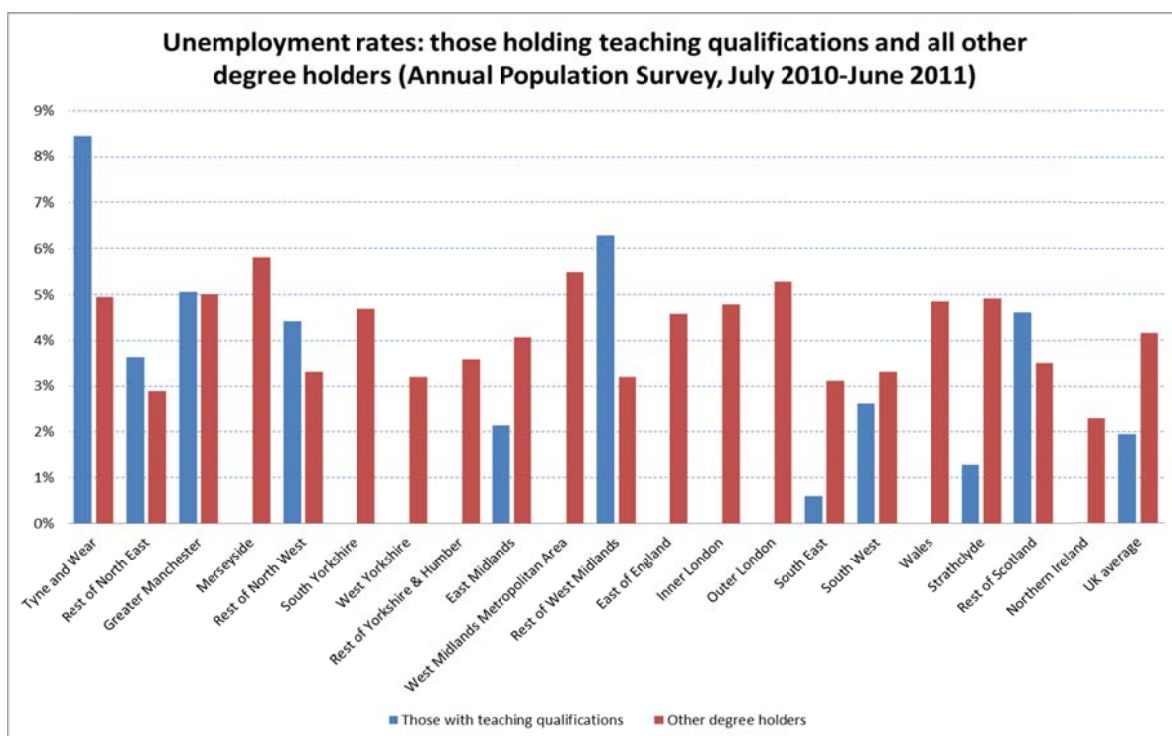
C9 The vacancy rate provides one indicator of teacher shortages. Table 1C shows vacancy rates by English region between 2001 and 2010 and highlights regional variation. Despite being in almost constant decline, vacancy rates in London have been at least 40 per cent higher than the national average across the entire time series, although this masks variations within local authorities which are set out below. In the East of England, vacancy rates have been a minimum of 15 per cent higher across the time series. With a few exceptions, vacancy rates in the South East have also been higher than the national average, as have rates for the last three years in the West Midlands.

<sup>21</sup> Based on advertised vacancies for full-time permanent appointments (or appointments of at least one term's duration). Includes vacancies being filled on a temporary basis of less than one term. Data collected through the 618g Survey and the School Workforce Census 2010.

C10 As London has had persistently higher than average vacancy rates, a notional national average excluding London has been used to examine whether any of the regions have persistently low vacancy rates, perhaps indicating an over-supply of teachers in that region. For each year between 2001 and 2010 vacancy rates in the South West have been at least 30 per cent lower than this notional average (excluding London); for the North West, rates have been at least 14 per cent lower, and for the East Midlands at least 11 per cent lower.

## Unemployment rates amongst teachers

Figure 3C: Graduate and teacher unemployment rates<sup>22</sup>



C11 Regional variations in the unemployment rate amongst teachers can be used as an indicator of regional variations in over and under supply of teachers. Figure 3C shows the unemployment rates of degree holders across regions against the rate for those with teaching qualifications. The fact that the gap between the unemployment rate for teachers and other degree holders varies markedly across regions suggests that there is an undersupply of teachers in some areas – for example, in London – and a possible over-supply in others, such as Tyne and Wear.

## The mobility of the teaching workforce

C12 The Teaching Agency Performance Profiles and Employment Dataset provide information on where ITT trainees originate from, where they train, and where they eventually find employment. Analysis of this data suggests the majority of ITT trainees choose to train and then later work in what they define as their “home region”. For those completing ITT in 2009/10, 75 per cent completed their training

<sup>22</sup> Due to small sample sizes these figures should be considered as indicative rather than definitive. Where low unemployment rates amongst teachers have been rounded they may appear to be zero.



in their home region and within a year 80 per cent of those who were employed in teaching found work in their home region.

- C13 The Higher Education Statistics Agency (HESA 2011) compared the domicile region of graduates at time of entry to Higher Education (HE) with their region of employment approximately three and a half years after leaving HE. With the exception of London, the proportion of graduates finding employment in their domicile region was lower than the 80 per cent found for teachers. The higher proportion observed for teachers might reflect that the ability to work close to home is a motivating factor for graduates choosing the teaching profession, or may reflect the fact that while the availability of teaching positions is largely driven by population density, other graduate careers may be centred in particular regions and require greater mobility.
- C14 Given that most trainees choose to train in their home region, it is important to be aware of the proportion of trainees that originate from each region. TA Performance Profiles data from 2009/10 show that the region contributing the greatest number of trainees is London (19 per cent), followed by the South East (16 per cent) and the North West (12 per cent). The most common regions for trainees to have completed ITT provision are the same (19 per cent London, 16 per cent South East, 16 per cent North West). The region contributing the least number of trainees and provision is the North East, with 4 per cent of all trainees stating this region as their home. However, this distribution aligns quite closely with the distribution of teachers across the country.

## Variations in turnover rates

- C15 Table 2C shows turnover rates by English region between 2003/04 and 2008/09. Historically, and in line with vacancy rates, the East of England, London and South East have had above average turnover rates. Of all the regions, the North East has consistently had the lowest turnover rates over the period, although differences between regions have narrowed in the most recent years of data.

**Table 2C: Teacher turnover<sup>23</sup> rates<sup>24</sup>**

Coverage: England

GOR	Turnover rate					
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09 <sup>3</sup>
North East	14.5	13.2	15.2	15.3	15.7	16.5
North West	18.2	16.6	17.2	17.0	17.1	18.2
Yorkshire and the Humber	16.5	16.9	17.2	17.3	17.4	17.4
East Midlands	18.4	17.9	18.4	17.3	17.5	19.0
West Midlands	16.7	16.2	17.0	17.4	17.6	18.2
East of England	19.5	19.1	20.1	19.5	19.7	20.7
London	21.4	19.9	19.5	18.0	18.2	19.0
South East	19.1	19.6	19.4	17.9	18.1	19.3
South West	17.9	17.9	18.2	16.6	16.8	18.5
<b>England</b>	<b>18.3</b>	<b>17.8</b>	<b>18.2</b>	<b>17.5</b>	<b>18.6</b>	<b>18.7</b>

Source: Database of Teacher Records

<sup>23</sup> Full-time turnover is defined as all teachers in full-time service in the English maintained school sector on 31 March 2008 who were not in full-time service in the same establishment on 31 March 2009. Turnover therefore includes wastage, transfer to other establishments within the maintained school sector and teachers leaving to part-time service. Not all employers record all movements between schools within their area so rates are understated.

<sup>24</sup> Source: Database of Teacher Records. 2008-09 shows provisional estimates. Academies included from 2007/08 onwards

C16 For both vacancy and turnover rates, differences between regions have narrowed in recent years. The East of England, London and South East have all shown above average vacancy and turnover rates historically. The lowest vacancy rates were seen in the South West, while turnover rates were nearer to average in the South West. The North East has the lowest turnover rates over the period and generally shows below average vacancy rates.

## Vacancies at leadership level

C17 About one in four head teachers are set to retire in the next few years with particular pressures on head teacher recruitment in the primary sector. The 17<sup>th</sup> annual report for the NAHT (NAHT 2011) examined 1,230 posts on the Leadership Scale advertised by publicly-funded schools and academies in England and Wales in 2010/11. Despite increases in the average number of applications per vacancy on the previous year, 36 per cent of primary, 19 per cent of secondary and 39 per cent of special school head teacher posts were reported unfilled after an advertisement. Equivalent figures for deputy head posts and assistant head posts also indicate some difficulty in recruiting at leadership grades.

C18 Of primary schools advertising a headship post, schools in the South East reported receiving fewest applications, with 53 per cent receiving three or fewer completed forms. In addition, 43 per cent of primary schools in the South East reported being unable to make an appointment, with comparable figures in Eastern England (41 per cent) and London (40 per cent). For secondary headship posts, however, a high number of applications were received in schools in all regions.

## Variation in vacancy rates within local authorities

C19 Analysis of the School Workforce Census for English local authorities was completed in an attempt to assess whether variation in vacancy rates exists within local authorities.

C20 Table 3C summarises the results. This analysis confirms that:

- 3 per cent of local authorities showed extreme polarity in vacancy rates for their schools. The majority of schools show very low vacancy rates, but the remainder demonstrate high vacancy rates.<sup>25</sup>
- 64 per cent of local authorities have a more even distribution of vacancy rates across the schools within their boundaries ranging from schools with very low rates to a minority with very high rates.
- 34 per cent of local authorities appear to have no or very few schools with high vacancy rates.

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<sup>25</sup> Where the total number of both vacant teacher positions and temporarily filled teacher positions as a percentage of the number of full time qualified teachers in each school is greater than 15per cent

**Table 3C: Variation in vacancy rates within local authorities in England**

Group	Number of LAs	% of total LAs	Range % of high vacancy schools	Range % of no vacancy schools	Examples
1	4	2.6%	4% - 8%	90% - 95%	Salford, Walsall
2	35	23.0%	1% - 5%	85%- 95%	Southwark, Lewisham, Ealing
3	62	40.8%	1% - 4%	80%– 95%	West Berkshire UA, Haringey
4	51	33.6%	0% - 1%	90% - 100%	Bury, Middlesbrough UA
<b>Total</b>	152	100.0%			

Source: School Workforce Census, November 2010

- C21 The local authority that appears to have the greatest variety in vacancies is Salford, which, despite having no vacancies in over 90 per cent of its schools, has several schools with a large number of vacancies. While Salford is the most extreme example of spread of vacancies, Southwark presents a large spread across more schools and in a manner that is more typical and more common. It has 92 schools, of which 9 (10 per cent) have between 1 per cent and 15 per cent vacancies and 4 (4 per cent) have more than 15 per cent vacancies. This pattern of having around 2 to 4 times as many schools in the 1 per cent to 15 per cent division as the above 15 per cent division is seen often in local authorities with higher spread. While Southwark is the case of this with the most vacancies, there are around a dozen that fit this description in the top 20.
- C22 This confirms that there is significant variation in vacancy levels within local authorities which may be indicative of the challenges that exist at an individual school level.

## Vacancy rates across subjects

- C23 Table 4C uses data from the School Workforce Census in 2010 to illustrate national vacancy rates by subject. In line with historical trends, above average vacancy rates are seen for maths, IT and English. Although the vacancy rate for all sciences is in line with the national average, this masks a shortage of qualified chemistry and physics teachers, and an oversupply of biology teachers. By region, the highest numbers of vacancies in the core subjects are in London, West Midlands, South East and East of England.

**Table 4C: Full time classroom teacher vacancies in secondary schools in England by subject<sup>26</sup>**

	VACANCIES AS A PERCENTAGE OF TEACHERS IN POST	NUMBER OF VACANCIES
<b>ALL VACANCIES</b>	0.4	630
<b>MAIN TEACHING SUBJECT</b>		
Mathematics	0.7	120
Information technology	0.5	40
All sciences	0.4	80
Languages	0.3	30
English	0.5	110
Drama	0.3	10
History	0.2	10
Social sciences	0.6	20
Geography	0.2	10
Religious education	0.3	10
Design and technology	0.4	40
Commercial/business studies	0.5	20
Art/craft/design	0.2	10
Music	0.2	10
Physical education/sport/dance	0.2	30
Careers	-	-
Other main and combined subjects	0.5	50
Unknown subjects	.	30

*Source: School Workforce Census – November 2010*

C24 While a post in a particular subject may not be vacant, it might not be filled by a specialist<sup>27</sup> teacher. This is despite evidence from Goldhaber & Brewer (Goldhaber & Brewer 1997; 2000) that found pupil achievement gains in maths were positively associated with teachers who earned their Master's in the subject. Their research appears to confirm that it is subject knowledge rather than general qualification level which is important. Internal analysis considered the number of specialist teachers for each of the English Baccalaureate subjects, the proportion of hours taught in these subjects by non-specialists, and finally the number of additional specialist teachers that would need to be recruited to teach the non-specialist hours as shown in table 5C.

<sup>26</sup> Definition of vacancies as above. Data collected through the School Workforce Census 2010.

<sup>27</sup> A 'specialist' teacher holds a relevant post A-level qualification in the subject taught.

**Table 5C: Specialist teacher in EBacc subjects**

<b>EBacc Subject</b>	<i>Number of 'specialist' teachers in subject</i>	<i>% of hours taught by 'non-specialist'</i>	<i>Number of additional 'specialist' teachers needed to teach the 'non-specialist' hours</i>
Maths	24,430	16.4%	4,790
English	29,140	11.6%	3,824
Physics	3,860	21.1%	1,032
Chemistry	4,880	20.2%	1,235
Biology	7,460	8.8%	720
Combined/General Science	29,330	10.0%	3,259
History	11,340	10.4%	1,316
Geography	9,720	11.2%	1,226
French	11,270	17.4%	2,374
German	3,900	22.0%	1,100
Spanish	3,390	34.3%	1,770
Other MFL	1,090	64.3%	1,963

*Source: School Workforce Census, November 2010*

- C25 Table 5C demonstrates a similar pattern of vacancies in science specialists to table 4C. Although the vacancy rate for all sciences is in line with the national average, one-fifth of the hours taught in chemistry and physics are by a non-specialist teacher. Table 5C also shows high proportions of non-specialist hours for modern foreign languages, although this does not account for the native tongue of the teacher<sup>28</sup>.
- C26 Analysis of timetable data from the 2010 School Workforce Census shows that 65 per cent of maths teachers taught only maths and a further 24 per cent taught one other subject, in addition to maths. The most common combinations of subjects taught by maths teachers were 'other' – information and communications technology (ICT), general/combined science, PE, English and citizenship. The analysis suggests that ensuring maths teachers exclusively teach maths might go some way towards addressing the shortage of specialist teachers in that subject.
- C27 Although the total number of full-time vacancies in specialist subjects at secondary schools is fairly small, at 630, this may reflect the employment of teachers from outside the European Economic Area (EEA) to help fill vacancies and the fact that some vacancies are filled by non-qualified teachers. If a school is unable to appoint a suitable qualified teacher, besides engaging non-EEA teachers, the shortage may be addressed by appointing a teacher without Qualified Teacher Status (QTS) - an unqualified teacher<sup>29</sup>- from the resident population or using supply teachers to fill the post temporarily. The proportion of non-QTS teachers in London has been consistently higher than for England as a whole. Figures from the 2010 School Workforce Census show that 6.0 per cent of London teachers are unqualified compared to 3.7 per cent of teachers in England overall (this figure includes teachers in all publicly-funded settings, whereas previous years only covered the maintained sector). The variation in these proportions across England can be seen in table 6C.

<sup>28</sup> For the Languages, there is no accounting for the native tongue of the teacher (e.g. a French national without a post-A level qualification in 'French' would not be counted as a specialist).

<sup>29</sup> Unqualified teachers must have appropriate skills and experience to fill the post temporarily until a suitable qualified teacher can be appointed. There is also statutory provision for unqualified teachers to teach and undertake an employment based training programme which allows them to study for QTS whilst they are employed.

**Table 6C: Non-QTS teachers by region**

<b>Region</b>	<i>% FTE teachers without QTS</i>
North East	2.1%
South West	2.3%
North West	2.6%
Yorkshire & The Humber	3.5%
East Midlands	3.8%
West Midlands	4.2%
East of England	4.9%
Inner London	6.5%
Outer London	5.6%
South East	3.8%

*Source: School Workforce Census, November 2010*

C28 Table 6C suggests that recruiting qualified teachers in London is more difficult than in the rest of the country, which in turn suggests that London schools are turning to overseas trained teachers (OTTs), instructors and trainee teachers to fill the gap.

## Annex D: Vacancies, the cost of living, and comparisons with the private sector

D1 This annex discusses the relationship between rates of vacancies in classroom teacher posts and the cost of living. Using average house prices at a local authority level it shows that vacancies tend to be higher in local authorities where the cost of living is higher. A similar analysis is undertaken using the ratio of classroom teacher pay to private sector pay to show that there is also a relationship between this ratio and rates of vacancies.

### Vacancies versus house prices and public-private sector pay ratios

D2 Figures 1D-6D compare vacancies in local authorities to the ratio of teacher pay to professional pay, to house prices and to the ratio of teacher pay to house prices. In each defined range on the horizontal axis, 90 per cent of the LAs lie within the range of the vertical bars. 50 per cent of the LAs lie within the range of the box. The median is the horizontal line within the box. The figures show that there is a relationship between vacancies for classroom teachers and both the local cost of living (as approximated by local housing costs) and the ratio of teachers' pay against that for private sector professionals<sup>30</sup>. This suggests that it is harder to recruit and retain teachers in areas where the pay is lower relative to that of private sector professionals and where costs of living are higher.

D3 Figure 2D shows the relationship between vacancy rates and the classroom teacher to private sector professional pay ratio averaged over the years 2005-07<sup>31</sup>. The correlation analysis in table 2D shows that this is significant. Figure 2D shows that in half of the local authorities with a ratio of classroom teacher pay to professional teacher pay less than one (i.e. where classroom teachers are paid, on average, less than their private sector equivalent) the vacancy rates are higher than in the majority of local authorities with a ratio of more than 1. Figure 1D shows a similar plot for the 2009 data which has a smaller sample size. Although this plot shows that the median vacancy rate for those local authorities with a ratio below 1 is higher than that for those above 1, we are unable to find evidence of a significant relationship in this data due to the suppression of small sample sizes.

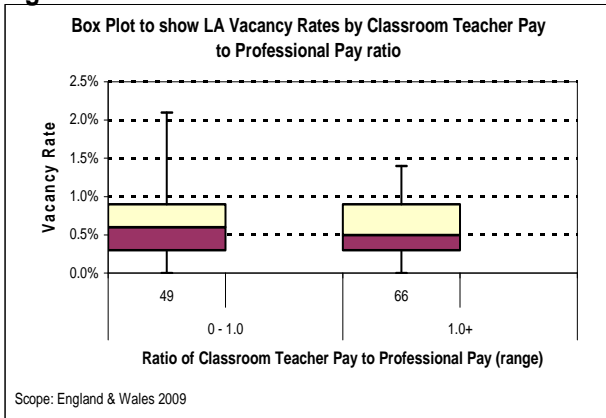
D4 Figure 3D shows the relationship between vacancy rates and median housing prices for the 2009 data. The plot shows an association between higher vacancy rates and higher house prices. The correlation analysis in table 1D shows that this relationship is significant. This is supported by the 2005-07 data shown in Figure 4D and again the correlation analysis in table 2D shows that the relationship is significant. However, it should be noted that teachers may live outside the local authority in which they work.

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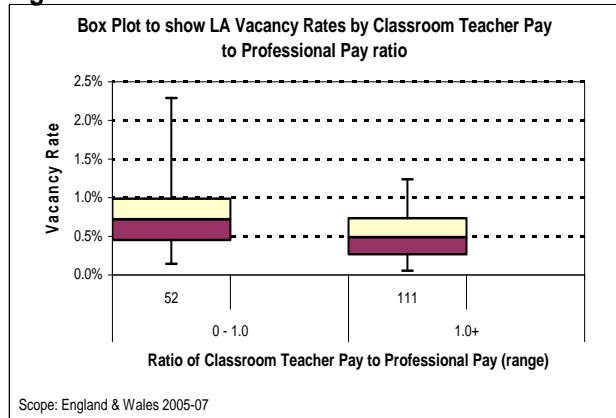
<sup>30</sup> Information on the data sources used is included at the end of this annex.

<sup>31</sup> The latest vacancy rate data available covers the period 2010-11 and suggest vacancy rates that are particularly low compared with earlier years. This may be explained in part by the favourable economic conditions for teachers during 2010-11. As we are investigating relationships between vacancies and relative pay measures in local authorities, we reasoned that because of the low rates we would have difficulty discerning relationships using the latest vacancy data. Instead we are using data for 2005-07 and 2009 for this analysis as in this period there was greater variation in the vacancy data.

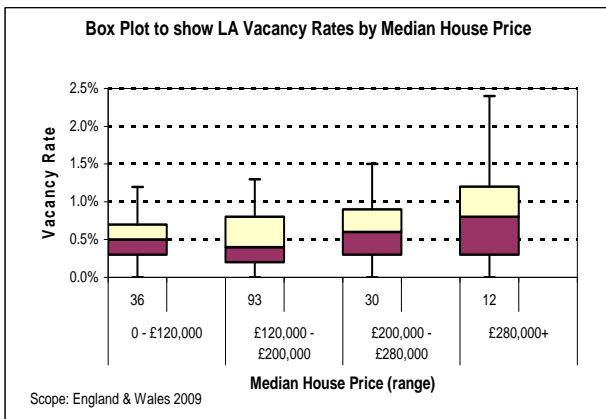
**Figure 1D**



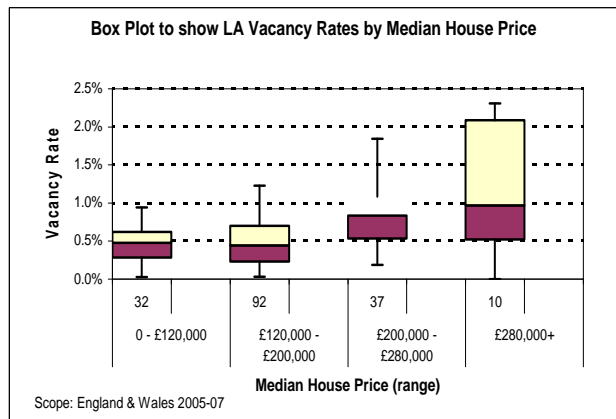
**Figure 2D**



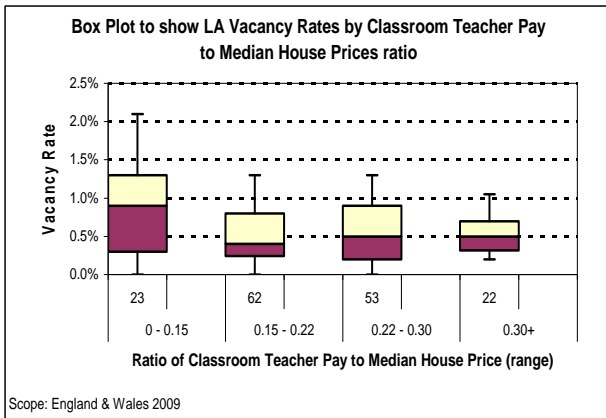
**Figure 3D**



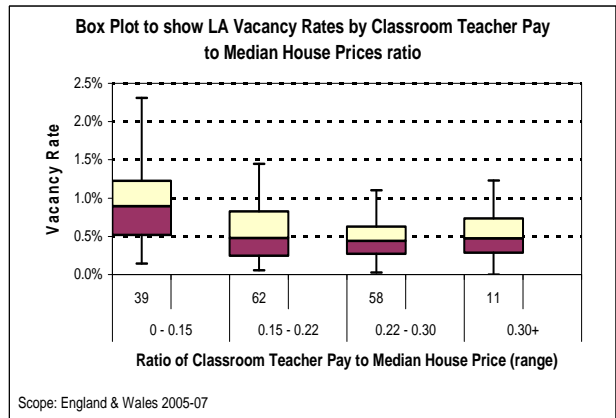
**Figure 4D**



**Figure 5D**



**Figure 6D**



D5 Figure 6D shows the relationship between vacancy rates and the ratio of classroom teachers' pay to median house prices for 2005-07. It shows that in at least half of the local authorities where the ratio of classroom teacher pay to median house price is higher than 0.15 (the three right-most boxes), the vacancy rate is lower than most of the local authorities with a ratio lower than 0.15 (the left-most box). Figure 5D shows a similar plot for the 2009 data and, again, there is evidence of an association between the two variables. The relationships in the two time periods are shown to be significant in the correlations analysis in table 1D (2009) and table 2D (2005-07).

D6 Table 1D shows correlation analysis for the 2009 data. Correlations can range from -1 to +1 and correlations close to these values indicate a strong correlation. Positive and negative correlations imply a positive or inverse relationship. The



significances are given by p-values for two-tailed tests in the shaded cells. This is the probability of the pattern having arisen by chance. P-values lower than 0.05 (testing at 5 per cent) are generally regarded as significant, although testing may take place at 10 per cent. For example, the correlation between the vacancy rate and relative classroom teacher to house price ratio is -0.192; this displays a negative relationship meaning higher vacancy rates are associated with lower ratios. The p-value is 0.015. As this is below 0.05, this relationship is significant when testing at 5 per cent.

**Table 1D: Correlations Matrix<sup>32</sup> (2009 data)**

VARIABLE		Vacancy Rate	Median House Price	Relative Classroom Teacher to Professional Pay Ratio	Classroom Teacher Salary to House Price Ratio
Vacancy Rate	Pearson Correlation	1	0.321	-0.158	-0.192
	Significance		0.000	0.092	0.015
	Number of Observations	172	171	115	160
Median House Price	Pearson Correlation	0.321	1	-0.348	-0.837
	Significance	0.000		0.000	0.000
	Number of Observations	171	171	115	160
Relative CT Teacher to Professional Pay Ratio	Pearson Correlation	-0.158	-0.348	1	0.461
	Significance	0.092	0.000		0.000
	Number of Observations	115	115	115	115
CT Teacher Salary to House Price Ratio	Pearson Correlation	-0.192	-0.837	0.461	1
	Significance	0.015	0.000	0.000	
	Number of Observations	160	160	115	160

Scope: England and Wales 2009

**Table 2D: Correlations Matrix (2005-07 data)**

VARIABLE		Vacancy Rate	Median House Price	Relative Classroom Teacher to Professional Pay Ratio	Classroom Teacher Salary to House Price Ratio
Vacancy Rate	Pearson Correlation	1	0.445	-0.225	-0.377
	Significance		0.000	0.004	0.000
	Number of Observations	172	171	163	170
Median House Price	Pearson Correlation	0.445	1	-0.408	-0.859
	Significance	0.000		0.000	0.000
	Number of Observations	171	171	163	170
Relative CT Teacher to Professional Pay Ratio	Pearson Correlation	-0.225	-0.408	1	0.450
	Significance	0.004	0.000		0.000
	Number of Observations	163	163	163	163
CT Teacher Salary to House Price Ratio	Pearson Correlation	-0.377	-0.859	0.450	1
	Significance	0.000	0.000	0.000	
	Number of Observations	170	170	163	170

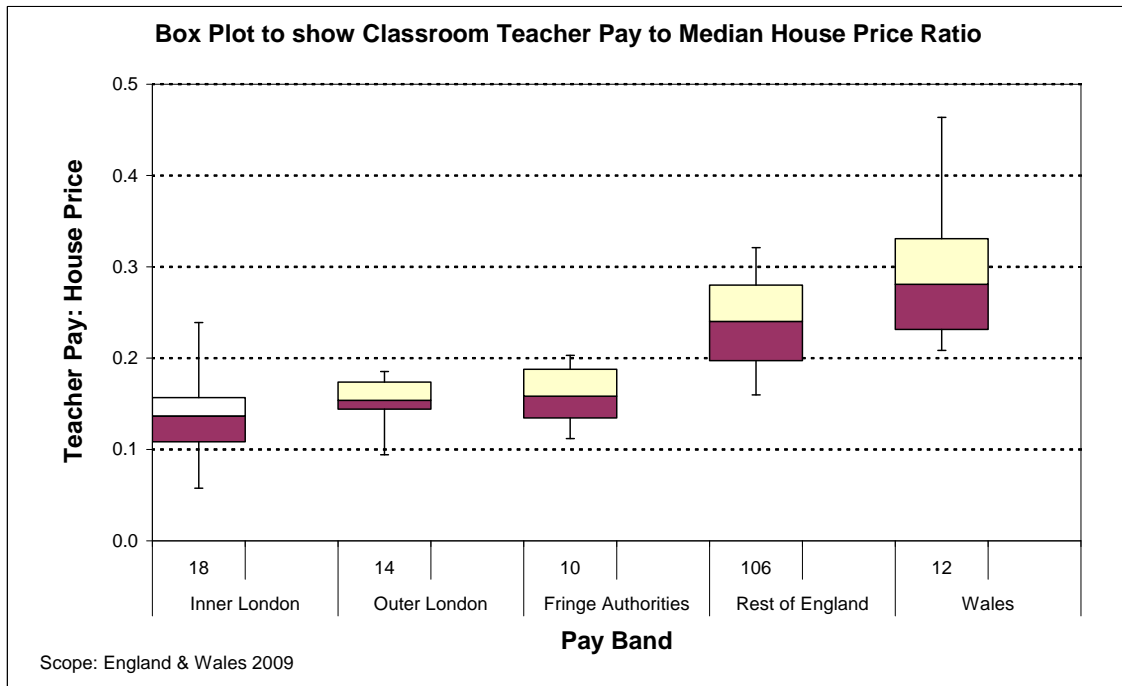
Scope: England and Wales 2005-07

D7 Figure 8D compares the ratio of classroom teacher pay with median house prices for 2005-07. It suggests the median value for Inner London, Outer London and the Fringe are similar. The salaries of teachers working in the Rest of England and

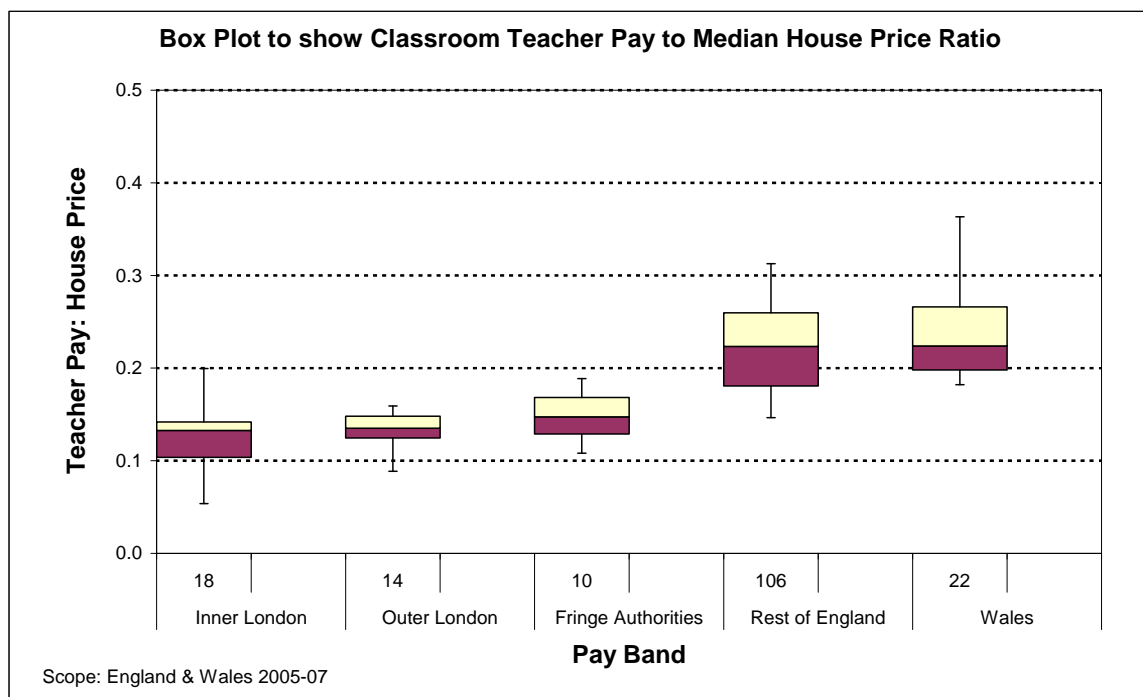
<sup>32</sup> There are differing numbers of observations for the different variables used in the correlations analysis because data at local authority level is suppressed if for any local authority and/or age cohort there are fewer than 100 teachers, or 30 sampled private sector professionals.

Wales remain relatively high in respect to this measure of local economic conditions. In this latter pay band 90 per cent of the authorities covered have ratios that are higher than the majority of those in the London and Fringe pay bands. Figure 7D shows a similar pattern for 2009, with slightly higher teacher pay to house price ratios as house prices generally fell between 2005-07 and 2009.

**Figure 7D: Box plot to show classroom teacher pay to median house price ratio, England and Wales 2009**



**Figure 8D: Box plot to show classroom teacher pay to median house price ratio, England and Wales 2005-07**



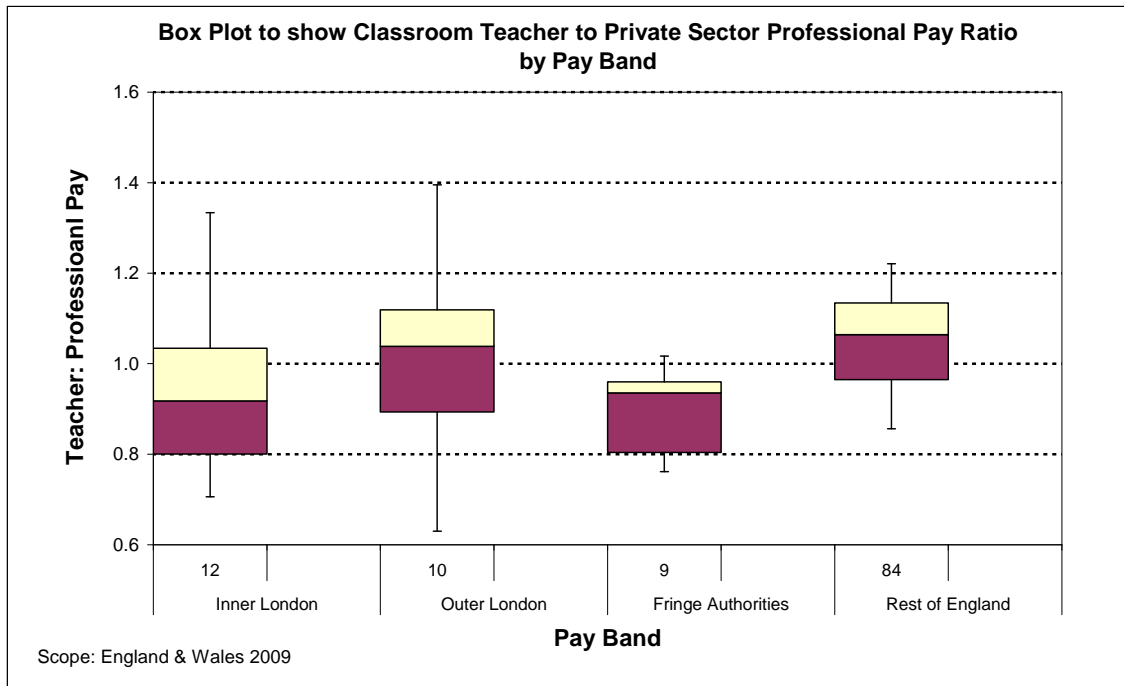
## Classroom teacher pay against private sector pay

- D8 Figure 10D shows the relative pay of classroom teachers compared to private sector professionals for the period of 2005-07 for existing pay bands. This illustrates that the relative pay ratio is not equal across all pay band areas. While this analysis cannot provide a definitive indication of the extent to which teachers' pay is relatively more or less generous when compared to private sector professions, it suggests that:
- Teachers working in over half of local authorities in Inner London, Outer London and the Fringe may be earning relatively lower salaries than private sector professionals working in those areas.
  - Teachers working in the Rest of England and Wales teachers are earning relatively higher salaries than private sector professionals working in those areas.
- D9 It should be noted that such benchmark setting is highly speculative and is highly sensitive to the choice of comparator professions and the use of average pay to make the comparison. It may mask wide variations in local conditions and between local authority areas covered by the existing pay bands.
- D10 Figure 9D displays the same information for 2009 but uses a smaller number of local authorities than for 2005-07<sup>33</sup> due to suppressing data for local authorities with small sample sizes. It is difficult to compare figures 9D and 10D but it suggests that the median ratio for teacher pay relative to private sector professions may have reduced between 2005-2007 and 2009 for some pay band areas.
- D11 A two-year pay freeze for teachers in the maintained sector in England and Wales started on 1 September 2011. Incremental progression for teachers continues during the pay freeze. This analysis pre-dates the pay freeze during which we would expect to see further decline in the ratios. Further analysis will be required to understand the impact of the recession on private sector pay and potential for recovery relative to the impact of the pay freeze on teachers' pay. This analysis will be required to make concrete conclusions on the extent of the gap between teachers pay relative to the private sector.

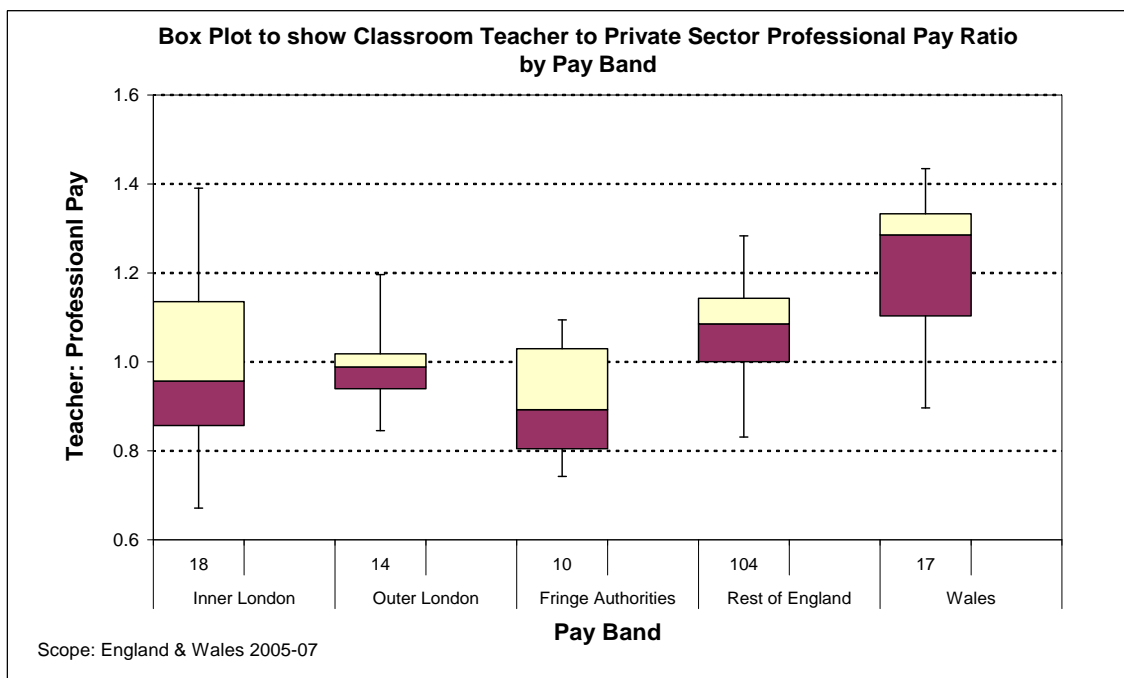
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<sup>33</sup> Wales is not shown on the 2009 box plot due to small sample sizes of private sector professionals in the Welsh local authorities. In this analysis data at local authority level is suppressed if for any local authority and/or age cohort there are fewer than 100 teachers, or 30 sampled private sector professionals.

**Figure 9D: Box plot to show classroom teacher to private sector professional pay ratio by pay band, England and Wales 2009**



**Figure 10D: Box plot to show classroom teacher to private sector professional pay ratio by pay band, England and Wales 2005-07**

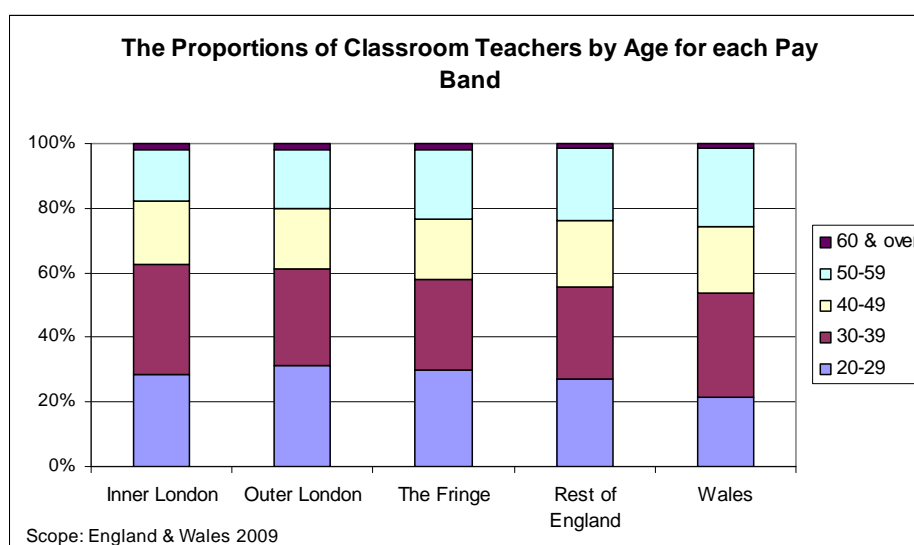


**Variation in relative pay by classroom teacher age**

D12 Figures 11D to 14D present comparisons of classroom teachers and professionals by age for each pay band. The charts for classroom teacher and professionals are broadly consistent in most areas apart from Inner London.

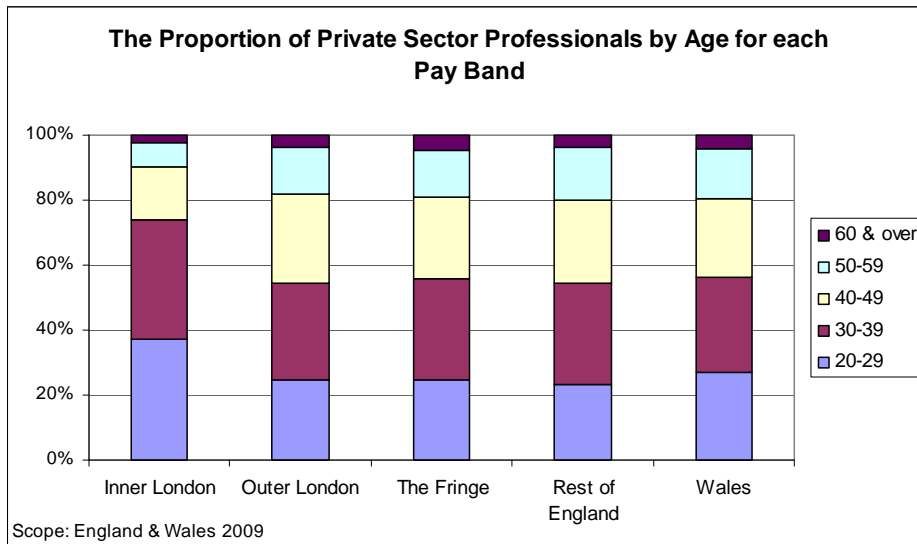
D13 We have undertaken further analysis of teacher to professional pay ratios by age bands 20-29, 30-39 and 40-49. For ages 50-59, and 60 and over, there was insufficient data. The results (figures 15D–17D<sup>34</sup>) suggest that there is little variation in the results for age groupings 30-39 and 40-49. For the under 30 age group, teachers' pay was equivalent to, or compared well to, that of private sector professionals in Inner London. For the other age groupings, analysis suggests that the pay of teachers compared less favourably to that of private sector professions. Given the higher proportion of private sector professionals in the under 30 age group relative to those in teaching, and relatively small sample sizes, it is difficult to conclude that there are greater or smaller disparities in pay between teachers and private sector professionals in the under 30's age group compared to other age groups. Further analysis would be necessary to investigate this issue fully.

**Figure 11D: The proportion of classroom teachers by age for each pay band, England and Wales 2009**

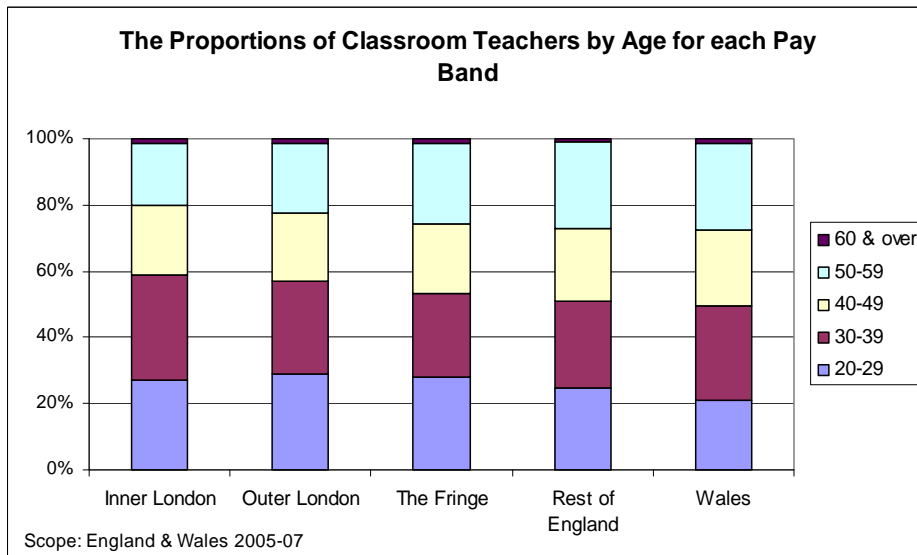


**Figure 12D: The proportion of private sector professional by age for each pay band, England and Wales 2009**

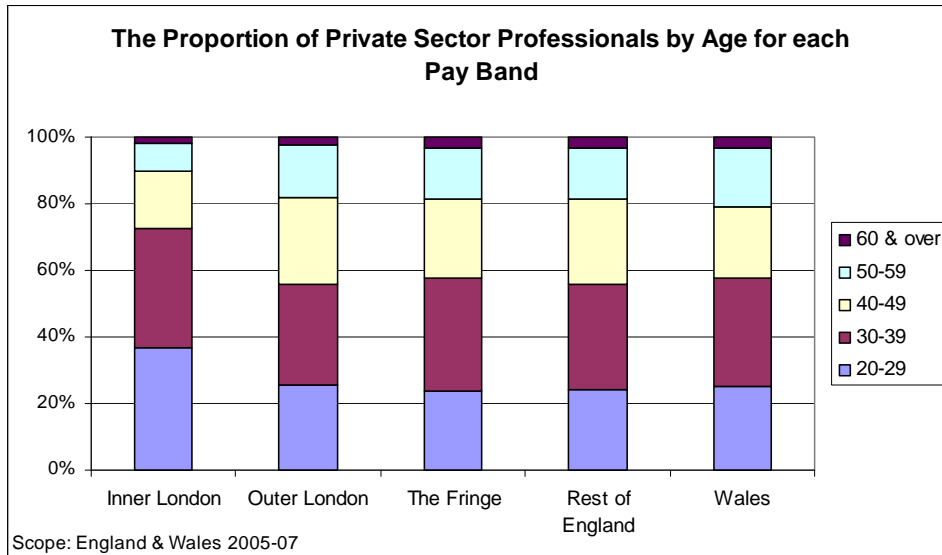
<sup>34</sup> Wales is not shown on these box plots due to small sample sizes of private sector professionals in the Welsh local authorities when the data is split by age band. In this analysis data at local authority level is suppressed if for any local authority and/or age cohort there are fewer than 100 teachers, or 30 sampled private sector professionals.



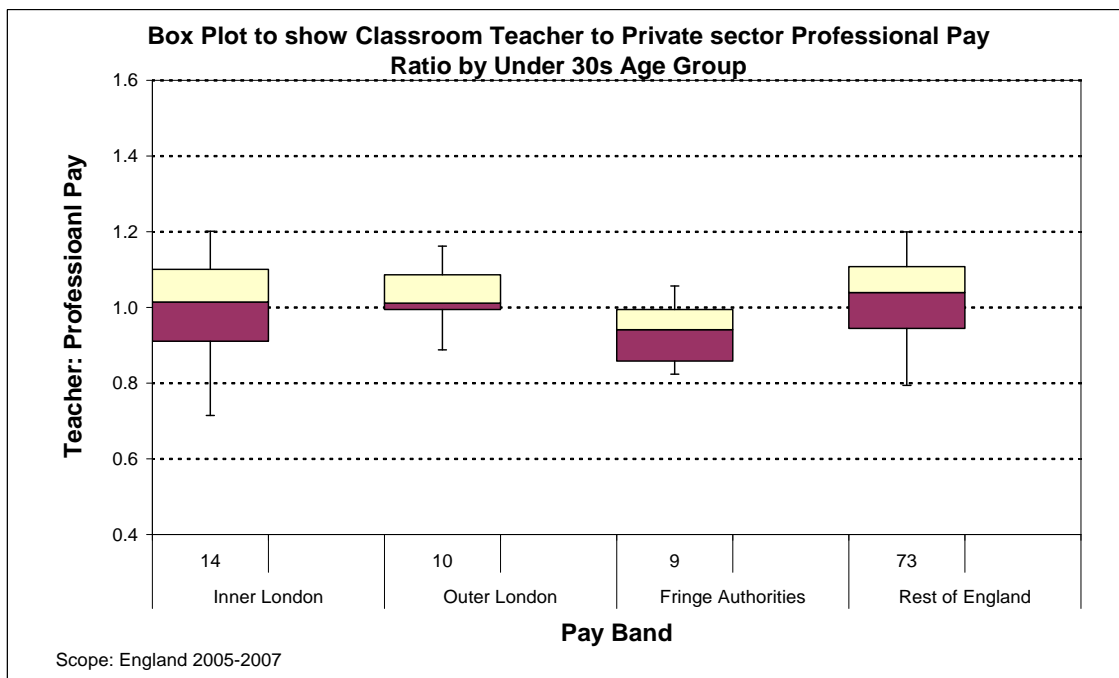
**Figure 13D: The proportion of classroom teachers by age for each pay band, England and Wales 2005-07**



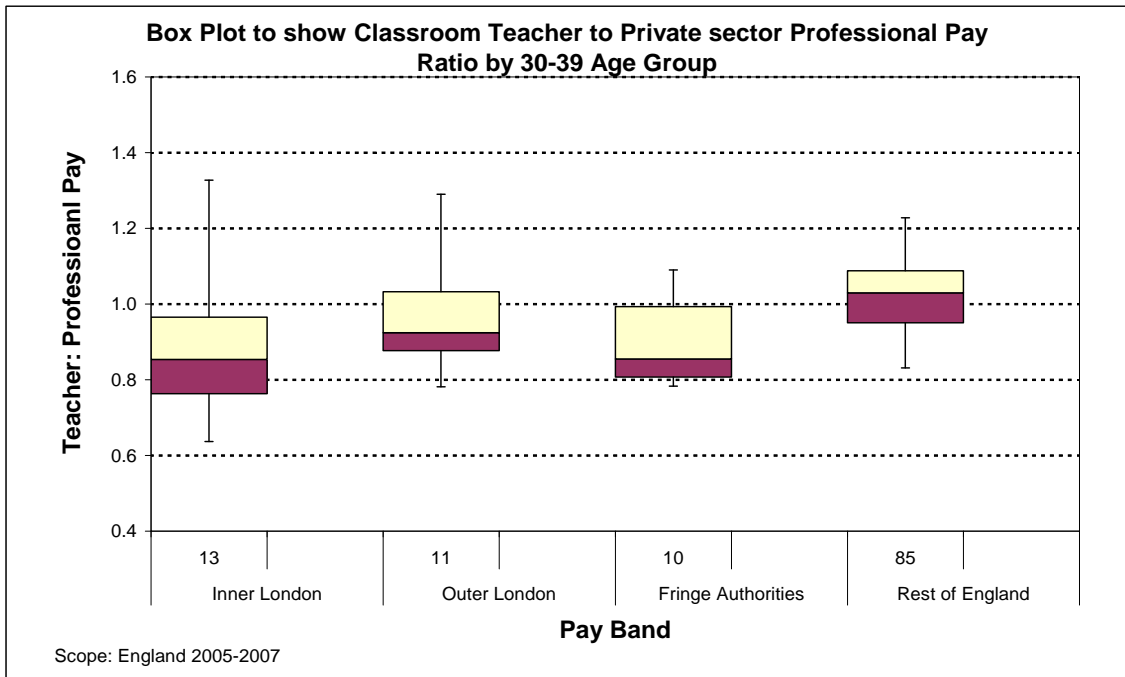
**Figure 14D: The proportion of private sector professionals by age for each pay band, England and Wales 2005-07**



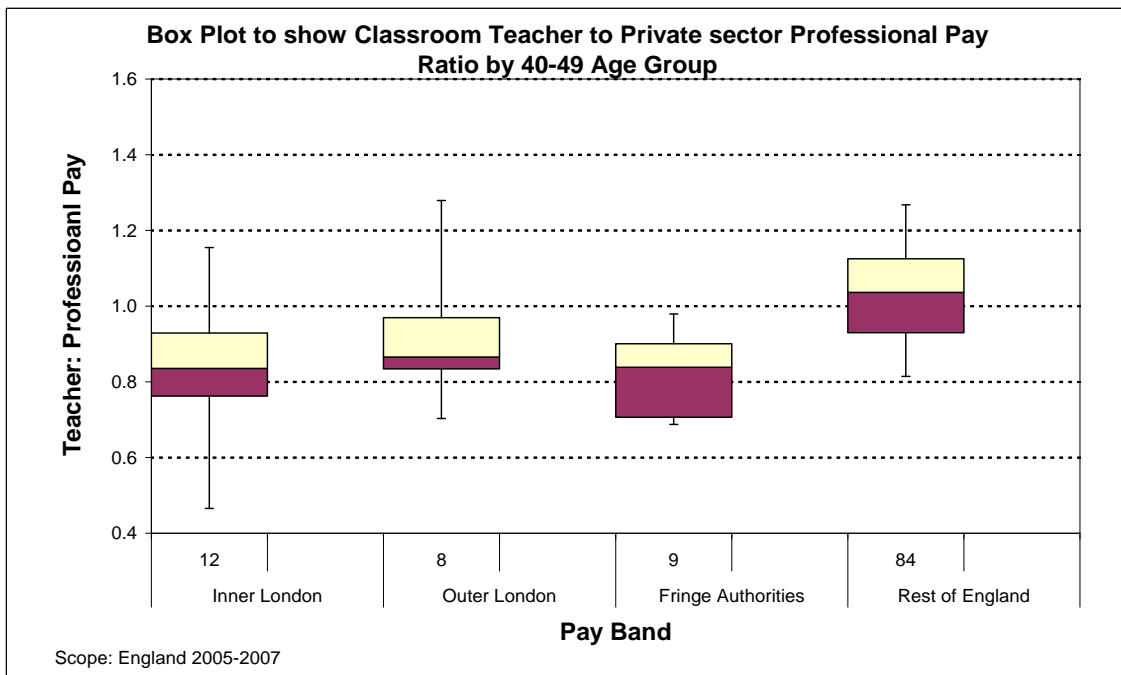
**Figure 15D: Box plot to show classroom teacher to private sector professional pay ratio for the under 30 age group, England 2005-07**



**Figure 16D: Box plot to show classroom teacher to private sector professional pay ratio for the 30 to 39 year old age group, England 2005-07**



**Figure 17D: Box plot to show classroom teacher to private sector professional pay ratio for the 40 to 49 year old age group, England 2005-07**



## Variation relative to cost of living and to the private sector across regions

D14 This section investigates how vacancy rates and teacher pay varies relative to the cost of living (as represented by house prices) and to private sector professional pay at a regional level. Tables 3D and 4D display values by region for the variables used in this investigation.



D15 The results are unsurprising, showing house prices and private sector professional salaries are highest in London, followed by the South East. Average classroom teacher salaries are also highest in London, where the current area pay band system sets pay, on average, at £4000-£5000 higher than the Rest of England and Wales pay band. Average classroom teacher salaries in Wales are second highest, despite having both lower house prices and professionals' pay than several other regions, although this could be explained by the higher proportion of experienced teachers.

**Table 3D Variables by Region (2005-2007 data)**

Region	Mean Classroom Teacher Pay (£)	Mean Private Sector Professional Pay (£)	Median House Price (£)	CT Teacher to Professional Pay Ratio	Confidence interval of CT to Prof Pay Ratio	CT Teacher Salary to House Price Ratio
North East	31,100	27,600	116,300	1.13	+/- 0.02	0.27
North West	31,100	29,400	126,600	1.06	+/- 0.02	0.25
Yorkshire and the Humber	30,900	28,700	128,000	1.08	+/- 0.02	0.24
East Midlands	30,800	28,900	138,000	1.06	+/- 0.02	0.22
West Midlands	30,900	29,700	141,100	1.04	+/- 0.03	0.22
East of England	30,900	32,500	179,300	0.95	+/- 0.01	0.17
London	34,400	42,200	246,700	0.82	+/- 0.01	0.14
South East	30,700	34,100	205,200	0.90	+/- 0.01	0.15
South West	30,700	29,400	179,900	1.05	+/- 0.01	0.17
Wales	31,500	27,000	132,500	1.17	+/- 0.02	0.24

**Scope:** England and Wales 2005-07

**Table 4D Variables by Region (2009 data)**

Region	Mean Classroom Teacher Pay (£)	Mean Private Sector Professional Pay (£)	Median House Price (£)	CT Teacher to Professional Pay Ratio	Confidence interval of CT to Prof Pay Ratio	CT Teacher Salary to House Price Ratio
North East	33,500	29,300	120,000	1.14	+/- 0.05	0.28
North West	33,300	31,400	130,000	1.06	+/- 0.03	0.26
Yorkshire and the Humber	32,900	30,700	130,000	1.07	+/- 0.03	0.25
East Midlands	33,000	32,400	135,000	1.02	+/- 0.03	0.24
West Midlands	33,200	31,700	142,000	1.05	+/- 0.04	0.23
East of England	33,200	34,700	175,000	0.96	+/- 0.03	0.19
London	37,300	46,200	250,000	0.81	+/- 0.02	0.15
South East	32,800	36,900	203,000	0.89	+/- 0.02	0.16
South West	33,100	31,800	175,000	1.04	+/- 0.03	0.19
Wales	34,300	29,800	133,000	1.15	+/- 0.05	0.26

**Scope:** England and Wales 2009

D16 The ratio of classroom teacher to private sector professional pay data detailed in Table 3D is broadly in line with the public sector pay premia data highlighted in HMT evidence to public sector pay review bodies. The same general pattern of London and the South East having the lowest ratios and the North East and Wales having the highest is shown when we compare full time equivalent teachers' pay to the pay of graduate professions rather than male teachers' pay to average male earnings. However this DfE data shows the pay of teachers in the East Midlands to be much closer to the pay of other private sector graduates than in other comparisons.

- D17 The above tables show an average value for this ratio, as well as a confidence interval<sup>35</sup> for the ratio, reflecting that the data is drawn from a sample and there is uncertainty around the estimates derived. Table 3D shows an estimated ratio for the North East is between 1.11 and 1.15, whereas that for London is between 0.81 and 0.83. As there is no overlap between these two ranges, we can conclude that the ratio for London is statistically significantly different to that of the North East. The ratio for the West Midlands lies between 1.01 and 1.07 whereas for the East Midlands it is between 1.04 and 1.08. In this case there is an overlap, so we can conclude that there is no significant difference between them.
- D18 The cost of living as indicated by median house prices in tables 3D and 4D generally shows London, the South East and the East as having higher price levels, whereas northern regions have the lowest. House pricing data has been used as it is the only pricing data available at local authority level.

## Variation across local authorities

- D19 Further analysis was completed at a local authority level to try and ascertain the extent to which variation existed between local authorities within the existing pay bands. Table 5D summarises the following details for all available local authorities:
- The ratio of classroom teacher pay to the pay of private sector professionals working in the local authorities (local authority based ratio).
  - A confidence interval for that ratio.
  - The ratio of classroom teacher pay to the pay of private sector professionals working in the region (regional based ratio).
  - The ratio of classroom teacher pay to average house prices in the local authority appropriate.
  - The ratio of classroom teacher pay to average house prices in the region.
  - Vacancy rates.
- D20 Two different measures of relative pay between teachers and private sector professional comparator groups were considered. One makes a comparison at a local authority level where sample sizes allow this. The confidence interval is provided to reflect the uncertainty around this estimate, which arises from the fact it is based on a small sample size. The second indicator compares the pay of teachers with an average of private sector graduate professions for the region in which the local authority belongs. This method attempts to account for any potential uneven distribution of other graduate professions that may exist at local authority level and to reflect the fact that individuals may be willing to travel across local authority boundaries to work. However, it is important to note that neither of these approaches can account for the fact that individuals are likely to travel to work across regional boundaries.
- D21 Local authorities with values in the top 25 per cent (upper quartile) of the distributions obtained are highlighted in green and those in the bottom 25 per cent (lower quartile) are highlighted in red in table 5D.

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<sup>35</sup> The 95 per cent confidence interval of the ratio is the range in which if you took 20 samples from the population, you would expect 19 of the samples to give a ratio within that range. For example, for North Yorkshire, when taking a sample of professionals we are confident that the classroom teacher to professional pay ratio will be between 1.05 and 1.15 for 19 out of every 20 samples taken.

- D22 This analysis confirms that the conclusions reached earlier that teachers working in local authorities closer to London earn relatively lower salaries with respect to cost of living, as represented by house prices, compared to those in the Rest of England and Wales pay bands where teachers broadly tend to earn relatively higher salaries with respect to the cost of living. There are, however, some exceptions within the Rest of England where some local authorities in the South East and South West demonstrate high cost of living ratios.
- D23 In addition, it provides an indication of those authorities in which teachers pay appears higher or lower relative to private sector professions in those areas. The pay ratio at a regional level in table 5D indicates that all London local authorities are within the upper quartile for the regional relative pay ratio. This suggests that their pay does not compare favourably with private sector professionals working in London. The analysis does, however, suggest that there is variation in the extent to which this applies within London, with some local authorities within Inner London, such as Lambeth and Tower Hamlets, showing lower ratios than others. This suggests that within the pay band some disparities also exist.
- D24 The table also highlights other authorities outside of the London and Fringe pay band where teachers' pay seems low relative to private sector professions. Other potential "hotspots" to consider would be those that have both regional and local authority level ratios that suggest teacher pay is less than other professions, for example parts of the South East region, such as Southampton, Portsmouth, Milton Keynes, Reading and Hampshire
- D25 The analysis also highlights local authorities with a higher ratio of teachers' pay relative to the regional average for private sector professions. These are authorities where pay levels for teachers appear generous relative to private sector professions.
- D26 It should be noted that this analysis is illustrative only and can not control for all factors that may drive differences in local market conditions and affect the comparison of teacher pay with that of private sector professionals. For the reasons described earlier, the analysis makes no judgement on the efficiency of the salaries paid, just that a disparity exists. Further work to understand changes in private sector pay resulting from the recession would need to be considered before such a judgement could be made.

## Data sources

- D27 Data on the pay of teachers is available from the Database of Teacher Records (DTR) and the 2010 School Workforce Census. There are two alternative datasets for data on the pay of comparator groups: a) Labour Force Survey (LFS) and b) Annual Survey of Hours and Earnings (ASHE). Each dataset has its own advantages and limitations<sup>36</sup>. ASHE was chosen as the most appropriate source of data for comparison with classroom teachers pay.
- D28 Comparisons were restricted to the following private sector professional occupations from ASHE:
- a) Group 2: Professional occupations; and
  - b) Group 3: Associate professional and technical occupations.

<sup>36</sup> The ASHE data is an annual 1 per cent sample survey of the population, whereas the LFS is a quarterly survey. The ASHE data is considered a more reliable source but doesn't include variables such as qualifications, which are included in the LFS. However, the LFS isn't a large enough dataset to break down to local authority level and can only provide robust results at regional or sub regional level. As analysis is required at the finest geographical detail possible, we are constrained to using ASHE data.

D29 Analysis of the Higher Education Institutes' data on the destination of graduates provides information on the employment of full time, first degree graduates by standard occupational group six months after graduating for the 2006/7 to 2009/10 cohorts. After three and a half years, 37 per cent of the 2006/7 cohort were in professional occupations and 30 per cent were in associate professional and technical occupations. Given the two ASHE groups selected represent two thirds of graduates we have concluded that these are the most appropriate comparison groups.

**Table 5D: Vacancies, pay and house prices in Local Authorities in England and Wales (2005-07 data)<sup>37</sup>**

LA Name	Region	Pay band	Relative Classroom Teacher to Professional Pay Ratio	95% Confidence interval of CT to Prof Pay Ratio	Relative CT Pay (LA) to Professional Pay (Region) Ratio	CT Salary to House Price Ratio	CT Pay (LA) to House Price (Region) Ratio	Vacancy Rate
City of London	London	A	n/a	n/a	n/a	n/a	n/a	0.0%
Brent	London	A	1.39	+/- 0.07	0.88	0.14	0.15	1.2%
Barking and Dagenham	London	A	1.10	+/- 0.09	0.86	0.20	0.15	0.7%
Lewisham	London	A	1.17	+/- 0.13	0.86	0.17	0.15	1.0%
Haringey	London	A	1.27	+/- 0.11	0.85	0.14	0.15	1.8%
Greenwich	London	A	1.17	+/- 0.07	0.85	0.16	0.14	1.8%
Newham	London	A	1.13	+/- 0.1	0.82	0.15	0.14	1.8%
Merton	London	A	1.14	+/- 0.08	0.83	0.14	0.14	1.1%
Ealing	London	A	1.06	+/- 0.06	0.84	0.13	0.14	0.9%
Camden	London	A	0.95	+/- 0.04	0.88	0.09	0.15	0.9%
Southwark	London	A	0.98	+/- 0.05	0.84	0.13	0.14	0.1%
Hackney	London	A	0.86	+/- 0.07	0.85	0.14	0.15	0.8%
Tower Hamlets	London	A	0.73	+/- 0.04	0.86	0.13	0.15	0.7%
Islington	London	A	0.86	+/- 0.03	0.85	0.11	0.15	2.3%
Wandsworth	London	A	0.92	+/- 0.13	0.84	0.10	0.14	2.1%
Hammersmith and Fulham	London	A	0.93	+/- 0.06	0.83	0.09	0.14	1.4%
Kensington and Chelsea	London	A	0.96	+/- 0.1	0.79	0.05	0.14	1.0%
Lambeth	London	A	0.67	+/- 0.07	0.82	0.13	0.14	1.8%
Westminster	London	A	0.79	+/- 0.03	0.82	0.07	0.14	2.3%
Havering	London	B	1.20	+/- 0.07	0.81	0.16	0.14	1.0%
Waltham Forest	London	B	1.13	+/- 0.14	0.79	0.14	0.13	1.7%
Enfield	London	B	1.06	+/- 0.06	0.79	0.15	0.14	0.7%
Bexley	London	B	1.02	+/- 0.08	0.78	0.16	0.13	1.5%
Croydon	London	B	1.02	+/- 0.06	0.77	0.15	0.13	1.1%
Redbridge	London	B	1.02	+/- 0.2	0.79	0.14	0.14	0.4%
Sutton	London	B	1.00	+/- 0.06	0.77	0.15	0.13	0.7%
Harrow	London	B	0.95	+/- 0.1	0.79	0.12	0.14	0.8%
Bromley	London	B	0.95	+/- 0.08	0.79	0.13	0.13	0.6%
Kingston upon Thames	London	B	0.99	+/- 0.07	0.78	0.12	0.13	1.0%
Hounslow	London	B	0.88	+/- 0.05	0.78	0.13	0.13	1.0%
Barnet	London	B	0.93	+/- 0.11	0.78	0.12	0.13	0.1%
Hillingdon	London	B	0.85	+/- 0.03	0.77	0.14	0.13	2.3%
Richmond upon Thames	London	B	0.94	+/- 0.07	0.76	0.09	0.13	1.8%
Thurrock	East of England	C	1.09	+/- 0.09	0.96	0.19	0.17	1.2%
Slough	South East	C	0.83	+/- 0.05	0.91	0.17	0.15	1.4%
Bracknell Forest	South East	C	0.78	+/- 0.05	0.91	0.15	0.15	0.5%
Windsor and Maidenhead	South East	C	0.74	+/- 0.08	0.92	0.11	0.15	0.5%
Surrey	South East	C	0.81	+/- 0.03	0.90	0.12	0.15	0.6%
Essex	East of England	C/D	0.95	+/- 0.02	0.96	0.16	0.17	0.5%
Hertfordshire	East of England	C/D	0.89	+/- 0.02	0.95	0.14	0.17	1.1%
Kent	South East	C/D	1.04	+/- 0.03	0.91	0.17	0.15	0.8%
West Sussex	South East	C/D	1.03	+/- 0.04	0.90	0.15	0.15	0.5%
Buckinghamshire	South East	C/D	0.91	+/- 0.04	0.91	0.13	0.15	1.0%
Rutland	East Midlands	D	n/a	n/a	1.06	0.15	0.22	0.4%
Leicester	East Midlands	D	1.15	+/- 0.05	1.06	0.25	0.22	0.4%
Derbyshire	East Midlands	D	1.14	+/- 0.05	1.07	0.23	0.22	0.4%
Nottinghamshire	East Midlands	D	1.09	+/- 0.04	1.07	0.24	0.22	0.1%
Northamptonshire	East Midlands	D	1.07	+/- 0.04	1.08	0.21	0.23	0.4%
Lincolnshire	East Midlands	D	1.19	+/- 0.05	1.04	0.22	0.22	0.4%
Nottingham	East Midlands	D	0.97	+/- 0.05	1.06	0.28	0.22	0.7%
Derby	East Midlands	D	0.98	+/- 0.03	1.05	0.24	0.22	0.2%
Leicestershire	East Midlands	D	1.01	+/- 0.05	1.06	0.20	0.22	0.3%
Southend-on-Sea	East of England	D	1.24	+/- 0.12	0.96	0.19	0.17	1.1%
Suffolk	East of England	D	1.09	+/- 0.05	0.96	0.19	0.17	0.7%
Norfolk	East of England	D	1.10	+/- 0.04	0.95	0.20	0.17	0.9%
Peterborough	East of England	D	1.03	+/- 0.06	0.93	0.23	0.17	0.4%
Bedfordshire	East of England	D	1.04	+/- 0.06	0.96	0.19	0.17	0.8%
Luton	East of England	D	0.77	+/- 0.06	0.93	0.20	0.17	1.3%
Cambridgeshire	East of England	D	0.89	+/- 0.03	0.93	0.16	0.17	0.5%

<sup>37</sup> Confidence intervals were initially calculated based on the unweighted means. However the means shown in the table have been weighted to represent a higher proportion of the population. To derive a confidence interval for the weighted means we calculated the distance either side of the unweighted mean as a percentage of the unweighted mean, and applied this percentage to the weighted mean. Local authority data has been suppressed (indicated by "n/a") where the sample size is less than 100 for professional pay and less than 30 for classroom teacher pay.

LA Name	Region	Pay band	Relative Classroom Teacher to Professional Pay Ratio	95% Confidence interval of CT to Prof Pay Ratio	Relative CT Pay (LA) to Professional Pay (Region) Ratio	CT Salary to House Price Ratio	CT Pay (LA) to House Price (Region) Ratio	Vacancy Rate
Hartlepool	North East	D	n/a	n/a	1.12	0.35	0.27	0.4%
South Tyneside	North East	D	1.36	+/- 0.12	1.16	0.29	0.28	0.3%
Darlington	North East	D	1.20	+/- 0.09	1.14	0.27	0.27	0.1%
Middlesbrough	North East	D	1.15	+/- 0.13	1.12	0.32	0.27	0.3%
Durham	North East	D	1.12	+/- 0.06	1.12	0.30	0.27	0.5%
Northumberland	North East	D	1.26	+/- 0.08	1.12	0.23	0.27	0.0%
Redcar and Cleveland	North East	D	1.09	+/- 0.11	1.12	0.27	0.27	0.7%
Sunderland	North East	D	1.08	+/- 0.07	1.11	0.28	0.26	0.6%
Stockton on Tees	North East	D	1.10	+/- 0.06	1.13	0.25	0.27	0.6%
Newcastle upon Tyne	North East	D	1.12	+/- 0.06	1.15	0.22	0.27	0.5%
North Tyneside	North East	D	1.13	+/- 0.12	1.12	0.23	0.26	0.3%
Gateshead	North East	D	1.05	+/- 0.07	1.12	0.26	0.26	0.6%
Blackburn with Darwen	North West	D	1.19	+/- 0.08	1.06	0.35	0.25	0.6%
Cumbria	North West	D	1.25	+/- 0.06	1.07	0.24	0.25	0.2%
Sefton	North West	D	1.27	+/- 0.12	1.08	0.21	0.25	0.0%
Bolton	North West	D	1.16	+/- 0.11	1.06	0.27	0.24	0.0%
Liverpool	North West	D	1.07	+/- 0.07	1.08	0.27	0.25	0.3%
Salford	North West	D	1.19	+/- 0.09	1.06	0.26	0.24	0.6%
Tameside	North West	D	1.26	+/- 0.1	1.05	0.26	0.24	0.4%
Blackpool	North West	D	1.38	+/- 0.13	1.03	0.27	0.24	0.5%
Wigan	North West	D	1.08	+/- 0.08	1.06	0.27	0.25	0.3%
Lancashire	North West	D	1.06	+/- 0.11	1.07	0.26	0.25	0.5%
Rochdale	North West	D	1.19	+/- 0.1	1.03	0.28	0.24	0.5%
St Helens	North West	D	1.05	+/- 0.13	1.07	0.26	0.25	0.3%
Bury	North West	D	1.04	+/- 0.12	1.08	0.25	0.25	0.1%
Wirral	North West	D	1.14	+/- 0.1	1.06	0.23	0.24	1.0%
Stockport	North West	D	1.11	+/- 0.05	1.07	0.20	0.25	0.6%
Oldham	North West	D	1.10	+/- 0.1	1.03	0.28	0.24	0.4%
Knowsley	North West	D	0.99	+/- 0.12	1.06	0.26	0.25	0.5%
Manchester	North West	D	0.95	+/- 0.03	1.08	0.24	0.25	0.0%
Warrington	North West	D	1.13	+/- 0.07	1.04	0.21	0.24	0.2%
Halton	North West	D	0.99	+/- 0.09	1.04	0.26	0.24	0.4%
Cheshire	North West	D	1.00	+/- 0.03	1.04	0.19	0.24	0.2%
Trafford	North West	D	1.02	+/- 0.05	1.04	0.17	0.24	0.7%
Medway	South East	D	1.15	+/- 0.08	0.90	0.21	0.15	0.8%
Isle of Wight	South East	D	1.29	+/- 0.11	0.89	0.18	0.15	0.7%
Brighton and Hove	South East	D	1.12	+/- 0.07	0.92	0.15	0.15	0.6%
East Sussex	South East	D	1.05	+/- 0.07	0.89	0.16	0.15	0.6%
Portsmouth	South East	D	0.83	+/- 0.06	0.89	0.21	0.15	0.7%
Reading	South East	D	0.90	+/- 0.05	0.90	0.16	0.15	1.1%
West Berkshire	South East	D	0.90	+/- 0.04	0.92	0.14	0.15	0.8%
Southampton	South East	D	0.80	+/- 0.09	0.88	0.19	0.15	0.6%
Hampshire	South East	D	0.91	+/- 0.02	0.90	0.15	0.15	0.4%
Oxfordshire	South East	D	0.96	+/- 0.04	0.89	0.14	0.15	0.9%
Milton Keynes	South East	D	0.89	+/- 0.04	0.87	0.18	0.14	0.9%
Wokingham	South East	D	0.70	+/- 0.05	0.91	0.12	0.15	0.4%
Isles of Scilly	South West	D	n/a	n/a	n/a	n/a	n/a	3.1%
Plymouth	South West	D	1.16	+/- 0.05	1.06	0.22	0.17	0.3%
Torbay	South West	D	1.46	+/- 0.2	1.06	0.19	0.17	0.5%
Cornwall	South West	D	1.28	+/- 0.06	1.06	0.17	0.17	0.1%
Gloucestershire	South West	D	1.10	+/- 0.03	1.07	0.18	0.17	0.6%
Devon	South West	D	1.21	+/- 0.04	1.04	0.16	0.17	0.2%
Somerset	South West	D	1.10	+/- 0.04	1.06	0.18	0.17	0.1%
Bournemouth	South West	D	1.03	+/- 0.09	1.06	0.17	0.17	0.0%
Wiltshire	South West	D	1.11	+/- 0.04	1.03	0.16	0.17	0.4%
Poole	South West	D	1.02	+/- 0.08	1.05	0.15	0.17	0.4%
Dorset	South West	D	1.00	+/- 0.05	1.05	0.14	0.17	0.2%
Bath and North East Somerset	South West	D	1.02	+/- 0.07	1.05	0.14	0.17	0.2%
City of Bristol	South West	D	0.97	+/- 0.04	1.02	0.18	0.17	0.5%
Swindon	South West	D	0.91	+/- 0.04	1.01	0.20	0.16	0.8%
South Gloucestershire	South West	D	0.91	+/- 0.04	1.03	0.17	0.17	0.2%
North Somerset	South West	D	0.79	+/- 0.17	1.04	0.17	0.17	0.2%
Merthyr Tydfil	Wales	D	n/a	n/a	1.20	0.36	0.24	0.0%
Blaenau Gwent	Wales	D	n/a	n/a	1.16	0.38	0.24	0.5%
Ceredigion	Wales	D	n/a	n/a	1.17	0.18	0.24	0.1%
Powys	Wales	D	n/a	n/a	1.17	0.19	0.24	1.3%
Isle of Anglesey	Wales	D	n/a	n/a	1.19	0.21	0.24	0.4%
Rhondda Cynon Taff	Wales	D	1.35	+/- 0.11	1.18	0.34	0.24	1.2%
Bridgend	Wales	D	1.37	+/- 0.13	1.19	0.26	0.24	0.2%
Carmarthenshire	Wales	D	1.43	+/- 0.16	1.18	0.24	0.24	0.9%

LA Name	Region	Pay band	Relative Classroom Teacher to Professional Pay Ratio	95% Confidence interval of CT to Prof Pay Ratio	Relative CT Pay (LA) to Professional Pay (Region) Ratio	CT Salary to House Price Ratio	CT Pay (LA) to House Price (Region) Ratio	Vacancy Rate
Stoke-on-Trent	West Midlands	D	1.29	+/- 0.09	1.01	0.35	0.21	0.6%
Wolverhampton	West Midlands	D	1.13	+/- 0.06	1.05	0.26	0.22	1.2%
Shropshire	West Midlands	D	1.13	+/- 0.09	1.06	0.18	0.22	0.4%
Walsall	West Midlands	D	1.10	+/- 0.1	1.03	0.25	0.22	0.6%
Staffordshire	West Midlands	D	1.12	+/- 0.07	1.04	0.22	0.22	0.3%
Dudley	West Midlands	D	1.06	+/- 0.12	1.05	0.24	0.22	0.5%
Coventry	West Midlands	D	0.99	+/- 0.04	1.06	0.25	0.22	0.6%
Birmingham	West Midlands	D	1.03	+/- 0.03	1.05	0.23	0.22	0.9%
Telford & Wrekin	West Midlands	D	1.05	+/- 0.06	1.03	0.24	0.22	0.3%
Worcestershire	West Midlands	D	1.14	+/- 0.06	1.03	0.18	0.22	0.5%
Herefordshire	West Midlands	D	1.16	+/- 0.1	1.03	0.17	0.22	0.1%
Sandwell	West Midlands	D	0.78	+/- 0.48	1.03	0.26	0.22	0.7%
Warwickshire	West Midlands	D	0.99	+/- 0.03	1.03	0.18	0.22	0.5%
Solihull	West Midlands	D	0.92	+/- 0.05	1.01	0.15	0.21	1.1%
Doncaster	Yorkshire and the Humber	D	1.15	+/- 0.08	1.09	0.27	0.24	0.5%
Kirklees	Yorkshire and the Humber	D	1.19	+/- 0.05	1.09	0.24	0.24	0.4%
North East Lincolnshire	Yorkshire and the Humber	D	1.22	+/- 0.12	1.06	0.31	0.24	0.9%
Bradford	Yorkshire and the Humber	D	1.14	+/- 0.05	1.08	0.26	0.24	1.1%
Sheffield	Yorkshire and the Humber	D	1.12	+/- 0.04	1.09	0.25	0.24	0.7%
Kingston-Upon-Hull, City of	Yorkshire and the Humber	D	1.12	+/- 0.07	1.06	0.36	0.24	0.7%
North Lincolnshire	Yorkshire and the Humber	D	1.02	+/- 0.09	1.08	0.27	0.24	0.6%
East Riding of Yorkshire	Yorkshire and the Humber	D	1.14	+/- 0.09	1.07	0.22	0.24	0.2%
Calderdale	Yorkshire and the Humber	D	1.06	+/- 0.08	1.08	0.25	0.24	0.4%
Rotherham	Yorkshire and the Humber	D	0.99	+/- 0.06	1.09	0.26	0.24	0.9%
Wakefield	Yorkshire and the Humber	D	1.06	+/- 0.06	1.06	0.25	0.24	0.2%
North Yorkshire	Yorkshire and the Humber	D	1.10	+/- 0.05	1.08	0.18	0.24	0.2%
Barnsley	Yorkshire and the Humber	D	1.04	+/- 0.09	1.05	0.27	0.23	0.9%
York	Yorkshire and the Humber	D	1.08	+/- 0.06	1.08	0.18	0.24	0.2%
Leeds	Yorkshire and the Humber	D	1.00	+/- 0.06	1.08	0.22	0.24	0.2%

**Pay band code:**

- A: Inner London
- B: Outer London
- C: The Fringe
- C/D Part of LA in the Fringe; part in Rest of England
- D: Rest of England and Wales

## Annex E: International evidence

- E1 This annex summarises the international evidence around reform of teachers' pay, and in particular the evidence of attempts to better relate teachers' pay to their performance.
- E2 Research by Ma, Battu and Elliot in 2009 found consensus in the research literature that pay plays an important role in the recruitment of teachers. Although pay is not the main or only motivation for teaching, it seems that unless the school system offers salaries in line with other graduate salaries, the same people do not enter teaching.
- E3 International studies have found positive effects of financial incentives on teacher performance. OECD suggest that education systems such as Finland and Ontario have granted significantly more discretion over the allocation of resources to school heads and school faculties (OECD 2009). This is something the Programme for International Student Assessment (PISA) shows to be closely related to school performance when combined with appropriate accountability arrangements.
- E4 According to Barber and Mourshed (2007), there is strong competition for entry into teacher training in countries where teaching has high social status (e.g. Finland & Korea). They argue that making entry to teacher training highly selective raises the status of the profession, which in turn attracts high quality graduates. Once teaching becomes a high-status profession, more talented people will become teachers, lifting the status of the profession even higher.

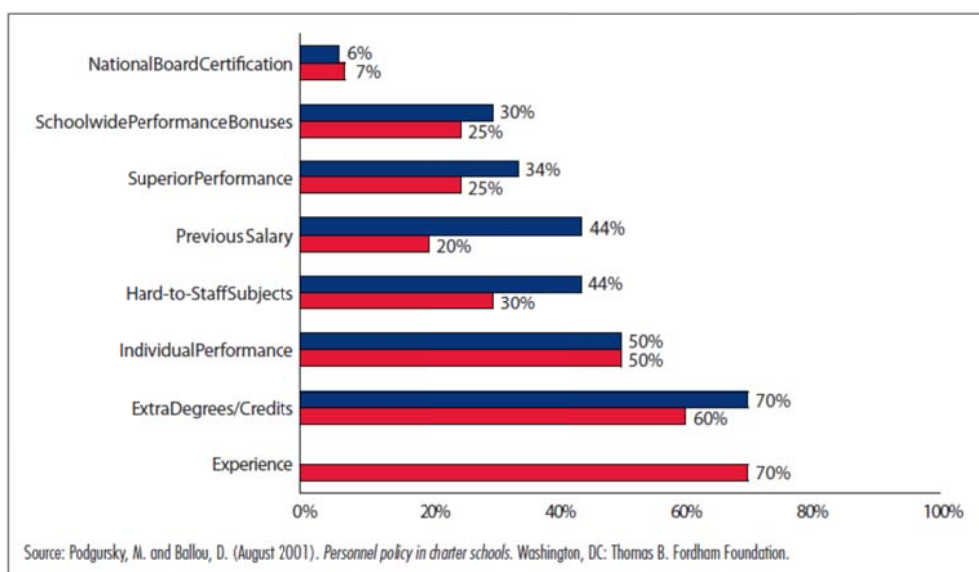
### United States

- E5 There is some evidence from the United States that making teacher pay more closely related to performance can have a positive effect on pupil attainment. A randomised trial of a PRP scheme in Tennessee – the Tennessee Career Ladder – found that pupils taught by teachers participating in the scheme had 3 per cent higher maths scores than pupils taught by non participating teachers (Dee *et al*, 2004).
- E6 Further, Figlio and Kenny (2007), in a cross-sectional study of 502 schools across the US, found that the use of PRP schemes were correlated with higher test scores of between 1.3 and 2.1 points – three times the impact of maternal education levels on pupil test scores. Other things being equal, students apparently learned more in schools where there was a wide range in wages for teachers with a specified mix of schooling and experience, or where small numbers of teachers received targeted bonuses or raises. The relationship was found to be strongest in schools serving lower-income populations. The estimated gains in test scores associated with the judicious use of salary incentives were modest (though they were comparable to those associated with other variables highlighted in the literature).
- E7 However, the authors point out that this evidence of a positive association between merit pay and student performance is not evidence of causation and should therefore be interpreted with caution. It could, for example, reflect students receiving a better education in schools in which the use of merit pay is correlated with more innovation in teaching, and in which higher student achievement is due to the innovation in teaching but not to use of merit pay. A controlled experiment would be necessary to obtain estimates of the causal effects of the use of



individual teacher incentives on student achievement. They also warn that, although there is a relation between test scores and merit pay targeted to a few, there is no association between student performance and indiscriminate merit pay.

**Figure 1E: Percentage of Private (blue) and Charter (red) Schools considering factors in determining initial salaries and salary growth**



E8 Charter and private schools in the US are exempted from many state regulations and are freed from collective bargaining agreements unless the school chooses to unionise. Charter and private schools are more likely than district schools to tie some portion of teachers' pay to performance and a significant number also use higher pay to fill hard-to-staff positions (Reed, 2010). In nearly 50 per cent of both charter and private schools, individual teacher performance is a consideration in salary increases. Just over 30 per cent of private schools and 25 per cent of charter schools reported using school-wide performance bonuses. Fewer than 40 per cent of charter schools and 30 per cent of private schools did not reward teachers for earning extra degrees and credits, and more than 30 per cent of charter schools did not base salary growth on experience. There is significant evidence to show how schools have used this flexibility, although very little to show any impact of this on outcomes at this stage.

## Sweden

E9 In 1995, as part of Sweden's broader effort to decentralise its schooling system, its centrally agreed salary scheme for teachers with fixed pay ladders was replaced by an individual based pay system determined locally (Strath, 2004, Ladd, 2007). The only area that retained a central agreement was a minimum starting salary and a guaranteed wage increase during the first five years. There was initial union hostility to the reforms, with a survey showing less than one third of members of the largest teacher union in favour of the reforms in 1999. This doubled to more than 60 per cent of members in favour in 2006.

E10 As a result of the reforms, salaries became negotiated according to teacher characteristics (for example, secondary versus primary), the labour market situation (with teachers in shortage areas able to negotiate higher salaries), the performance of the teacher, and the range of the teacher's responsibilities. Pay is agreed when a new teacher is hired and then revised annually. Pay can be set

either through direct dialogue between the teacher and the head teacher or through negotiations between head teachers and local trade unions. There is also a mixed model in which pay is set at an individual school level, but with union involvement in making sure that the pay review is conducted in a fair manner. The latest study showed that more schools were moving towards the first model, but that at that time, one third used the first model, one third the second model and one third the mixed model.

E11 Strath suggested there was evidence to show that teachers generally preferred to negotiate their salary increases without the involvement of the local union. There is as yet no consideration of whether either model was cheaper or led to better outcomes. Evidence on the impact of the reform was limited, but available studies suggested that:

- Despite expectations to the contrary the spread between the pay of the bottom 10 per cent and the upper 10 per cent has decreased. Other factors cited that may have contributed to this included: the demand for teachers exceeding the supply of teachers in recent years, thus forcing many municipalities to increase the entry-level salary for teachers (indeed the differences between starting teachers were larger than between experienced teachers); and a prevailing culture of egalitarianism in Sweden which works against pay dispersion (Bjorklund, 2007).
- Individualised pay has reduced teacher shortages in certain geographical areas where the teacher shortage has been most pronounced (the largest cities and most rural areas), and where the entry-level salaries for teachers have been close to 50 per cent higher than in municipalities at the bottom of the salary scale. However, the ability of a locality to make salary adjustments depends on its own economic situation. Notably, poor localities can compete effectively for teachers only with the help of central government grants (Ladd, 2007).
- There is some limited evidence that the reforms have made it easier to reward and retain committed teachers and to assess where teachers are not performing up to the standards (Strath).
- The new pay system provides teachers with an incentive to compete for a higher wage at another school. In fact, there are some indications that the recent school reforms have resulted in a higher mobility within the education sector. The probability of teachers changing municipalities was twice as large in 2000 as in the 1990s.

E12 Strath suggests that the following key lessons can be learnt from the Swedish experience:

- One important outcome of introducing performance based pay is that in order to define teacher performance criteria, municipalities and schools were forced to think explicitly about what the school should achieve and what should be expected of teachers.
- However the individualised pay scheme seems to have functioned primarily as a labour market instrument rather than as a way of rewarding teachers on the basis of their performance. This suggests that where there is a countrywide shortage of teachers, competition on the basis of salary may amount to a zero sum game.

- A significant issue in implementing individualised or performance based pay is the availability of resources. With limited resources there is a great risk that the system will lose credibility, especially if the ability to pay teachers varies across municipalities or if a municipality or school has to deal with teacher shortages whilst also using financial incentives to reward teacher effectiveness.
- Moves to individualised pay agreements put significant pressure on the job of the head teacher, with new skills needed to provide honest feedback and sufficient arguments when negotiating salaries.
- Active involvement by the unions in assuring that the process is carried out correctly is probably an important prerequisite for a smooth transition from a fixed pay ladder to a performance based pay system.

- E13 According to Wolf (2010), Swedish 'free schools' do not as a rule utilise the freedoms that they have to set individual salaries. But they do 'operate with working hours and conditions which are often very different from the state sector, including expectations of teachers' involvement in extra-curricular activities and administration'.
- E14 OECD's February 2011 report *'Evaluation and Assessment Frameworks for Improving School Outcomes'* found that Sweden's individualised pay system means that employers and school leaders can potentially make salary decisions contingent on evidence of good performance. In practice, however, salary differences are often determined on the basis of effort and commitment rather than achievement of stated objectives.
- E15 OECD reports that the individual-based pay system has been a significant step towards greater flexibility in the management of teacher careers and a closer linkage between teacher performance and reward. It has the important advantage that schools can potentially reward effective teachers, including with better pay. It also allows schools to better value those competencies that best fit their needs. However, important aspects of its implementation such as the way the performance of teachers is assessed and what the system actually rewards (e.g. commitment or labour market position instead of performance) do raise concerns about the ability of the individual-based pay system to actually provide teachers with the incentives to improve their performance without appropriate support and governance arrangements.
- E16 The OECD review team (reported in OECD review of Sweden, 2011) met with some school leaders who had little time to perform classroom observation and to engage in a closer analysis of teacher performance. The consequence was that performance did not receive much weight in the salary decision. In addition, it is clear that no consistency in teacher appraisal can be assured across schools and municipalities as methodologies used are different and each school leader gives distinct importance to performance as a factor to influence teacher pay.

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