

# The impact of changes to teachers' pay on equality in schools in England

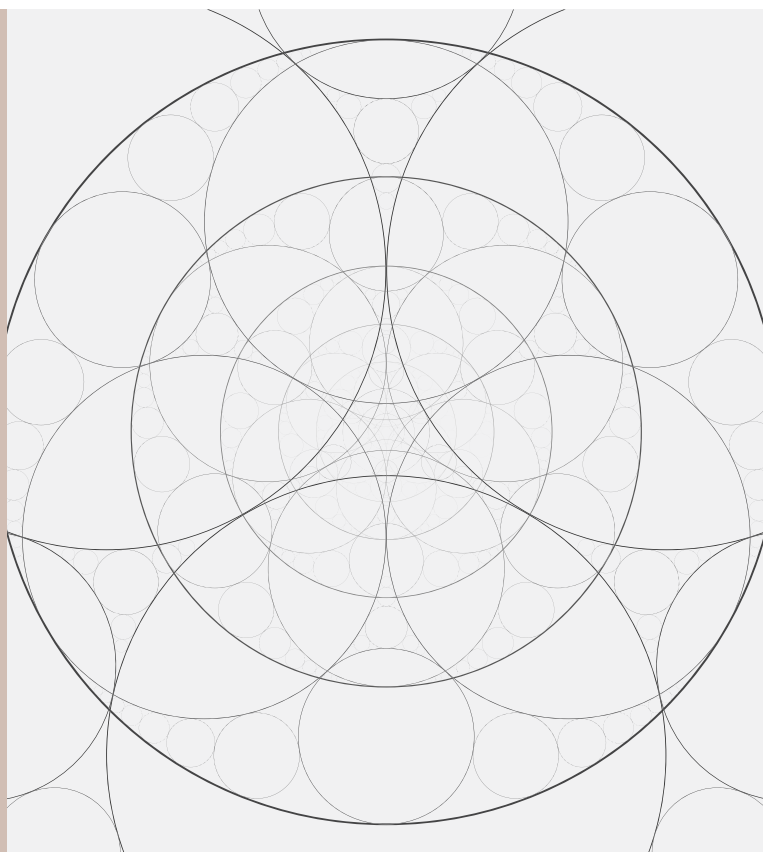
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Report on employment and earnings trends for teachers with protected characteristics between 2010 and 2015

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## Executive Summary

This report presents information on employment and earnings trend for teachers in England, focusing upon the comparative experience of teachers with protected characteristics. The report is based on the analysis of data from the annual DfE School Workforce Censuses for 2010 to 2015. Individual-level data has been aggregated to produce new information, not contained in published DfE reports on teacher employment which are based on the Census.

The highlights of the analysis are:

- The number of teachers in England grew by 4 per cent between 2010 and 2015.
- The number of teachers aged under 50 was expanding faster than average, while the number of teachers in their fifties fell by more than a fifth during this period.
- There was a major shift in employment from local (education) authority-controlled schools to academies.
- Women dominate employment, being most strongly represented in the primary phase. Men are more common in secondary schools and were more likely than women to work in academies. White teachers gained employment to a greater extent than BME teachers from the growth of academies.
- Employment grew strongly for younger teachers and teachers from minority ethnic groups between 2010 and 2015. Employment grew fastest for South Asian ethnic groups. However, BME groups formed a small percentage of teachers throughout this period.
- Men were more likely than women to be in senior posts. However, there was a relatively rapid increase in employment in senior posts for people from minority ethnic groups.
- For all teachers in work, male wages were higher than female and people from most minority ethnic groups earned less than white people.
- Annual average median wages fell between 2010 and 2015. Female wages declined slightly relative to those of men over this period, but there was convergence in relative earnings by age group and by ethnic group.
- The earnings of older teachers declined, while those of younger teachers barely increased between 2010 and 2015.

### *Explanatory statistical modelling*

- Statistical models revealed a strong tendency for women to earn less than men, having taken other factors into account.
- They also reveal that younger teachers (aged 21 to 29) had significantly lower wages than men and teachers aged 41 to 49. There was a statistically significant tendency for the earnings of 51 to 59 year olds to be higher.
- The models reveal no significant tendency for disabled teachers to earn less or more than average.
- When other factors were controlled for, the separate influence of ethnicity upon earnings was weak, but for all minority ethnic groups the effect was to reduce earnings relative to White British teachers. The size of this negative effect was greatest for Black-African and Pakistani teachers.
- Secondary school teachers tended to earn more, while working in an academy has a statistically significant negative effect on earnings.
- Working in London and the London Fringe also tended to increase earnings, once other factors were controlled for.

### *Trends in earnings for teachers employed throughout the period*

- In contrast to the average for all teachers in work in a given year, those teachers who stayed in employment throughout the period 2010 to 2015 saw their earnings

increase by around 10 per cent between 2010 and 2015. Gender, ethnic group and disability differentials increased among these teachers, but age differentials narrowed.

- One reason for this is that the teaching profession lost older, more highly paid teachers and gained younger teachers over this period. Pay increases experienced by lower paid younger teachers were relatively greater.

## 1 Introduction

This report analyses data from the Department for Education's (DfE) annual School Workforce Census (SWC) for 2010 to 2015. The analysis is based on the individual-level data from the SWC linked across all five years using the individual identifier for each teacher. The report provides new information not available from other reports published by the DfE on the SWC. Most of the analysis is based on all teachers in work aged 21 to 69 recorded in the SWC in the year reported, but trends in earnings for those teachers traced in all six Censuses are also presented (in section 4.1).

The report demonstrates how employment by protected characteristics has changed over this period and contrasts earnings over this period by protected characteristic – age, gender, disability and ethnicity. The average earning figures presented in the report are based on all teachers employed in each year, and are thus influenced by the changing population of teachers. To provide a contrasting perspective on individual experience, the report also presents median earnings for teachers who have remained in employment throughout this period.

### **Please note:**

- (1) The data set provided by the Department for Education for 2010 to 2015 does not include information on disability (because of their concerns over data quality). Therefore, no data on disability for 2015 is included in this report and the disability figures presented are taken from the linked SWC data for 2010 to 2014.
- (2) The employment figures presented in this report are counts of total numbers of teachers in the School Workforce Census linked data set for 2010 to 2015. The totals reported here are higher in each year of the Census than those obtained from the previous version of this data set (for 2010 to 2015).
- (3) The data set provided by the DfE for analysis in this Report differs from the data set dataset used in the Phase 1 baseline survey<sup>1</sup> and the Phase 1 update Report<sup>2</sup> in the following ways:
  - a. Most importantly, the actual amount paid to each teacher was not reported. Instead, gross (i.e. actual) and full-time equivalent pay was presented in banded form.
  - b. The data set did not contain information on hours worked. However, it did contain an indicator of full-time/part-time working and the proportion of full-time hours worked.
  - c. Following discussion with DfE statisticians, actual base and gross pay was provided, but not for heads and deputy heads or others with very high levels of pay. This action was taken to protect the confidentiality of individual teachers.
- (4) These changes in the School Workforce Census have some effect on the comparability of the earnings data presented in the reports for 2010 to 2014 and for 2010 to 2015. Most importantly, the earnings data presented in the latter is an estimate, created by multiplying gross pay by the proportion of full-time hours worked by the teacher.

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<sup>1</sup> March 2016

<sup>2</sup> August 2016

## 2 The Demographic breakdown of teachers by protected characteristics, 2010-2015

This section of the report sets the context for the analysis of pay differentials by presenting the changing breakdown of the teacher workforce in England by protected characteristics (age, gender, ethnicity and disability) for the period 2010 to 2015.

**Table 1: Demographic characteristics of teachers, 2010-2015**

|   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | Change 2010-15 |
|---|--------|--------|--------|--------|--------|--------|----------------|
| Female                                  | 356869 | 353522 | 362616 | 366949 | 373958 | 375407 | 18538          |
| Male                                    | 122022 | 118933 | 121121 | 121418 | 122710 | 122637 | 615            |
|   |        |        |        |        |        |        |                |
| Disabled*                               | 2393   | 2324   | 2396   | 2322   | 2305   |        | -88            |
|   |        |        |        |        |        |        |                |
| Aged 21-29                              | 102620 | 100990 | 105910 | 108692 | 113784 | 116047 | 11454          |
| Aged 30-39                              | 145207 | 146674 | 152341 | 155158 | 158769 | 160511 | 14078          |
| Aged 40-49                              | 111501 | 113281 | 118423 | 121869 | 125379 | 126276 | 14689          |
| Aged 50-59                              | 105361 | 97550  | 92645  | 87978  | 84307  | 81231  | -19078         |
| Aged 60-69                              | 14438  | 14436  | 14893  | 14927  | 14720  | 14192  | 475            |
| All ages                                | 479127 | 472931 | 484212 | 488624 | 496959 | 498257 | 21618          |
|   |        |        |        |        |        |        |                |
| White ethnic groups                     | 429609 | 422630 | 432087 | 432534 | 437900 | 433069 | 3460           |
| White British                           | 407516 | 400821 | 409641 | 408607 | 412994 | 407599 | 83             |
| White Irish                             | 6688   | 6972   | 7449   | 7771   | 8087   | 7969   | 1281           |
| Any Other White Background              | 15405  | 14837  | 14997  | 16156  | 16819  | 17501  | 2096           |
| <b>Black and Minority Ethnic groups</b> | 29264  | 29097  | 30764  | 32389  | 34281  | 35597  | 6333           |
| <i>Mixed parentage</i>                  | 3729   | 3972   | 4333   | 4784   | 5146   | 5400   | 1671           |
| White and Black Caribbean               | 844    | 925    | 1049   | 1145   | 1283   | 1396   | 552            |
| White and Black African                 | 424    | 456    | 483    | 505    | 515    | 534    | 110            |
| White and Asian                         | 1037   | 1117   | 1193   | 1294   | 1385   | 1431   | 394            |
| Any Other Mixed Background              | 1424   | 1474   | 1608   | 1840   | 1963   | 2039   | 615            |
| <i>South Asian ethnic groups</i>        | 13740  | 13827  | 14829  | 15606  | 16612  | 17519  | 3779           |
| Indian                                  | 6773   | 6877   | 7310   | 7560   | 7957   | 8229   | 1456           |
| Pakistani                               | 3564   | 3546   | 3819   | 3968   | 4267   | 4527   | 963            |
| Bangladeshi                             | 1394   | 1424   | 1547   | 1755   | 1898   | 2058   | 664            |
| Any Other Asian Background              | 2009   | 1980   | 2153   | 2323   | 2490   | 2705   | 696            |
| <i>Black ethnic groups</i>              | 8647   | 8308   | 8572   | 8905   | 9282   | 9543   | 896            |
| Black African                           | 3182   | 3013   | 3073   | 3196   | 3394   | 3461   | 279            |
| Black Caribbean                         | 4421   | 4308   | 4465   | 4493   | 4639   | 4767   | 346            |
| Any Other Black Background              | 1044   | 987    | 1034   | 1216   | 1249   | 1315   | 271            |
| <i>Chinese and other ethnic groups</i>  | 3148   | 2990   | 3030   | 3094   | 3241   | 3135   | -13            |
| Chinese                                 | 684    | 685    | 701    | 699    | 724    | 719    | 35             |
| Arab                                    | 0      | 0      | 0      | 0      | 0      | 1      | 1              |
| Any Other Ethnic Group                  | 2464   | 2305   | 2329   | 2395   | 2517   | 2415   | -49            |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 2: Profile of teachers, 2010-2015**

|   | Percentage of all teachers |       |       |       |       |       | % change 2010-15 |
|---|----------------------------|-------|-------|-------|-------|-------|------------------|
|   | 2010                       | 2011  | 2012  | 2013  | 2014  | 2015  |                  |
| Female                                  | 74.5                       | 74.8  | 74.9  | 75.1  | 75.2  | 75.3  | 5.2              |
| Male                                    | 25.5                       | 25.1  | 25.0  | 24.8  | 24.7  | 24.6  | 0.5              |
| Disabled*                               | 0.5                        | 0.5   | 0.5   | 0.5   | 0.5   |       | -3.7             |
| Aged 21-29                              | 21.4                       | 21.4  | 21.9  | 22.2  | 22.9  | 23.3  | 13.1             |
| Aged 30-39                              | 30.3                       | 31.0  | 31.5  | 31.8  | 31.9  | 32.2  | 10.5             |
| Aged 40-49                              | 23.3                       | 24.0  | 24.5  | 24.9  | 25.2  | 25.3  | 13.3             |
| Aged 50-59                              | 22.0                       | 20.6  | 19.1  | 18.0  | 17.0  | 16.3  | -22.9            |
| Aged 60-69                              | 3.0                        | 3.1   | 3.1   | 3.1   | 3.0   | 2.8   | -1.7             |
| All ages                                | 100.0                      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 4.0              |
| White ethnic groups                     | 89.7                       | 89.4  | 89.2  | 88.5  | 88.1  | 86.9  | 0.8              |
| White British                           | 85.1                       | 84.8  | 84.6  | 83.6  | 83.1  | 81.8  | 0.0              |
| White Irish                             | 1.4                        | 1.5   | 1.5   | 1.6   | 1.6   | 1.6   | 19.2             |
| Any Other White Background              | 3.2                        | 3.1   | 3.1   | 3.3   | 3.4   | 3.5   | 13.6             |
| <b>Black and minority ethnic groups</b> | 6.1                        | 6.2   | 6.4   | 6.6   | 6.9   | 7.1   | 21.6             |
| <i>Mixed parentage</i>                  | 0.8                        | 0.8   | 0.9   | 1.0   | 1.0   | 1.1   | 44.8             |
| White and Black Caribbean               | 0.2                        | 0.2   | 0.2   | 0.2   | 0.3   | 0.3   | 65.4             |
| White and Black African                 | 0.1                        | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 25.9             |
| White and Asian                         | 0.2                        | 0.2   | 0.2   | 0.3   | 0.3   | 0.3   | 38.0             |
| Any Other Mixed Background              | 0.3                        | 0.3   | 0.3   | 0.4   | 0.4   | 0.4   | 43.2             |
| <i>South Asian ethnic groups</i>        | 2.9                        | 2.9   | 3.1   | 3.2   | 3.3   | 3.5   | 27.5             |
| Indian                                  | 1.4                        | 1.5   | 1.5   | 1.5   | 1.6   | 1.7   | 21.5             |
| Pakistani                               | 0.7                        | 0.7   | 0.8   | 0.8   | 0.9   | 0.9   | 27.0             |
| Bangladeshi                             | 0.3                        | 0.3   | 0.3   | 0.4   | 0.4   | 0.4   | 47.6             |
| Any Other Asian Background              | 0.4                        | 0.4   | 0.4   | 0.5   | 0.5   | 0.5   | 34.6             |
| <i>Black ethnic groups</i>              | 1.8                        | 1.8   | 1.8   | 1.8   | 1.9   | 1.9   | 10.4             |
| Black African                           | 0.7                        | 0.6   | 0.6   | 0.7   | 0.7   | 0.7   | 8.8              |
| Black Caribbean                         | 0.9                        | 0.9   | 0.9   | 0.9   | 0.9   | 1.0   | 7.8              |
| Any Other Black Background              | 0.2                        | 0.2   | 0.2   | 0.2   | 0.3   | 0.3   | 26.0             |
| <i>Chinese and other ethnic groups</i>  | 0.7                        | 0.6   | 0.6   | 0.6   | 0.7   | 0.6   | -0.4             |
| Chinese                                 | 0.1                        | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 5.1              |
| Arab                                    | 0.0                        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -                |
| Any Other Ethnic Group                  | 0.5                        | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | -2.0             |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

The total number of teachers (aged 21 to 69) of all types in England increased from 479.1 to 498.3 thousand between 2010 and 2015 (Table 1), an increase of 4 per cent. Within this overall total, there were marked differences by protected characteristic.

*Gender:* Women dominate the profession, accounting for 75.3 per cent of all teachers in 2015<sup>3</sup>. The number of female teachers only grew very slightly over the period 2010 to 2015, but the number of male teachers increased by 15.6 thousand (4.7 per cent).

*Disability:* Between 2.3 and 2.4 thousand teachers were recorded as being disabled in each year during the period 2010 to 2014, representing 0.5 per cent of all teachers. The number disabled declined by 3.7 per cent between 2010 and 2014.

*Age:* The number of teachers in each ten-year age group up to the age of 50 increased between 2010 and 2015, but the number of 50 to 59 year olds fell by 24.1 thousand (22.9 per cent) over this period. The fastest rate of increase was for 40 to 49 year olds (13.3 per cent).

*Ethnicity:* There were 35.6 thousand teachers from Black and Minority Ethnic (BME) groups in 2015 (7.1 percent of the total). The number of BME teachers increased by 6.3 thousand or 21.6 per cent between 2010 and 2015 (Table 2). South Asians formed 3.5 per cent of the total and Black teachers 1.9 per cent in 2015. The number of South Asian teachers grew by 27.5 per cent between 2010 and 2015. The largest individual BME groups in 2015 were Indian, followed by Black-Caribbean and Pakistani, though the total number from mixed parentage ethnic groups was larger (5.4 thousand). The fastest growing BME groups between 2010 and 2015 was the Bangladeshi ethnic group (47.6 per cent), followed by teachers of mixed parentage (44.8 per cent). White Irish teachers formed 1.6 per cent of the total (growing by 19.2 per cent between 2010 and 2015), while Other White (including white European) teachers formed 3.5 per cent of all teachers in 2015 (growing by 13.6 per cent between 2010 and 2015).

The number of teachers from individual BME groups is relatively small (Table 1), with the largest individual minority ethnic group (Indian) having only 8.2 thousand teachers in 2015. Therefore in the remainder of this report, the broad groupings (White, Mixed parentage, South Asian, Black and Chinese and Other) are used in many of the tables presented in the remainder of this report.

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<sup>3</sup>Gender was not recorded or refused for 213 teachers in 2015. Ethnicity was not recorded for 29.5 thousand teachers and refused for 3.7 thousand teachers in 2015 (thus ethnicity is not recorded for 5.9 per cent of cases).



### 3 Type of employment

#### 3.1 Phase and sector of education (Tables 3 to 17)

The number of teachers in primary and nursery education increased by 25.6 thousand (11.7 per cent) between 2010 and 2015, while the number of secondary teachers fell by 5 thousand (-2.2 per cent). The most notable feature is the shift of teachers from schools in local education authority control to academies. The number of teachers in the community sector contracted by 149.6 thousand (33.9 per cent) while the number of teachers in academies and free schools grew by 173.1 thousand (764.1 per cent).

Turning to gender, female teachers dominate employment in all phases and sectors (Table 3), but form seven-eighths of primary school teachers compared with under two-thirds of secondary teachers (Table 4). They formed nearly four-fifths of teachers in the local authority/community sector, but two-thirds of teachers in academies, free schools, etc. in 2015. The number of female teachers increased faster than male teachers in academies between 2010 and 2015 and fell more slowly than males in the local authority/community sector (Table 4). Therefore, the share of female teachers in the local authority/community sector increased between 2010 and 2015, as male employment contracted. On the other hand, female employment growth in academies outstripped male employment growth (Table 3), resulting in their share of academy employment also increasing (Table 4).

The share of disabled teachers in employment is highest for special schools, in which their employment increased between 2010 and 2014 (Table 5). They also experienced a relative shift from the local authority/community sector to academies and free schools (data on disabled teachers in 2015 was not made available by the DfE). Whilst the number of disabled teachers in academies has grown, the numerical increase has arisen because of the increase in academies, rather than an increase in the proportion of disabled teachers employed in academies. The percentage of disabled teachers in academies declined between 2010 and 2014.

The largest ten-year age group among teachers is those aged 30 to 39 in all sectors except special schools (Tables 9 and 10). The share of this age group increased between 2010 and 2015 as the share of teachers aged 50 or more fell. The number of teachers increased between 2010 and 2015 in each ten-year age group under 50, most rapidly for 40 to 49 year olds (Table 11). There was a small increase in the number of teachers aged 60 to 69. However, the number of 50-59 year olds fell by more than a fifth, most rapidly in the local authority/community sector. The decline in 50-59 year olds was faster in the secondary than the primary sector and employment in the academy/free school sector also grew most slowly for this age group. The share of 21-29 year olds and 50-59 year olds in the academy/free school sector declined over this period though growth in the numbers employed was greatest for 30-39 years olds (just exceeding the increase in 40-49 year olds employed).

All broad ethnic groups gained employment between 2010 and 2015, with the largest increase for BME groups (3.8 thousand) being for South Asians (Table 14). All ethnic groups lost employment between 2010 and 2015 in the local authority/community sector, while the number of teachers from white and Chinese and Other ethnic groups also declined in the secondary phase (Tables 14 and 17). The share of white teachers in employment declined in all phases of education, but increased in the academy/free school sector (Tables 15 and 16). The rate of increase in employment in academies and free schools was also highest for white teachers. The South Asian share of employment increased in all phases of education and in local authority/community schools between 2010 and 2015, but fell in academies and free schools. The rate of employment increase was fastest for teachers of mixed parentage, for whom the rate of increase was faster in special schools and primary and nursery schools than in secondary schools. The rate of increase in employment in academies and free

schools was slowest for Black teachers, whose share of employment also declined in this sector (Tables 15 and 16).

**Table 3: Gender breakdown of teachers by phase and sector of education in 2010 and 2015 (numbers)**

| Phase / sector            | Female        |               |              | Male          |               |             |
|---------------------------|---------------|---------------|--------------|---------------|---------------|-------------|
|                           | 2010          | 2015          | Change       | 2010          | 2015          | Change      |
| <i>Phase</i>              |               |               |              |               |               |             |
| Primary and nursery       | 190723        | 209973        | 19250        | 27984         | 34375         | 6391        |
| Secondary                 | 142185        | 142594        | 409          | 86091         | 80683         | -5408       |
| Special                   | 12253         | 14486         | 2233         | 4212          | 4962          | 750         |
| <i>Sector</i>             |               |               |              |               |               |             |
| Local Authority/Community | 331287        | 232480        | -98807       | 109532        | 58938         | -50594      |
| Academy/free etc.         | 13874         | 134573        | 120699       | 8755          | 61082         | 52327       |
| <b>Total</b>              | <b>345161</b> | <b>367053</b> | <b>21892</b> | <b>118287</b> | <b>120020</b> | <b>1733</b> |

**Table 4: Gender breakdown of teachers by phase and sector of education in 2010 and 2015 (percentages) and percentage change 2010-15**

| Phase / sector            | Female      |             |            | Male        |             |             |
|---------------------------|-------------|-------------|------------|-------------|-------------|-------------|
|                           | 2010        | 2015        | % Change   | 2010        | 2015        | % Change    |
| <i>Phase</i>              |             |             |            |             |             |             |
| Primary and nursery       | 87.2        | 85.9        | 10.1       | 12.8        | 87.2        | 22.8        |
| Secondary                 | 62.2        | 63.8        | 0.3        | 37.7        | 62.2        | -6.3        |
| Special                   | 74.4        | 74.5        | 14         | 25.6        | 74.4        | 17.8        |
| <i>Sector</i>             |             |             |            |             |             |             |
| Local Authority/Community | 75.1        | 79.8        | -26.9      | 24.8        | 75.1        | -46.2       |
| Academy/free etc.         | 61.2        | 68.7        | 786.6      | 38.6        | 61.2        | 597.7       |
| <b>Total</b>              | <b>74.4</b> | <b>75.3</b> | <b>5.8</b> | <b>25.5</b> | <b>74.4</b> | <b>1.47</b> |

**Table 5: Disabled teachers by phase and sector of education in 2010 and 2014\***

| Phase / sector            | Number      |             |          | Percentage |            |            |
|---------------------------|-------------|-------------|----------|------------|------------|------------|
|                           | 2010        | 2014        | Change   | 2010       | 2014       | % Change   |
| <i>Phase</i>              |             |             |          |            |            |            |
| Primary and nursery       | 984         | 934         | -50      | 0.4        | 0.4        | -5.1       |
| Secondary                 | 1035        | 1051        | 16       | 0.5        | 0.5        | 1.5        |
| Special                   | 118         | 156         | 38       | 0.7        | 0.8        | 32.2       |
| <i>Sector</i>             |             |             |          |            |            |            |
| Local Authority/Community | 2020        | 1417        | -603     | 0.5        | 0.5        | -29.9      |
| Academy/free etc.         | 117         | 724         | 607      | 0.5        | 0.4        | 518.8      |
| <b>Total</b>              | <b>2137</b> | <b>2141</b> | <b>4</b> | <b>0.5</b> | <b>0.4</b> | <b>0.2</b> |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 6: Age of teachers by phase and sector of education in 2010 (numbers)**

| Age group  | Phase               |           |         | Sector                    |                    | All    |
|------------|---------------------|-----------|---------|---------------------------|--------------------|--------|
|            | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |        |
| Aged 21-29 | 48728               | 51220     | 1803    | 95439                     | 6312               | 101751 |
| Aged 30-39 | 66987               | 71665     | 3888    | 135337                    | 7203               | 142540 |
| Aged 40-49 | 51785               | 51226     | 4227    | 102557                    | 4681               | 107238 |
| Aged 50-59 | 45447               | 47908     | 5755    | 95191                     | 3919               | 99110  |
| Aged 60-69 | 5853                | 6391      | 799     | 12495                     | 548                | 13043  |
| All ages   | 218800              | 228410    | 16472   | 441019                    | 22663              | 463682 |

**Table 7: Age of teachers by phase and sector of education in 2015 (numbers)**

| Age group  | Phase               |           |         | Sector                    |                    | All    |
|------------|---------------------|-----------|---------|---------------------------|--------------------|--------|
|            | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |        |
| Aged 21-29 | 63474               | 48950     | 2992    | 67886                     | 47530              | 115416 |
| Aged 30-39 | 75836               | 77082     | 5515    | 92586                     | 65847              | 158433 |
| Aged 40-49 | 61955               | 55825     | 5210    | 75438                     | 47552              | 122990 |
| Aged 50-59 | 36918               | 35773     | 4681    | 47591                     | 29781              | 77372  |
| Aged 60-69 | 6211                | 5811      | 1052    | 7948                      | 5126               | 13074  |
| All ages   | 244394              | 223441    | 19450   | 291449                    | 195836             | 487285 |

**Table 8: Age of teachers by phase and sector of education: change 2010-2015**

| Age group  | Phase               |           |         | Sector                    |                    | All    |
|------------|---------------------|-----------|---------|---------------------------|--------------------|--------|
|            | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |        |
| Aged 21-29 | 14746               | -2270     | 1189    | -27553                    | 41218              | 13665  |
| Aged 30-39 | 8849                | 5417      | 1627    | -42751                    | 58644              | 15893  |
| Aged 40-49 | 10170               | 4599      | 983     | -27119                    | 42871              | 15752  |
| Aged 50-59 | -8529               | -12135    | -1074   | -47600                    | 25862              | -21738 |
| Aged 60-69 | 358                 | -580      | 253     | -4547                     | 4578               | 31     |
| All ages   | 25594               | -4969     | 2978    | -149570                   | 173173             | 23603  |

**Table 9: Age of teachers by phase and sector of education in 2010 (percentages)**

| Age group  | Phase               |           |         | Sector                    |                    | All   |
|------------|---------------------|-----------|---------|---------------------------|--------------------|-------|
|            | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |       |
| Aged 21-29 | 22.3                | 22.4      | 10.9    | 21.6                      | 27.9               | 21.9  |
| Aged 30-39 | 30.6                | 31.4      | 23.6    | 30.7                      | 31.8               | 30.7  |
| Aged 40-49 | 23.7                | 22.4      | 25.7    | 23.3                      | 20.7               | 23.1  |
| Aged 50-59 | 20.8                | 21.0      | 34.9    | 21.6                      | 17.3               | 21.4  |
| Aged 60-69 | 2.7                 | 2.8       | 4.9     | 2.8                       | 2.4                | 2.8   |
| All ages   | 100.0               | 100.0     | 100.0   | 100.0                     | 100.0              | 100.0 |

**Table 10: Age of teachers by phase and sector of education in 2015 (percentages)**

| Age group  | Phase               |           |         | Sector                    |                    | All   |
|------------|---------------------|-----------|---------|---------------------------|--------------------|-------|
|            | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |       |
| Aged 21-29 | 26.0                | 21.9      | 15.4    | 23.3                      | 24.3               | 23.7  |
| Aged 30-39 | 31.0                | 34.5      | 28.4    | 31.8                      | 33.6               | 32.5  |
| Aged 40-49 | 25.4                | 25.0      | 26.8    | 25.9                      | 24.3               | 25.2  |
| Aged 50-59 | 15.1                | 16.0      | 24.1    | 16.3                      | 15.2               | 15.9  |
| Aged 60-69 | 2.5                 | 2.6       | 5.4     | 2.7                       | 2.6                | 2.7   |
| All ages   | 100.0               | 100.0     | 100.0   | 100.0                     | 100.0              | 100.0 |

**Table 11: Age of teachers by phase and sector of education: percentage change 2010-2015**

| Age group  | Phase               |           |         | Sector                    |                    | All   |
|------------|---------------------|-----------|---------|---------------------------|--------------------|-------|
|            | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |       |
| Aged 21-29 | 30.3                | -4.4      | 65.9    | -28.9                     | 653.0              | 13.4  |
| Aged 30-39 | 13.2                | 7.6       | 41.8    | -31.6                     | 814.2              | 11.1  |
| Aged 40-49 | 19.6                | 9.0       | 23.3    | -26.4                     | 915.9              | 14.7  |
| Aged 50-59 | -18.8               | -25.3     | -18.7   | -50.0                     | 659.9              | -21.9 |
| Aged 60-69 | 6.1                 | -9.1      | 31.7    | -36.4                     | 835.4              | 0.2   |
| All ages   | 11.7                | -2.2      | 18.1    | -33.9                     | 764.1              | 5.1   |

**Table 12: Ethnic group of teachers by phase and sector of education in 2010 (numbers)**

| Ethnic group    | Phase               |           |         | Sector                    |                    | All    |
|-----------------|---------------------|-----------|---------|---------------------------|--------------------|--------|
|                 | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |        |
| White           | 201096              | 200959    | 15291   | 398335                    | 19011              | 417346 |
| Mixed           | 1583                | 1929      | 107     | 3341                      | 278                | 3619   |
| South Asian     | 5514                | 7719      | 185     | 12504                     | 914                | 13418  |
| Black           | 2685                | 5516      | 209     | 7424                      | 986                | 8410   |
| Chinese & Other | 1042                | 1930      | 68      | 2760                      | 280                | 3040   |

**Table 13: Ethnic group of teachers by phase and sector of education in 2014 (numbers)**

| Ethnic group    | Phase               |           |         | Sector                    |                    | All    |
|-----------------|---------------------|-----------|---------|---------------------------|--------------------|--------|
|                 | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |        |
| White           | 217496              | 189229    | 17344   | 256811                    | 167258             | 424069 |
| Mixed           | 2455                | 2619      | 191     | 3082                      | 2183               | 5265   |
| South Asian     | 7540                | 9410      | 314     | 10245                     | 7019               | 17264  |
| Black           | 3307                | 5620      | 372     | 5181                      | 4118               | 9299   |
| Chinese & Other | 1095                | 1845      | 106     | 1581                      | 1465               | 3046   |

**Table 14: Ethnic group of teachers by phase and sector of education: change 2010-2014**

| Ethnic group    | Phase               |           |         | Sector                    |                    | All  |
|-----------------|---------------------|-----------|---------|---------------------------|--------------------|------|
|                 | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |      |
| White           | 16400               | -11730    | 2053    | -141524                   | 148247             | 6723 |
| Mixed           | 872                 | 690       | 84      | -259                      | 1905               | 1646 |
| South Asian     | 2026                | 1691      | 129     | -2259                     | 6105               | 3846 |
| Black           | 622                 | 104       | 163     | -2243                     | 3132               | 889  |
| Chinese & Other | 53                  | -85       | 38      | -1179                     | 1185               | 6    |

**Table 15: Ethnic group of teachers by phase and sector of education in 2010 (percentages)**

| Ethnic group    | Phase               |           |         | Sector                    |                    | All  |
|-----------------|---------------------|-----------|---------|---------------------------|--------------------|------|
|                 | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |      |
| White           | 91.9                | 88.0      | 92.8    | 90.3                      | 83.9               | 90.0 |
| Mixed           | 0.7                 | 0.8       | 0.6     | 0.8                       | 1.2                | 0.8  |
| South Asian     | 2.5                 | 3.4       | 1.1     | 2.8                       | 4.0                | 2.9  |
| Black           | 1.2                 | 2.4       | 1.3     | 1.7                       | 4.4                | 1.8  |
| Chinese & Other | 0.5                 | 0.8       | 0.4     | 0.6                       | 1.2                | 0.7  |

**Table 16: Ethnic group of teachers by phase and sector of education in 2015 (percentages)**

| Ethnic group    | Phase               |           |         | Sector                    |                    | All  |
|-----------------|---------------------|-----------|---------|---------------------------|--------------------|------|
|                 | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |      |
| White           | 89.0                | 84.7      | 89.2    | 88.1                      | 85.4               | 87.0 |
| Mixed           | 1.0                 | 1.2       | 1.0     | 1.1                       | 1.1                | 1.1  |
| South Asian     | 3.1                 | 4.2       | 1.6     | 3.5                       | 3.6                | 3.5  |
| Black           | 1.4                 | 2.5       | 1.9     | 1.8                       | 2.1                | 1.9  |
| Chinese & Other | 0.4                 | 0.8       | 0.5     | 0.5                       | 0.7                | 0.6  |

**Table 17: Change in ethnic group breakdown of teachers by phase and sector of education between 2010 and 2015 (percentage changes)**

| Ethnic group    | Phase               |           |         | Sector                    |                    | All  |
|-----------------|---------------------|-----------|---------|---------------------------|--------------------|------|
|                 | Primary and nursery | Secondary | Special | Local Authority/Community | Academy /free etc. |      |
| White           | 8.2                 | -5.8      | 13.4    | -35.5                     | 779.8              | 1.6  |
| Mixed           | 55.1                | 35.8      | 78.5    | -7.8                      | 685.3              | 45.5 |
| South Asian     | 36.7                | 21.9      | 69.7    | -18.1                     | 667.9              | 28.7 |
| Black           | 23.2                | 1.9       | 78.0    | -30.2                     | 317.6              | 10.6 |
| Chinese & Other | 5.1                 | -4.4      | 55.9    | -42.7                     | 423.2              | 0.2  |
| All teachers    | 11.7                | -2.2      | 18.1    | -33.9                     | 764.1              | 5.1  |

### 3.2 Employment by job grade, 2010-2014

A common feature of employment by job grade across all sections of the teacher workforce is the contraction of employment in the Advanced Teacher/Excellent Teacher/Lead Practitioner category between 2010 and 2015 (these three grades are combined because the AST and ET programmes ceased after 2013). Employment in this category fell by 1.4 thousand, mostly for females, which declined by 25.1 per cent (Table 18), compared to 15.4 per cent for males (Table 19). Employment grew fastest for deputy and assistant heads, with the rate of increase much faster for females than males. The number of head teachers declined by 3 per cent for males but increased by 1.7 per cent for females. The number of female classroom teachers increased by 4.2 per cent, compared with 0.1 per cent for males. However, the percentage of staff in senior roles was higher for men than women in both 2010 and 2015, though the male share of senior employment fell slightly over this period.

For disabled teachers, the number of head teachers increased by 8.7 per cent between 2010 and 2014, while the number of classroom teachers fell by 3.5 per cent (Table 20). The number of assistant and deputy heads fell by 0.6 per cent, and the share of the disabled among deputy and assistant heads fell slightly. Data on disability is not available for 2015.

Turning to age group, the number of classroom teachers in employment increased most quickly for 21-29 year olds, while the number of classroom teachers aged 50-59 declined by nearly a quarter between 2010 and 2015 (Table 24). The rate of increase in the number of heads and deputy heads was fastest for 21-29 year olds, followed by 40-49 year olds, while the number of heads and deputy heads aged 50-59 declined by a fifth. The percentage share of this age group among senior staff was about 10 per cent lower in 2015 than 2010 (Tables 25 and 26). The percentage of 50-59 year olds holding senior jobs was higher than for any age group in 2010 and increased from 21.7 to 22.7 per cent (Tables 27 and 28), indicating that job loss in this age group was mainly experienced by staff in more junior positions.

White teachers were the only ethnic group to lose employment in head teacher posts between 2010 and 2015 (Table 31). Growth in Black and Minority Ethnic groups did not offset this decline, with the total number of heads falling by 217 (1 per cent). The number of new heads was greatest for Black ethnic groups, an increase of a third over the period (Table 32). There was rapid increase in the number of deputy and assistant heads in all BME groups, with the highest rate of increase being 87 per cent for people of mixed parentage, followed by the 68 per cent increase in the South Asian ethnic groups. The decrease in the number of teachers in the Advanced Teacher/Excellent Teacher/Lead Practitioner category largely affected the white ethnic group. The rate of increase in classroom teachers was most rapid for people of mixed parentage and the South Asian ethnic groups. White teachers accounted for the great majority of employment in each grade of employment (Tables 33 and 34) and the share of senior posts in total employment was highest for the white ethnic group in both 2010 (Table 35) and 2014 (Table 36).



**Table 18: Female employment by job grade, 2010-15**

|                            | 2010   | % of females | % job level | 2015   | % of females | % job level | Change | % change |
|----------------------------|--------|--------------|-------------|--------|--------------|-------------|--------|----------|
| Head, exec head            | 14026  | 3.9          | 65.2        | 14269  | 3.8          | 66.2        | 243    | 1.7      |
| Deputy, Assistant head     | 25826  | 7.2          | 65.7        | 32021  | 8.5          | 68.8        | 6195   | 24.0     |
| AST, ET, Lead Practitioner | 4549   | 1.3          | 74.4        | 3405   | 0.9          | 71.9        | -1144  | -25.1    |
| Classroom Teacher          | 312468 | 87.6         | 75.8        | 325712 | 86.8         | 76.6        | 13244  | 4.2      |
| Females                    | 356869 | 100.0        | 74.5        | 375407 | 100.0        | 75.3        | 18538  | 5.2      |

**Table 19: Male employment by job grade, 2010-15**

|                            | 2010   | % of males | % job level | 2015   | % of males | % job level | Change | % change |
|----------------------------|--------|------------|-------------|--------|------------|-------------|--------|----------|
| Head, exec head            | 7492   | 6.1        | 34.8        | 7268   | 5.9        | 33.7        | -224   | -3.0     |
| Deputy, Assistant head     | 13455  | 11.0       | 34.2        | 14485  | 11.8       | 31.1        | 1030   | 7.7      |
| AST, ET, Lead Practitioner | 1567   | 1.3        | 25.6        | 1326   | 1.1        | 28.0        | -241   | -15.4    |
| Classroom Teacher          | 99508  | 81.5       | 24.1        | 99558  | 81.2       | 23.4        | 50     | 0.1      |
| Males                      | 122022 | 100.0      | 25.5        | 122637 | 100.0      | 24.6        | 615    | 0.5      |

**Table 20: Disabled employment by job grade, 2010-14\***

|                            | 2010 | % of disabled | % job level | 2014 | % of disabled | % job level | Change | % change |
|----------------------------|------|---------------|-------------|------|---------------|-------------|--------|----------|
| Head, exec head            | 104  | 4.3           | 0.5         | 113  | 4.9           | 0.5         | 9      | 8.7      |
| Deputy, Assistant head     | 154  | 6.4           | 0.4         | 153  | 6.6           | 0.3         | -1     | -0.6     |
| AST, ET, Lead Practitioner | 62   | 2.6           | 1.0         | 39   | 1.7           | 0.9         | -23    | -37.1    |
| Classroom Teacher          | 2073 | 86.6          | 0.5         | 2000 | 86.8          | 0.5         | -73    | -3.5     |
| Disabled                   | 2393 | 100.0         | 0.5         | 2305 | 100.0         | 0.5         | -88    | -3.7     |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 21: Employment by age group and job grade, 2010**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total  |
|-------|-----------------|------------------------|----------------------------|-------------------|--------|
| 21-29 | 19              | 972                    | 378                        | 101251            | 102620 |
| 30-39 | 2423            | 12595                  | 1954                       | 128235            | 145207 |
| 40-49 | 7230            | 12497                  | 1601                       | 90173             | 111501 |
| 50-59 | 10683           | 12177                  | 1871                       | 80630             | 105361 |
| 60-69 | 1166            | 1051                   | 313                        | 11908             | 14438  |
| Total | 21521           | 39292                  | 6117                       | 412197            | 479127 |

**Table 22: Employment by age group and job grade, 2015**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total  |
|-------|-----------------|------------------------|----------------------------|-------------------|--------|
| 21-29 | 32              | 1548                   | 459                        | 114008            | 116047 |
| 30-39 | 2555            | 16610                  | 1440                       | 139906            | 160511 |
| 40-49 | 8950            | 17349                  | 1379                       | 98598             | 126276 |
| 50-59 | 8578            | 9861                   | 1151                       | 61641             | 81231  |
| 60-69 | 1427            | 1144                   | 306                        | 11315             | 14192  |
| Total | 21542           | 46512                  | 4735                       | 425468            | 498257 |

**Table 23: Change in employment by age group and job grade, 2010-2015**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total  |
|-------|-----------------|------------------------|----------------------------|-------------------|--------|
| 21-29 | 13              | 576                    | 81                         | 12757             | 13427  |
| 30-39 | 132             | 4015                   | -514                       | 11671             | 15304  |
| 40-49 | 1720            | 4852                   | -222                       | 8425              | 14775  |
| 50-59 | -2105           | -2316                  | -720                       | -18989            | -24130 |
| 60-69 | 261             | 93                     | -7                         | -593              | -246   |
| Total | 21              | 7220                   | -1382                      | 13271             | 19130  |

**Table 24: Percentage change in employment by age group and job grade, 2010-2015**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-------|-----------------|------------------------|----------------------------|-------------------|-------|
| 21-29 | 68.4            | 59.3                   | 21.4                       | 12.6              | 13.1  |
| 30-39 | 5.4             | 31.9                   | -26.3                      | 9.1               | 10.5  |
| 40-49 | 23.8            | 38.8                   | -13.9                      | 9.3               | 13.3  |
| 50-59 | -19.7           | -19.0                  | -38.5                      | -23.6             | -22.9 |
| 60-69 | 22.4            | 8.8                    | -2.2                       | -5.0              | -1.7  |
| Total | 0.1             | 18.4                   | -22.6                      | 3.2               | 4.0   |

**Table 25: Percentage of age group in each job grade, 2010**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-------|-----------------|------------------------|----------------------------|-------------------|-------|
| 21-29 | 0.1             | 2.5                    | 6.2                        | 24.6              | 21.4  |
| 30-39 | 11.3            | 32.1                   | 31.9                       | 31.1              | 30.3  |
| 40-49 | 33.6            | 31.8                   | 26.2                       | 21.9              | 23.3  |
| 50-59 | 49.6            | 31.0                   | 30.6                       | 19.6              | 22.0  |
| 60-69 | 5.4             | 2.7                    | 5.1                        | 2.9               | 3.0   |
| Total | 100.0           | 100.0                  | 100.0                      | 100.0             | 100.0 |

**Table 26: Percentage of age group in each job grade, 2015**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-------|-----------------|------------------------|----------------------------|-------------------|-------|
| 21-29 | 0.1             | 3.3                    | 9.7                        | 26.8              | 23.3  |
| 30-39 | 11.9            | 35.7                   | 30.4                       | 32.9              | 32.2  |
| 40-49 | 41.5            | 37.3                   | 29.1                       | 23.2              | 25.3  |
| 50-59 | 39.8            | 21.2                   | 24.3                       | 14.5              | 16.3  |
| 60-69 | 6.6             | 2.5                    | 6.5                        | 2.7               | 2.8   |
| Total | 100.0           | 100.0                  | 100.0                      | 100.0             | 100.0 |

**Table 27: Percentage of job grade in each age group, 2010**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-------|-----------------|------------------------|----------------------------|-------------------|-------|
| 21-29 | 0.0             | 0.9                    | 0.4                        | 98.7              | 100.0 |
| 30-39 | 1.7             | 8.7                    | 1.3                        | 88.3              | 100.0 |
| 40-49 | 6.5             | 11.2                   | 1.4                        | 80.9              | 100.0 |
| 50-59 | 10.1            | 11.6                   | 1.8                        | 76.5              | 100.0 |
| 60-69 | 8.1             | 7.3                    | 2.2                        | 82.5              | 100.0 |
| Total | 4.5             | 8.2                    | 1.3                        | 86.0              | 100.0 |

**Table 28: Percentage of job grade in each age group, 2015**

|       | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-------|-----------------|------------------------|----------------------------|-------------------|-------|
| 21-29 | 0.0             | 1.3                    | 0.4                        | 98.2              | 100.0 |
| 30-39 | 1.6             | 10.3                   | 0.9                        | 87.2              | 100.0 |
| 40-49 | 7.1             | 13.7                   | 1.1                        | 78.1              | 100.0 |
| 50-59 | 10.6            | 12.1                   | 1.4                        | 75.9              | 100.0 |
| 60-69 | 10.1            | 8.1                    | 2.2                        | 79.7              | 100.0 |
| Total | 4.3             | 9.3                    | 1.0                        | 85.4              | 100.0 |

**Table 29: Employment by ethnic group and job grade, 2010**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total  |
|-----------------|-----------------|------------------------|----------------------------|-------------------|--------|
| White           | 20435           | 36549                  | 5338                       | 367287            | 429609 |
| Mixed           | 103             | 200                    | 47                         | 3379              | 3729   |
| South Asian     | 197             | 657                    | 188                        | 12698             | 13740  |
| Black           | 168             | 498                    | 109                        | 7872              | 8647   |
| Chinese & Other | 30              | 132                    | 49                         | 2937              | 3148   |
| Total           | 20933           | 38036                  | 5731                       | 394173            | 458873 |

**Table 30: Employment by ethnic group and job grade, 2015**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total  |
|-----------------|-----------------|------------------------|----------------------------|-------------------|--------|
| White           | 20079           | 42159                  | 3956                       | 366875            | 433069 |
| Mixed           | 127             | 374                    | 62                         | 4837              | 5400   |
| South Asian     | 246             | 1105                   | 199                        | 15969             | 17519  |
| Black           | 225             | 674                    | 102                        | 8542              | 9543   |
| Chinese & Other | 39              | 191                    | 59                         | 2846              | 3135   |
| Total           | 20716           | 44503                  | 4378                       | 399069            | 468666 |

**Table 31: Change in employment by ethnic group and job grade, 2010-2015**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-----------------|-----------------|------------------------|----------------------------|-------------------|-------|
| White           | -356            | 5610                   | -1382                      | -412              | 3460  |
| Mixed           | 24              | 174                    | 15                         | 1458              | 1671  |
| South Asian     | 49              | 448                    | 11                         | 3271              | 3779  |
| Black           | 57              | 176                    | -7                         | 670               | 896   |
| Chinese & Other | 9               | 59                     | 10                         | -91               | -13   |
| Total           | -217            | 6467                   | -1353                      | 4896              | 9793  |

**Table 32: Percentage change in employment by ethnic group and job grade, 2010-2015**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-----------------|-----------------|------------------------|----------------------------|-------------------|-------|
| White           | -1.7            | 15.3                   | -25.9                      | -0.1              | 0.8   |
| Mixed           | 23.3            | 87.0                   | 31.9                       | 43.1              | 44.8  |
| South Asian     | 24.9            | 68.2                   | 5.9                        | 25.8              | 27.5  |
| Black           | 33.9            | 35.3                   | -6.4                       | 8.5               | 10.4  |
| Chinese & Other | 30.0            | 44.7                   | 20.4                       | -3.1              | -0.4  |
| Total           | -1.0            | 17.0                   | -23.6                      | 1.2               | 2.1   |

**Table 33: Percentage of ethnic group in each job grade, 2010**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-----------------|-----------------|------------------------|----------------------------|-------------------|-------|
| White           | 97.6            | 96.1                   | 93.1                       | 93.2              | 93.6  |
| Mixed           | 0.5             | 0.5                    | 0.8                        | 0.9               | 0.8   |
| South Asian     | 0.9             | 1.7                    | 3.3                        | 3.2               | 3.0   |
| Black           | 0.8             | 1.3                    | 1.9                        | 2.0               | 1.9   |
| Chinese & Other | 0.1             | 0.3                    | 0.9                        | 0.7               | 0.7   |
| Total           | 100.0           | 100.0                  | 100.0                      | 100.0             | 100.0 |

**Table 34: Percentage of ethnic group in each job grade, 2015**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-----------------|-----------------|------------------------|----------------------------|-------------------|-------|
| White           | 96.9            | 94.7                   | 90.4                       | 91.9              | 92.4  |
| Mixed           | 0.6             | 0.8                    | 1.4                        | 1.2               | 1.2   |
| South Asian     | 1.2             | 2.5                    | 4.5                        | 4.0               | 3.7   |
| Black           | 1.1             | 1.5                    | 2.3                        | 2.1               | 2.0   |
| Chinese & Other | 0.2             | 0.4                    | 1.3                        | 0.7               | 0.7   |
| Total           | 100.0           | 100.0                  | 100.0                      | 100.0             | 100.0 |

**Table 35: Percentage of job grade in each ethnic group, 2010**

|                 | Head, exec head | Deputy, Assistant head | AST, ET, Lead Practitioner | Classroom Teacher | Total |
|-----------------|-----------------|------------------------|----------------------------|-------------------|-------|
| White           | 4.8             | 8.5                    | 1.2                        | 85.5              | 100.0 |
| Mixed           | 2.8             | 5.4                    | 1.3                        | 90.6              | 100.0 |
| South Asian     | 1.4             | 4.8                    | 1.4                        | 92.4              | 100.0 |
| Black           | 1.9             | 5.8                    | 1.3                        | 91.0              | 100.0 |
| Chinese & Other | 1.0             | 4.2                    | 1.6                        | 93.3              | 100.0 |
| Total           | 4.6             | 8.3                    | 1.2                        | 85.9              | 100.0 |

**Table 36: Percentage of job grade in each ethnic group, 2015**

|                 | Head,<br>exec<br>head | Deputy,<br>Assistant<br>head | AST, ET,<br>Lead<br>Practitioner | Classroom<br>Teacher | Total |
|-----------------|-----------------------|------------------------------|----------------------------------|----------------------|-------|
| White           | 4.6                   | 9.7                          | 0.9                              | 84.7                 | 100.0 |
| Mixed           | 2.4                   | 6.9                          | 1.1                              | 89.6                 | 100.0 |
| South Asian     | 1.4                   | 6.3                          | 1.1                              | 91.2                 | 100.0 |
| Black           | 2.4                   | 7.1                          | 1.1                              | 89.5                 | 100.0 |
| Chinese & Other | 1.2                   | 6.1                          | 1.9                              | 90.8                 | 100.0 |
| Total           | 4.4                   | 9.5                          | 0.9                              | 85.1                 | 100.0 |

### 3.3 Employment by pay range, 2010-2014

The analysis of employment change by pay range for 2010 to 2015 is complicated by the suppression by the DfE of pay range and earnings data for teachers with unusually high pay in the 2010-2015 linked data set.

Despite requests made to the DfE by researchers for a full data set of pay and earnings data, this was not provided by the Department. The unwillingness of a Government Department to provide details of the pay of public servants is a significant concern.

This suppression of data means that it is not possible to draw an exact comparison between the data analysis in the Phase 1 research report and this current report. Nevertheless, it is possible to identify trends in the lower pay ranges and to present cautious findings for the more senior pay ranges. The most notable feature of employment change by pay range between 2010 and 2015 is the fall of 1.3 thousand (28.5 per cent) in the number employed in the AST, Excellent Teacher and Lead Practitioners pay ranges (Table 43). The number of teachers on the Leadership range grew by 18.2 per cent. The number on other pay ranges increased more slowly, the fastest increase being for Unqualified Teachers (9.3 per cent).

Turning first to gender, the number on each pay range other than the Advanced Teacher/Excellent Teacher/Lead Practitioner range increased for both women and men. The fastest rates of increase for women (21.5 per cent for women and 11.7 per cent for men) were for the Leadership range (Tables 37 and 38), with rates of increase in the other pay ranges being highest for Unqualified Teachers. Men were more likely than women to be on both the Unqualified and Leadership pay ranges in both 2010 and 2015.

Disabled teachers were most likely to be on the Upper pay range in both 2010 and 2014 (Table 39), but the number on this pay range declined by 10.3 per cent. On the other hand, the percentage on the Unqualified pay range increased by nearly a third over this period. Data on disability is not available for 2015.

Numbers employed on the Unqualified Teacher scale increased by more than a quarter in both the 21-29 and 60-69 year old age groups (Table 43). The number of teachers on the Main pay scale fell in all age groups above the age of 40, fastest for 50-59 year olds. The latter was the only age group in which the number on the Upper and Leadership pay scales fell between 2010 and 2015 (by 22.9 and 16.3 per cent respectively). The number of 21-29 year olds on the Leadership scale increased by 64.3 per cent. The percentage of teachers on the Upper and Leadership pay ranges increased with increasing age up to the age of 60 in both 2010 and 2015 (Tables 44 and 45). However, the percentage of teachers on the Leadership scale aged 40-49 exceeded the percentage for 50-59 year olds in 2015, and the latter was the only age group in which the percentage of teachers in higher pay ranges fell between 2010 and 2015.

Turning to ethnic group, employment grew between 2010 and 2015 for each ethnic group in each pay range except the Advanced Teacher/Excellent Teacher/Lead Practitioner range, in which the number of White and Chinese and Other teachers fell by (31.3 per cent and 19.4 per cent respectively). The highest rates of increase were experienced by teachers of mixed parentage in each pay range, with the fastest rate of growth in the Leadership range and the slowest in the Unqualified Teacher range (Table 51). Rates of increase for South Asian teachers were slightly slower in the Upper and Leadership ranges. The share of Black and Minority Ethnic groups in each pay range increased between 2010 and 2015 (Tables 52 and 53). South Asian ethnic groups displayed a higher share of employment in each pay range than Black ethnic groups in both 2010 and 2015 and the shares of both ethnic groups increased over this period. The share of total employment in each of these broad ethnic groups declined with increasing seniority, while that of the White group increased. The

percentage employed on the most senior pay scales from White ethnic groups only fell slightly over this period.



**Table 37: Female employment by pay range, 2010-2015**

|                            | 2010   | % of females | % pay range | 2015   | % of females | % pay range | Change | % change |
|----------------------------|--------|--------------|-------------|--------|--------------|-------------|--------|----------|
| Unqualified Teacher        | 8666   | 2.7          | 68.4        | 9535   | 2.8          | 68.8        | 869    | 10.0     |
| Main                       | 137679 | 43.7         | 77.4        | 147246 | 43.0         | 77.4        | 9567   | 6.9      |
| Upper                      | 127854 | 40.5         | 76.3        | 137692 | 40.2         | 77.0        | 9838   | 7.7      |
| AST, ET, Lead Practitioner | 3370   | 1.1          | 73.2        | 2302   | 0.7          | 69.9        | -1068  | -31.7    |
| Leadership                 | 37790  | 12.0         | 66.3        | 45923  | 13.4         | 68.1        | 8133   | 21.5     |
| Total                      | 315359 | 100.0        | 75.1        | 342698 | 100.0        | 75.5        | 27339  | 8.7      |

**Table 38: Male employment by pay range, 2010-2015**

|                            | 2010   | % of males | % pay range | 2015   | % of males | % pay range | Change | % change |
|----------------------------|--------|------------|-------------|--------|------------|-------------|--------|----------|
| Unqualified Teacher        | 4009   | 3.8        | 31.6        | 4322   | 3.9        | 31.2        | 313    | 7.8      |
| Main                       | 40298  | 38.6       | 22.6        | 43053  | 38.8       | 22.6        | 2755   | 6.8      |
| Upper                      | 39696  | 38.0       | 23.7        | 41219  | 37.1       | 23.0        | 1523   | 3.8      |
| AST, ET, Lead Practitioner | 1236   | 1.2        | 26.8        | 993    | 0.9        | 30.1        | -243   | -19.7    |
| Leadership                 | 19215  | 18.4       | 33.7        | 21463  | 19.3       | 31.8        | 2248   | 11.7     |
| Total                      | 104454 | 100.0      | 24.9        | 111050 | 100.0      | 24.5        | 6596   | 6.3      |

**Table 39: Disabled employment by pay range, 2010-2014\***

|                            | 2010 | % of disabled | % pay range | 2014 | % of disabled | % pay range | Change | % change |
|----------------------------|------|---------------|-------------|------|---------------|-------------|--------|----------|
| Unqualified Teacher        | 108  | 4.6           | 0.6         | 142  | 6.2           | 0.7         | 34     | 31.5     |
| Main                       | 691  | 29.5          | 0.4         | 760  | 33.0          | 0.4         | 69     | 10.0     |
| Upper                      | 1221 | 52.1          | 0.6         | 1095 | 47.6          | 0.5         | -126   | -10.3    |
| AST, ET, Lead Practitioner | 34   | 1.5           | 0.7         | 19   | 0.8           | 0.6         | -15    | -44.1    |
| Leadership                 | 289  | 12.3          | 0.4         | 285  | 12.4          | 0.4         | -4     | -1.4     |
| Total                      | 2343 | 100.0         | 0.5         | 2301 | 100.0         | 0.5         | -42    | -1.8     |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 40: Employment by age group and pay range, 2010**

|       | Unqualified Teacher | Main   | Upper  | AST, ET, Lead Practitioner | Leadership | Total  |
|-------|---------------------|--------|--------|----------------------------|------------|--------|
| 21-29 | 4123                | 79030  | 4701   | 355                        | 1223       | 89432  |
| 30-39 | 2831                | 50927  | 57660  | 1698                       | 14250      | 127366 |
| 40-49 | 3309                | 29020  | 46364  | 1187                       | 18280      | 98160  |
| 50-59 | 2021                | 16300  | 51825  | 1203                       | 21200      | 92549  |
| 60-69 | 392                 | 2712   | 7002   | 163                        | 2055       | 12324  |
| Total | 12676               | 177989 | 167552 | 4606                       | 57008      | 419831 |

**Table 41: Employment by age group and pay range, 2015**

|       | Unqualified Teacher | Main   | Upper  | AST, ET, Lead Practitioner | Leadership | Total  |
|-------|---------------------|--------|--------|----------------------------|------------|--------|
| 21-29 | 5251                | 91921  | 5333   | 314                        | 2010       | 104829 |
| 30-39 | 2998                | 54613  | 67731  | 1245                       | 19641      | 146228 |
| 40-49 | 2910                | 27772  | 58474  | 941                        | 25523      | 115620 |
| 50-59 | 2207                | 13704  | 39960  | 663                        | 17747      | 74281  |
| 60-69 | 494                 | 2296   | 7417   | 132                        | 2477       | 12816  |
| Total | 13860               | 190306 | 178915 | 3295                       | 67398      | 453774 |

**Table 42: Change in employment by age group and pay range, 2010-2015**

|       | Unqualified Teacher | Main  | Upper  | AST, ET, Lead Practitioner | Leadership | Total  |
|-------|---------------------|-------|--------|----------------------------|------------|--------|
| 21-29 | 1128                | 12891 | 632    | -41                        | 787        | 15397  |
| 30-39 | 167                 | 3686  | 10071  | -453                       | 5391       | 18862  |
| 40-49 | -399                | -1248 | 12110  | -246                       | 7243       | 17460  |
| 50-59 | 186                 | -2596 | -11865 | -540                       | -3453      | -18268 |
| 60-69 | 102                 | -416  | 415    | -31                        | 422        | 492    |
| Total | 1184                | 12317 | 11363  | -1311                      | 10390      | 33943  |

**Table 43: Percentage change in employment by age group and pay range, 2010-2015**

|       | Unqualified Teacher | Main  | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-------|---------------------|-------|-------|----------------------------|------------|-------|
| 21-29 | 27.4                | 16.3  | 13.4  | -11.5                      | 64.3       | 17.2  |
| 30-39 | 5.9                 | 7.2   | 17.5  | -26.7                      | 37.8       | 14.8  |
| 40-49 | -12.1               | -4.3  | 26.1  | -20.7                      | 39.6       | 17.8  |
| 50-59 | 9.2                 | -15.9 | -22.9 | -44.9                      | -16.3      | -19.7 |
| 60-69 | 26.0                | -15.3 | 5.9   | -19.0                      | 20.5       | 4.0   |
| Total | 9.3                 | 6.9   | 6.8   | -28.5                      | 18.2       | 8.1   |

**Table 44: Percentage of each age group in each pay range, 2010**

|       | Unqualified Teacher | Main  | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-------|---------------------|-------|-------|----------------------------|------------|-------|
| 21-29 | 32.5                | 44.4  | 2.8   | 7.7                        | 2.1        | 21.3  |
| 30-39 | 22.3                | 28.6  | 34.4  | 36.9                       | 25.0       | 30.3  |
| 40-49 | 26.1                | 16.3  | 27.7  | 25.8                       | 32.1       | 23.4  |
| 50-59 | 15.9                | 9.2   | 30.9  | 26.1                       | 37.2       | 22.0  |
| 60-69 | 3.1                 | 1.5   | 4.2   | 3.5                        | 3.6        | 2.9   |
| Total | 100.0               | 100.0 | 100.0 | 100.0                      | 100.0      | 100.0 |

**Table 45: Percentage of each age group in each pay range, 2015**

|       | Unqualified Teacher | Main  | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-------|---------------------|-------|-------|----------------------------|------------|-------|
| 21-29 | 37.9                | 48.3  | 3.0   | 9.5                        | 3.0        | 23.1  |
| 30-39 | 21.6                | 28.7  | 37.9  | 37.8                       | 29.1       | 32.2  |
| 40-49 | 21.0                | 14.6  | 32.7  | 28.6                       | 37.9       | 25.5  |
| 50-59 | 15.9                | 7.2   | 22.3  | 20.1                       | 26.3       | 16.4  |
| 60-69 | 3.6                 | 1.2   | 4.1   | 4.0                        | 3.7        | 2.8   |
| Total | 100.0               | 100.0 | 100.0 | 100.0                      | 100.0      | 100.0 |

**Table 46: Percentage of pay range in each age group, 2010**

|       | Unqualified Teacher | Main | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-------|---------------------|------|-------|----------------------------|------------|-------|
| 21-29 | 4.6                 | 88.4 | 5.3   | 0.4                        | 1.4        | 100.0 |
| 30-39 | 2.2                 | 40.0 | 45.3  | 1.3                        | 11.2       | 100.0 |
| 40-49 | 3.4                 | 29.6 | 47.2  | 1.2                        | 18.6       | 100.0 |
| 50-59 | 2.2                 | 17.6 | 56.0  | 1.3                        | 22.9       | 100.0 |
| 60-69 | 3.2                 | 22.0 | 56.8  | 1.3                        | 16.7       | 100.0 |
| Total | 3.0                 | 42.4 | 39.9  | 1.1                        | 13.6       | 100.0 |

**Table 47: Percentage of pay range in each age group, 2015**

|       | Unqualified Teacher | Main | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-------|---------------------|------|-------|----------------------------|------------|-------|
| 21-29 | 5.0                 | 87.7 | 5.1   | 0.3                        | 1.9        | 100.0 |
| 30-39 | 2.1                 | 37.3 | 46.3  | 0.9                        | 13.4       | 100.0 |
| 40-49 | 2.5                 | 24.0 | 50.6  | 0.8                        | 22.1       | 100.0 |
| 50-59 | 3.0                 | 18.4 | 53.8  | 0.9                        | 23.9       | 100.0 |
| 60-69 | 3.9                 | 17.9 | 57.9  | 1.0                        | 19.3       | 100.0 |
| Total | 3.1                 | 41.9 | 39.4  | 0.7                        | 14.9       | 100.0 |

**Table 48: Employment by ethnic group and pay range, 2010**

|                 | Unqualified Teacher | Main   | Upper  | AST, ET, Lead Practitioner | Leadership | Total  |
|-----------------|---------------------|--------|--------|----------------------------|------------|--------|
| White           | 10613               | 158049 | 153868 | 4156                       | 53554      | 380240 |
| Mixed           | 165                 | 1799   | 929    | 39                         | 288        | 3220   |
| South Asian     | 517                 | 6570   | 3438   | 120                        | 783        | 11428  |
| Black           | 385                 | 3692   | 2505   | 74                         | 647        | 7303   |
| Chinese & Other | 241                 | 1426   | 886    | 31                         | 178        | 2762   |
| Total           | 11921               | 171536 | 161626 | 4420                       | 55450      | 404953 |

**Table 49: Employment by ethnic group and pay range, 2015**

|                 | Unqualified Teacher | Main   | Upper  | AST, ET, Lead Practitioner | Leadership | Total  |
|-----------------|---------------------|--------|--------|----------------------------|------------|--------|
| White           | 11267               | 162816 | 160141 | 2855                       | 61506      | 398585 |
| Mixed           | 237                 | 2670   | 1388   | 51                         | 521        | 4867   |
| South Asian     | 601                 | 7923   | 5116   | 123                        | 1401       | 15164  |
| Black           | 531                 | 3797   | 3060   | 79                         | 940        | 8407   |
| Chinese & Other | 227                 | 1360   | 948    | 25                         | 244        | 2804   |
| Total           | 12863               | 178566 | 170653 | 3133                       | 64612      | 429827 |

**Table 50: Change in employment by ethnic group and pay range, 2010-2015**

|                 | Unqualified Teacher | Main | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-----------------|---------------------|------|-------|----------------------------|------------|-------|
| White           | 654                 | 4767 | 6273  | -1301                      | 7952       | 18345 |
| Mixed           | 72                  | 871  | 459   | 12                         | 233        | 1647  |
| South Asian     | 84                  | 1353 | 1678  | 3                          | 618        | 3736  |
| Black           | 146                 | 105  | 555   | 5                          | 293        | 1104  |
| Chinese & Other | -14                 | -66  | 62    | -6                         | 66         | 42    |
| Total           | 942                 | 7030 | 9027  | -1287                      | 9162       | 24874 |

**Table 51: Percentage change in employment by ethnic group and pay range, 2010-2015**

|                 | Unqualified Teacher | Main | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-----------------|---------------------|------|-------|----------------------------|------------|-------|
| White           | 6.2                 | 3.0  | 4.1   | -31.3                      | 14.8       | 4.8   |
| Mixed           | 43.6                | 48.4 | 49.4  | 30.8                       | 80.9       | 51.1  |
| South Asian     | 16.2                | 20.6 | 48.8  | 2.5                        | 78.9       | 32.7  |
| Black           | 37.9                | 2.8  | 22.2  | 6.8                        | 45.3       | 15.1  |
| Chinese & Other | -5.8                | -4.6 | 7.0   | -19.4                      | 37.1       | 1.5   |
| Total           | 7.9                 | 4.1  | 5.6   | -29.1                      | 16.5       | 6.1   |

**Table 52: Percentage of ethnic group in each pay range, 2010**

|                 | Unqualified Teacher | Main  | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-----------------|---------------------|-------|-------|----------------------------|------------|-------|
| White           | 89.0                | 92.1  | 95.2  | 94.0                       | 96.6       | 93.9  |
| Mixed           | 1.4                 | 1.0   | 0.6   | 0.9                        | 0.5        | 0.8   |
| South Asian     | 4.3                 | 3.8   | 2.1   | 2.7                        | 1.4        | 2.8   |
| Black           | 3.2                 | 2.2   | 1.5   | 1.7                        | 1.2        | 1.8   |
| Chinese & Other | 2.0                 | 0.8   | 0.5   | 0.7                        | 0.3        | 0.7   |
| Total           | 100.0               | 100.0 | 100.0 | 100.0                      | 100.0      | 100.0 |

**Table 53: Percentage of ethnic group in each pay range, 2015**

|                 | Unqualified Teacher | Main  | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-----------------|---------------------|-------|-------|----------------------------|------------|-------|
| White           | 87.6                | 91.2  | 93.8  | 91.1                       | 95.2       | 92.7  |
| Mixed           | 1.8                 | 1.5   | 0.8   | 1.6                        | 0.8        | 1.1   |
| South Asian     | 4.7                 | 4.4   | 3.0   | 3.9                        | 2.2        | 3.5   |
| Black           | 4.1                 | 2.1   | 1.8   | 2.5                        | 1.5        | 2.0   |
| Chinese & Other | 1.8                 | 0.8   | 0.6   | 0.8                        | 0.4        | 0.7   |
| Total           | 100.0               | 100.0 | 100.0 | 100.0                      | 100.0      | 100.0 |

**Table 54: Percentage of pay range in each ethnic group, 2010**

|                 | Unqualified Teacher | Main | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-----------------|---------------------|------|-------|----------------------------|------------|-------|
| White           | 2.8                 | 41.6 | 40.5  | 1.1                        | 14.1       | 100.0 |
| Mixed           | 5.1                 | 55.9 | 28.9  | 1.2                        | 8.9        | 100.0 |
| South Asian     | 4.5                 | 57.5 | 30.1  | 1.1                        | 6.9        | 100.0 |
| Black           | 5.3                 | 50.6 | 34.3  | 1.0                        | 8.9        | 100.0 |
| Chinese & Other | 8.7                 | 51.6 | 32.1  | 1.1                        | 6.4        | 100.0 |
| Total           | 2.9                 | 42.4 | 39.9  | 1.1                        | 13.7       | 100.0 |

**Table 55: Percentage of pay range in each ethnic group, 2015**

|                 | Unqualified Teacher | Main | Upper | AST, ET, Lead Practitioner | Leadership | Total |
|-----------------|---------------------|------|-------|----------------------------|------------|-------|
| White           | 2.8                 | 40.8 | 40.2  | 0.7                        | 15.4       | 100.0 |
| Mixed           | 4.9                 | 54.9 | 28.5  | 1.0                        | 10.7       | 100.0 |
| South Asian     | 4.0                 | 52.2 | 33.7  | 0.8                        | 9.2        | 100.0 |
| Black           | 6.3                 | 45.2 | 36.4  | 0.9                        | 11.2       | 100.0 |
| Chinese & Other | 8.1                 | 48.5 | 33.8  | 0.9                        | 8.7        | 100.0 |
| Total           | 3.0                 | 41.5 | 39.7  | 0.7                        | 15.0       | 100.0 |

#### 4 Earnings trends, 2010-2015

This section presents analysis of changes in average earnings for teachers with protected characteristics compared with all teachers. The analysis presents averages for all teachers present in the SWC in a given year. In the 2010-2015 linked data set, the DfE have provided Full-time equivalent gross annual pay for all except Head teachers and others the Department has defined as having unusual pay. It is not unreasonable to draw the conclusion that, under these circumstances, 'unusual' is defined by the DfE as 'unusually high'. Actual salary is calculated by multiplying full-time equivalent annual salary by the proportion of full-time hours worked. Actual salary is preferred to full-time equivalent salary, because the latter is a hypothetical quantity and obscures earnings differences resulting from a greater likelihood of working less than full-time experienced by groups with protected characteristics. Tables 56 to 58 present median actual earnings by gender, age group and ethnic group for each year from 2010 to 2015. Earnings grew slowly from 2010 to 2013, experienced a peak in 2014 and fell back again in 2015 for most groups. Female and male earnings were both highest in 2014, but the fall 2014-15 was greater for males than females. Earnings for disabled people were more variable, but were higher in 2014 than 2010 (Table 56).

Median earnings were higher in 2015 than 2010 for all age groups (Table 57), except 21-29 year olds. The reason for this pattern is that the number of teachers aged under 30 were growing and wage progression with age within this age group was masked by the entry of new teachers on the lowest salaries. In the older age groups, employment was falling (possibly involving some of the highest paid teachers). Turning to ethnicity, median earnings for White British teachers declined between 2010 and 2015, with a temporary increase in 2014, again reflecting the influence of the influx of younger and lower paid teachers and the loss of older, more highly paid teachers. Earnings growth was also stagnant and variable in the relatively youthful mixed parentage ethnic groups. Median earnings for South Asian and Chinese ethnic groups also stagnated and were lower in 2015 than 2014. However, the median earnings of teachers from the Black African and Black Caribbean ethnic groups grew between 2010 and 2015. The earnings of White Irish teachers declined gradually, while those from White Other ethnic groups grew between 2010 and 2014.

Percentage changes for the entire period and year-on-year changes between 2010 and 2015 are presented in Tables 59 to 61. Over the whole period, female earnings grew faster than male, earnings increased fastest for 44-49 year olds, but declined for those aged over 60 and aged 21 to 29. These tables show that year-on-year rates of earnings change varied between plus and minus 1 per cent for most sections of the teacher workforce, with greatest volatility between 2013 and 2015. There was greater year-on-year variation in earnings growth in the youngest and oldest age groups than in those in the 30 to 59 age range. Median earnings fell overall for White British, White Irish and Chinese teachers but there were years in which earnings increased. Percentage increases between 2010 and 2015 were highest for the Black ethnic groups.

Differentials within this rather volatile pattern can be presented more clearly by expressing median earnings for each sub-group relative to the median for all teachers (Tables 62 to 64). The differential for females narrowed between 2010 and 2015. However, the male differential became wider throughout this period. Disabled people earned more than average and this differential was wider in 2014 than in 2010. Relative earnings for 31-39 year olds, 41-49 year olds and 51-59 year olds increased between 2010 and 2015, while the relative position of younger teachers remained stable and that of older teachers deteriorated. The positive differential for White British teachers declined slowly over this period, while the relative earnings of White Irish teachers varied around the average throughout the period. The relative earnings of South Asians increased over the period, but relative Black African

and Black Caribbean teacher earnings increasingly more quickly. Median earnings of Chinese teachers remained below average, but their relative position improved slightly.

Table 65 focuses on earnings differentials for women relative to men. Overall, women earned about seven-eighths of male earnings, but this negative differential narrowed slightly between 2010 and 2015. The differential was closest for young women, with 21-29 year olds earning about the same as men in each year from 2011 to 2015. The differential was widest for 40-49 year olds, but earnings for teachers aged 60 or more were about equal for men and women. The gender differential was narrower for White Irish than White British women. In the Black ethnic groups, there was little difference by gender. The largest gender differentials were in the Indian, Pakistani and Bangladeshi ethnic groups, but the earnings of women relative to men deteriorated markedly over the period 2010 to 2015 in the Chinese ethnic group.



**Table 56: Median earnings, 2010-2015 by gender and disability**

|                | Median earnings (£) |              |              |              |              |              |
|----------------|---------------------|--------------|--------------|--------------|--------------|--------------|
|                | 2010                | 2011         | 2012         | 2013         | 2014         | 2015         |
| Female         | 31552               | 31552        | 31552        | 31868        | 32187        | 32025        |
| Male           | 36756               | 36756        | 36716        | 36751        | 37119        | 36959        |
| Disabled*      | 34181               | 34294        | 34181        | 34523        | 34204        | -            |
| <b>Persons</b> | <b>33981</b>        | <b>33974</b> | <b>32733</b> | <b>32914</b> | <b>33287</b> | <b>32831</b> |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 57: Median earnings, 2010-2015 by age group**

| Age group      | Median earnings (£) |              |              |              |              |              |
|----------------|---------------------|--------------|--------------|--------------|--------------|--------------|
|                | 2010                | 2011         | 2012         | 2013         | 2014         | 2015         |
| 21-29          | 27000               | 27000        | 26658        | 26422        | 27104        | 26106        |
| 30-39          | 34181               | 34181        | 34181        | 34523        | 34869        | 35218        |
| 40-49          | 36096               | 36574        | 36387        | 36756        | 37124        | 37349        |
| 50-59          | 36789               | 36756        | 36756        | 37124        | 37496        | 37871        |
| 60-69          | 29405               | 29552        | 29403        | 30269        | 29672        | 27895        |
| <b>Persons</b> | <b>33981</b>        | <b>33974</b> | <b>32733</b> | <b>32914</b> | <b>33287</b> | <b>32831</b> |

**Table 58: Median earnings, 2010-2015 by ethnic group**

| Ethnic group                            | Median earnings (£) |              |              |              |              |              |
|---|---------------------|--------------|--------------|--------------|--------------|--------------|
|   | 2010                | 2011         | 2012         | 2013         | 2014         | 2015         |
| White British                           | 34049               | 34030        | 32785        | 32914        | 33356        | 32831        |
| White Irish                             | 34181               | 33752        | 32559        | 32264        | 33042        | 33170        |
| Any Other White Background              | 32644               | 33553        | 33301        | 33649        | 33500        | 32716        |
| <i>Black and Minority Ethnic Groups</i> | <i>33865</i>        | <i>34181</i> | <i>34087</i> | <i>34007</i> | <i>34546</i> | <i>33743</i> |
| White and Black Caribbean               | 31759               | 31552        | 31446        | 30404        | 31431        | 30992        |
| White and Black African                 | 33459               | 32630        | 32155        | 32424        | 33243        | 33177        |
| White and Asian                         | 30681               | 31324        | 31365        | 31446        | 31963        | 32187        |
| Any Other Mixed Background              | 32348               | 32630        | 32420        | 31868        | 32624        | 32400        |
| Indian                                  | 33036               | 33865        | 33811        | 33636        | 34096        | 33620        |
| Pakistani                               | 30738               | 31552        | 31546        | 31868        | 32079        | 30992        |
| Bangladeshi                             | 31433               | 31499        | 31466        | 31682        | 31963        | 31446        |
| Any Other Asian Background              | 32839               | 34181        | 33865        | 32957        | 34180        | 32831        |
| Black African                           | 35116               | 35447        | 35447        | 35801        | 36160        | 36182        |
| Black Caribbean                         | 36400               | 36716        | 36569        | 37115        | 37432        | 37187        |
| Any Other Black Background              | 35447               | 35688        | 35777        | 35802        | 36756        | 36523        |
| Chinese                                 | 31552               | 30902        | 31217        | 31283        | 31868        | 30992        |
| Any Other Ethnic Group                  | 34181               | 34181        | 34181        | 34522        | 34869        | 34374        |
| <b>Persons</b>                          | <b>33981</b>        | <b>33974</b> | <b>32733</b> | <b>32914</b> | <b>33287</b> | <b>32831</b> |

**Table 59: Percentage change in median earnings for 2010-15 and individual years by gender and disability**

|                | Percentage change between Censuses |         |         |         |         |         |
|----------------|------------------------------------|---------|---------|---------|---------|---------|
|                | 2010-15                            | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Female         | 1.5                                | 0.0     | 0.0     | 1.0     | 1.0     | -0.5    |
| Male           | 0.6                                | 0.0     | -0.1    | 0.1     | 1.0     | -0.4    |
| Disabled*      | -                                  | 0.5     | -6.5    | -0.1    | 1.0     | -       |
| <b>Persons</b> | -3.4                               | 0.0     | -3.6    | 0.5     | 1.1     | -1.4    |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 60: Percentage change in median earnings for 2010-15 and individual years by age group**

| Age group      | Percentage change between Censuses |         |         |         |         |         |
|----------------|------------------------------------|---------|---------|---------|---------|---------|
|                | 2010-15                            | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| 21-29          | -3.3                               | 0.0     | -1.2    | -0.8    | 2.5     | -3.7    |
| 30-39          | 3.0                                | 0.0     | 0.0     | 1.0     | 1.0     | 1.0     |
| 40-49          | 3.5                                | 1.3     | -0.5    | 1.0     | 1.0     | 0.6     |
| 50-59          | 2.9                                | -0.1    | 0.0     | 1.0     | 1.0     | 1.0     |
| 60-69          | -5.2                               | 0.5     | -0.5    | 2.9     | -2.0    | -6.0    |
| <b>Persons</b> | -3.4                               | 0.0     | -3.6    | 0.5     | 1.1     | -1.4    |

**Table 61: Percentage change in median earnings for 2010-15 and individual years by individual ethnic group**

| Ethnic group                            | Percentage change between Censuses |         |         |         |         |         |
|---|------------------------------------|---------|---------|---------|---------|---------|
|   | 2010-15                            | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| White British                           | -3.6                               | -0.1    | -3.6    | 0.3     | 1.4     | -1.7    |
| White Irish                             | -2.9                               | -0.9    | -3.8    | -0.9    | 2.4     | 0.4     |
| Any Other White Background              | 0.5                                | 2.7     | -0.5    | 1.3     | -0.7    | -2.2    |
| <i>Black and Minority Ethnic Groups</i> | -0.4                               | 0.9     | -0.3    | -0.2    | 1.6     | -2.3    |
| White and Black Caribbean               | -2.5                               | -0.7    | -0.3    | -3.3    | 3.4     | -1.4    |
| White and Black African                 | -0.8                               | -2.5    | -1.3    | 0.7     | 2.5     | -0.2    |
| White and Asian                         | 4.9                                | 2.2     | 0.1     | 0.4     | 1.4     | 0.7     |
| Any Other Mixed Background              | 0.2                                | 0.9     | -0.6    | -1.7    | 2.4     | -0.7    |
| Indian                                  | 1.3                                | 2.4     | -0.3    | -0.6    | 1.4     | -1.5    |
| Pakistani                               | 0.4                                | 2.2     | 0.0     | 1.0     | 0.7     | -3.4    |
| Bangladeshi                             | 0.1                                | 0.2     | -0.1    | 0.8     | 1.0     | -1.7    |
| Any Other Asian Background              | -1.0                               | 3.0     | -0.9    | -2.7    | 3.8     | -4.0    |
| Black African                           | 3.0                                | 0.9     | 0.1     | 0.9     | 1.0     | 0.1     |
| Black Caribbean                         | 2.2                                | 0.8     | -0.2    | 1.4     | 0.8     | -0.6    |
| Any Other Black Background              | 3.0                                | 0.7     | 0.2     | 0.1     | 2.7     | -0.6    |
| Chinese                                 | -1.8                               | -2.1    | 1.0     | 0.4     | 1.9     | -3.0    |
| Any Other Ethnic Group                  | 1.0                                | 0.0     | 0.0     | 1.0     | 1.0     | -1.0    |
| <b>Persons</b>                          | -3.4                               | 0.0     | -3.6    | 0.5     | 1.1     | -1.4    |

**Table 62: Relative median earnings, 2010-2015 by gender and disability (all teachers=100)**

|           | Median earnings relative to those for all teachers (=100) |       |       |       |       |       |
|-----------|---|-------|-------|-------|-------|-------|
|           | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
| Female    | 92.8  | 92.9  | 96.3  | 96.8  | 96.7  | 97.5  |
| Male      | 108.1   | 108.2 | 112.1 | 111.7 | 111.5 | 112.6 |
| Disabled* | 108.1   | 108.2 | 112.2 | 112.8 | 108.6 | -     |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

**Table 63: Relative median earnings, 2010-2015 by age group (all teachers=100)**

| Age group | Median earnings relative to those for all teachers (=100) |       |       |       |       |       |
|-----------|---|-------|-------|-------|-------|-------|
|           | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
| 21-29     | 79.4  | 79.5  | 81.4  | 80.4  | 81.4  | 79.5  |
| 30-39     | 100.5   | 100.6 | 104.3 | 104.9 | 104.8 | 107.3 |
| 40-49     | 106.2   | 107.6 | 111.1 | 111.7 | 111.5 | 113.8 |
| 50-59     | 108.2   | 108.2 | 112.2 | 112.8 | 112.6 | 115.4 |
| 60-69     | 86.5  | 87.0  | 89.8  | 92.0  | 89.1  | 84.9  |

**Table 64: Relative median earnings, 2010-2015 by ethnic group (all teachers=100)**

| Ethnic group               | Median earnings relative to those for all teachers (=100) |       |       |       |       |       |
|----------------------------|---|-------|-------|-------|-------|-------|
|                            | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
| White British              | 100.2   | 100.2 | 100.2 | 100.0 | 100.3 | 100.0 |
| White Irish                | 100.5   | 99.7  | 99.5  | 98.1  | 99.3  | 101.1 |
| Any Other White Background | 96.1  | 98.7  | 101.9 | 102.7 | 100.8 | 100.0 |
| White and Black Caribbean  | 93.5  | 92.9  | 96.0  | 92.4  | 94.4  | 94.4  |
| White and Black African    | 98.4  | 96.0  | 98.3  | 98.5  | 99.9  | 101.1 |
| White and Asian            | 90.3  | 92.3  | 95.8  | 95.8  | 96.0  | 98.0  |
| Any Other Mixed Background | 95.2  | 96.0  | 99.0  | 96.8  | 98.0  | 98.7  |
| Indian                     | 97.6  | 100.0 | 103.4 | 102.3 | 102.6 | 102.4 |
| Pakistani                  | 90.8  | 92.9  | 96.3  | 96.8  | 96.4  | 94.4  |
| Bangladeshi                | 92.5  | 92.7  | 96.1  | 96.4  | 96.2  | 95.9  |
| Any Other Asian Background | 97.6  | 100.6 | 103.4 | 100.1 | 102.7 | 100.0 |
| Black African              | 103.3   | 104.3 | 108.3 | 108.8 | 108.6 | 110.2 |
| Black Caribbean            | 107.1   | 108.0 | 111.8 | 112.8 | 112.5 | 113.4 |
| Any Other Black Background | 104.3   | 105.0 | 109.2 | 108.8 | 110.4 | 111.2 |
| Chinese                    | 92.8  | 90.9  | 95.3  | 95.2  | 96.0  | 94.4  |
| Any Other Ethnic Group     | 100.5   | 100.6 | 104.3 | 104.9 | 104.8 | 105.2 |

**Table 65: Relative earnings differentials for female teachers by disability, age group and ethnic group**

|                            | Female median earnings relative to male earnings (=100) |             |             |             |             |             |
|----------------------------|---|-------------|-------------|-------------|-------------|-------------|
|                            | 2010  | 2011        | 2012        | 2013        | 2014        | 2015        |
| <i>Age group</i>           |   |             |             |             |             |             |
| 21-29                      | 100.0   | 100.0       | 101.8       | 101.8       | 100.0       | 101.0       |
| 30-39                      | 92.2  | 92.5        | 92.8        | 92.4        | 91.9        | 89.8        |
| 40-49                      | 86.8  | 85.7        | 87.0        | 87.9        | 87.8        | 87.0        |
| 50-59                      | 90.3  | 90.9        | 93.3        | 93.5        | 93.9        | 93.9        |
| 60-69                      | 100.0   | 100.0       | 101.8       | 101.8       | 100.0       | 101.0       |
|                            |   |             |             |             |             |             |
| Disabled*                  | 91.4  | 93.0        | 92.3        | 92.0        | 90.2        | -           |
|                            |   |             |             |             |             |             |
| <i>Ethnic group</i>        |   |             |             |             |             |             |
| White British              | 85.8  | 85.8        | 85.8        | 86.7        | 86.7        | 85.7        |
| White Irish                | 90.4  | 88.1        | 89.0        | 90.4        | 89.9        | 91.2        |
| Any Other White Background | 86.8  | 87.7        | 87.9        | 88.7        | 89.2        | 89.0        |
| White and Black Caribbean  | 93.2  | 92.3        | 93.6        | 94.7        | 95.9        | 95.0        |
| White and Black African    | 90.6  | 89.7        | 89.9        | 93.9        | 92.9        | 91.4        |
| White and Asian            | 86.0  | 88.4        | 87.5        | 89.0        | 86.7        | 86.7        |
| Any Other Mixed Background | 89.9  | 93.8        | 89.9        | 92.0        | 90.2        | 90.3        |
| Indian                     | 86.3  | 88.2        | 88.1        | 87.0        | 87.2        | 87.6        |
| Pakistani                  | 86.0  | 87.9        | 87.4        | 85.4        | 84.2        | 81.9        |
| Bangladeshi                | 88.2  | 87.5        | 82.1        | 85.5        | 83.3        | 82.9        |
| Any Other Asian Background | 93.7  | 95.4        | 94.4        | 89.9        | 90.8        | 88.2        |
| Black African              | 102.6   | 101.4       | 100.9       | 100.0       | 97.9        | 96.7        |
| Black Caribbean            | 100.3   | 100.0       | 100.2       | 100.2       | 100.0       | 100.7       |
| Any Other Black Background | 100.0   | 97.4        | 99.5        | 97.1        | 98.9        | 95.7        |
| Chinese                    | 97.0  | 91.5        | 89.1        | 86.9        | 86.0        | 87.1        |
| Any Other Ethnic Group     | 89.6  | 89.7        | 89.6        | 88.4        | 89.5        | 88.4        |
|                            |   |             |             |             |             |             |
| <b>All females</b>         | <b>85.8</b>   | <b>85.8</b> | <b>85.9</b> | <b>86.7</b> | <b>86.7</b> | <b>86.6</b> |

\*Data from 2010-2014 linked Census. Data for 2010-2015 not available.

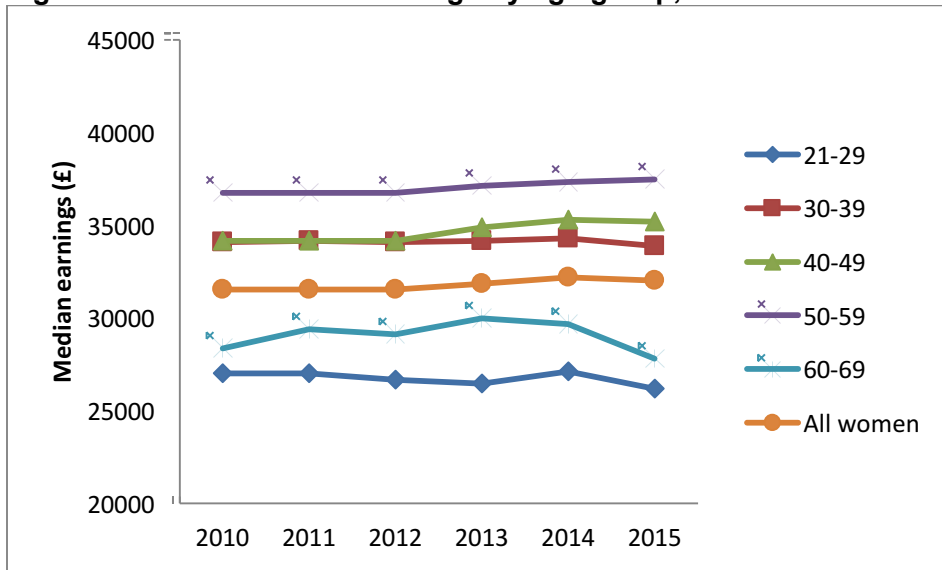
Figure 1 and 2 depict median earnings for women and men by age group over the period 2010 to 2015. These diagrams demonstrate the greater variation in earnings by age group for men than for women and a divergence in earnings by age. Earnings for 21-29 year olds barely increased, while those for 60 to 69 year olds declined for both men and women. Figure 3 clearly shows that the narrowing of the wage gap during this period was a feature of older age groups, while the gap between male and female earnings widened for teachers aged 30 to 39.

Figure 4 shows that there was a narrowing in earnings differentials relative to the White British group for teachers from minority ethnic groups between 2010 and 2015.

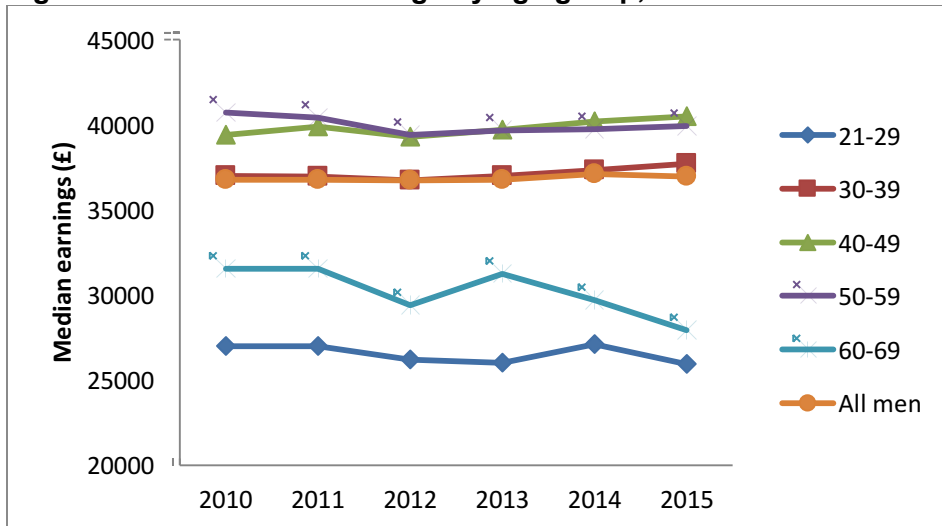
Figures 5 to 8 provide more detail on earnings for the protected characteristics considered in this report by presenting the number of teachers in each £2500 salary range from £0 to £79,999 by gender (Figure 5), disability (Figure 6), age group (Figure 7) and broad ethnic group (Figure 8) in 2014. Two marked peaks appear, at £20-22.5 thousand and £35-37.5 thousand pounds (with a smaller peak at £27.5-29.99 thousand pounds). Female teachers dominate in lower pay ranges, but the largest share of male teachers is found for the larger peak and nearby pay bands. Men are more prominent in the mid to high pay bands. The distribution of pay for disabled teachers is similar to the average. Younger teachers are better represented in lower pay levels (with a strong peak in the £20-22.49 thousand pay band). A clear relationship demonstrated between increasing pay and increasing age. The most notable feature of the distribution of earnings by ethnic group is the greater representation of Black ethnic groups in the middle and upper levels of the pay distribution.

Figures 9 to 20 present change in the distribution of earnings between 2010 and 2015 by gender (Figure 9), disability (Figure 10), age group (Figures 11 to 15) and ethnic group (Figures 16 to 20). The patterns are quite complex, but increasing representation of younger groups at the lower end of the distribution is apparent. Earnings progression at the upper end of the distribution is apparent for 40 to 49 year olds, while the older age groups experience a reduction in number of teachers in the middle part of the earnings distribution, but increases in both the upper and lower ends.

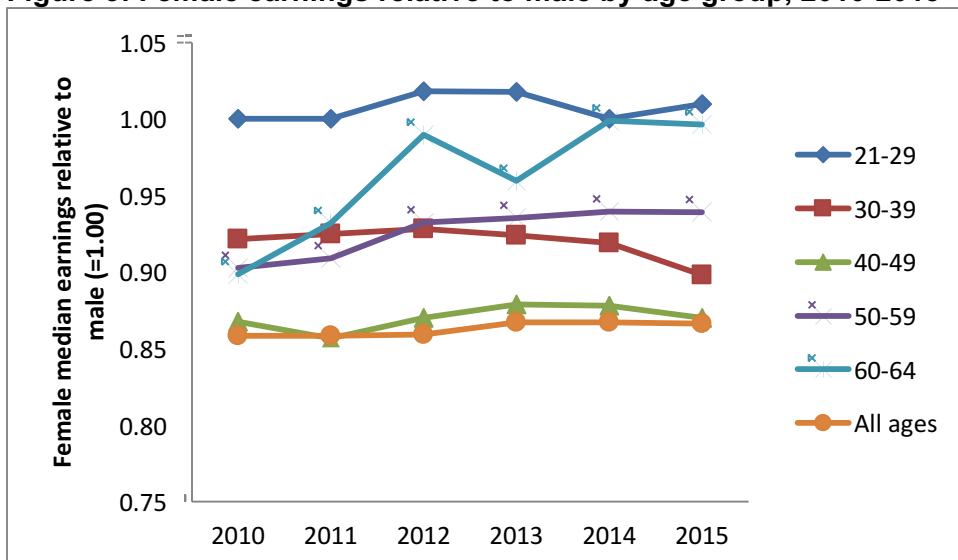
**Figure 1: Female median earnings by age group, 2010-2015**



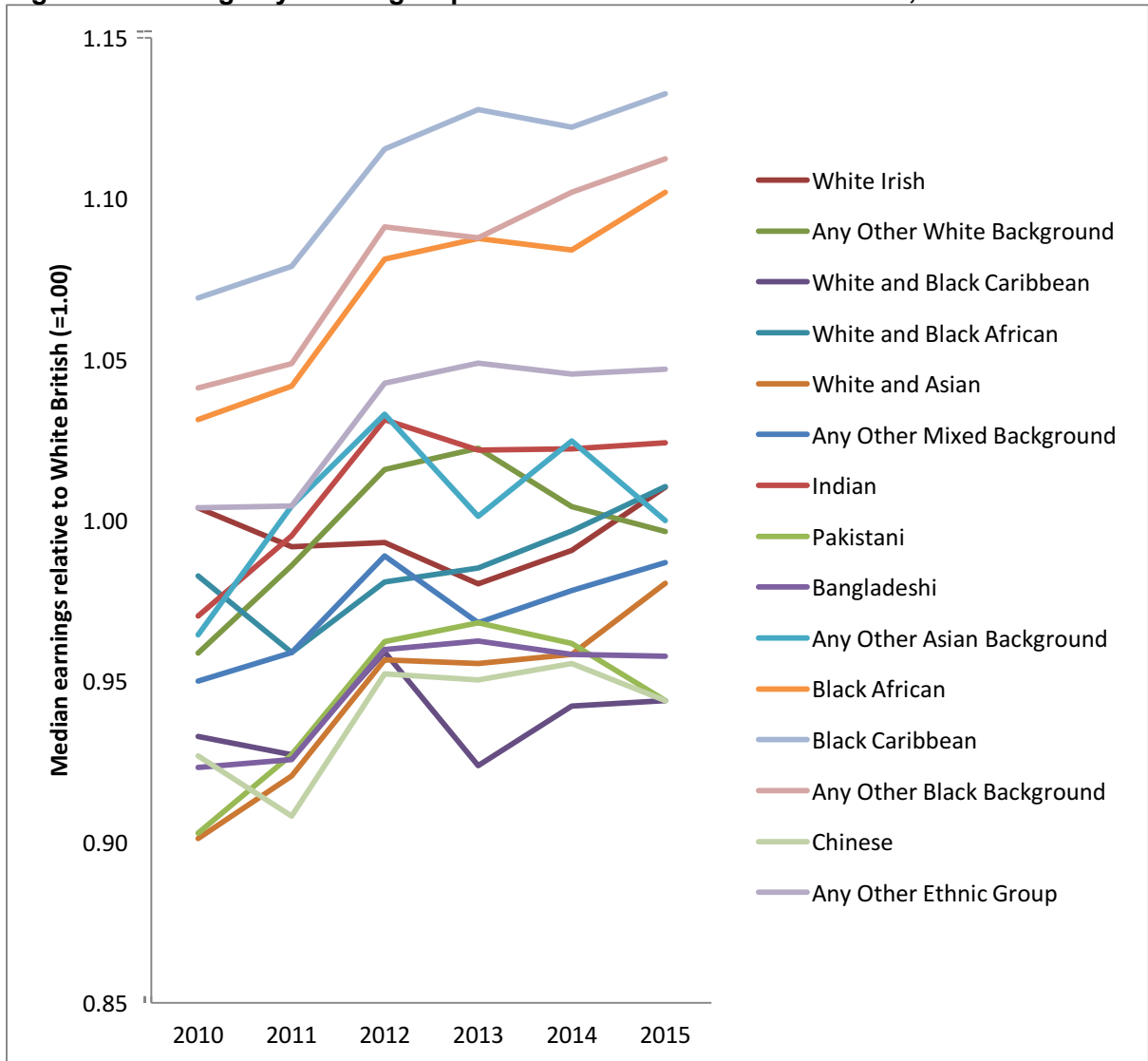
**Figure 2: Male median earnings by age group, 2010-2015**



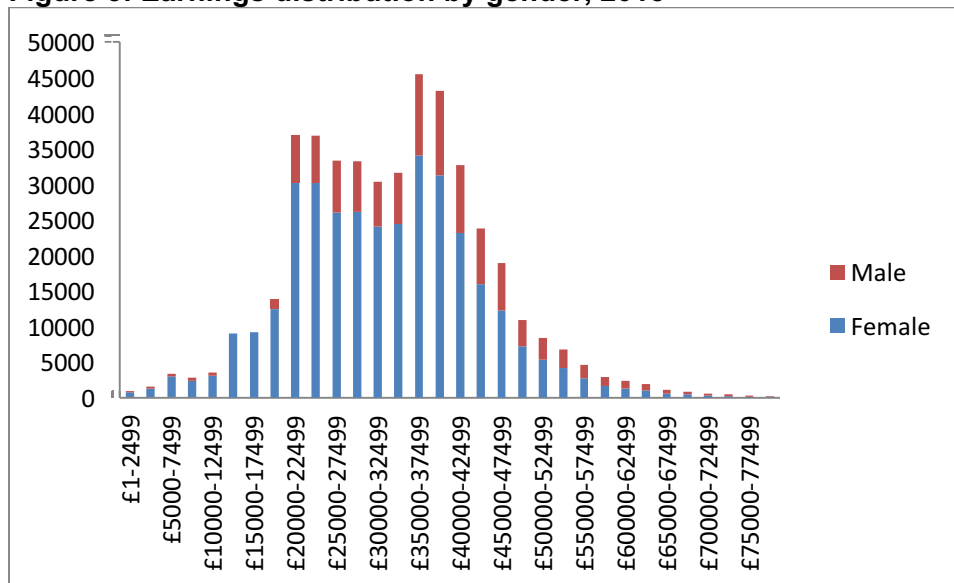
**Figure 3: Female earnings relative to male by age group, 2010-2015**



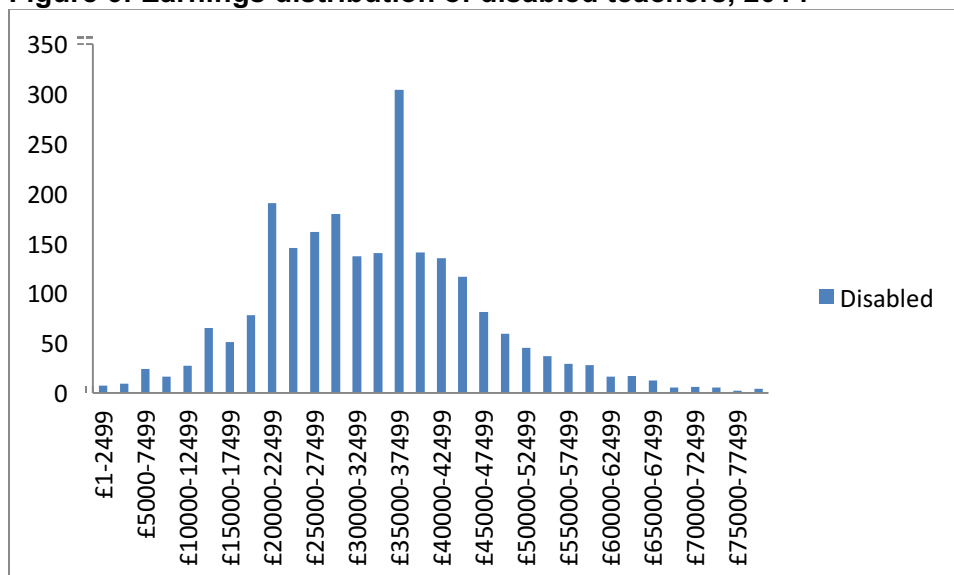
**Figure 4: Earnings by ethnic group relative to White British teachers, 2010-2015**



**Figure 5: Earnings distribution by gender, 2015**



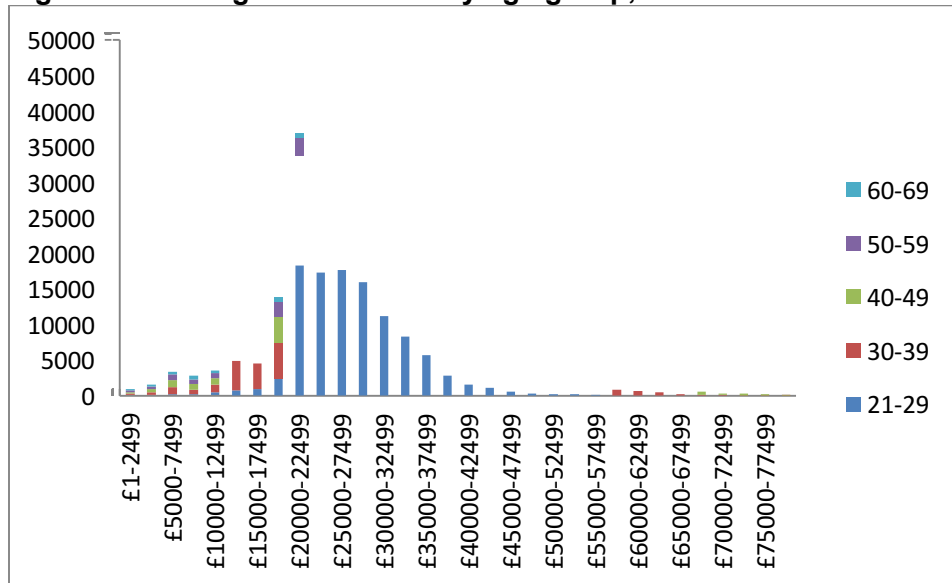
**Figure 6: Earnings distribution of disabled teachers, 2014**



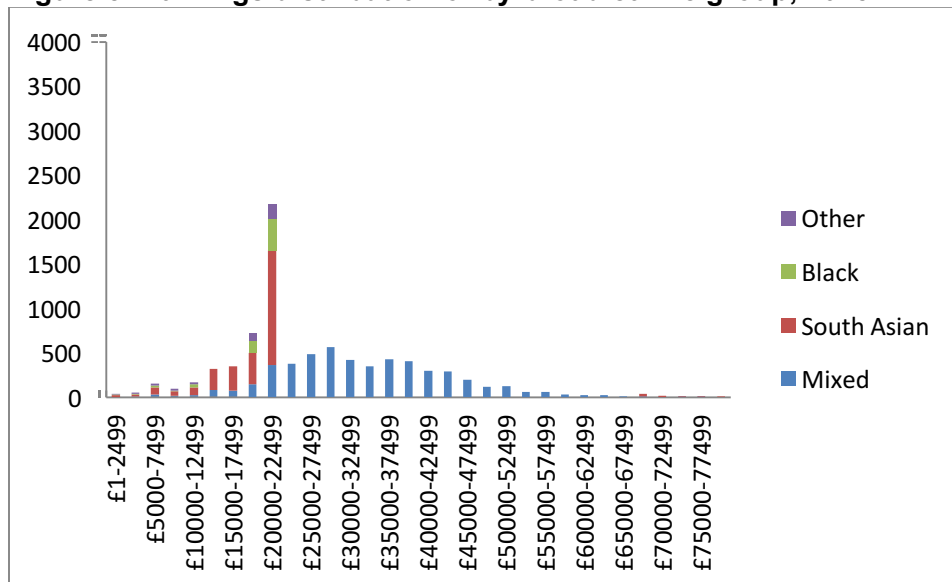
Note: No data on earnings by disability for 2015.



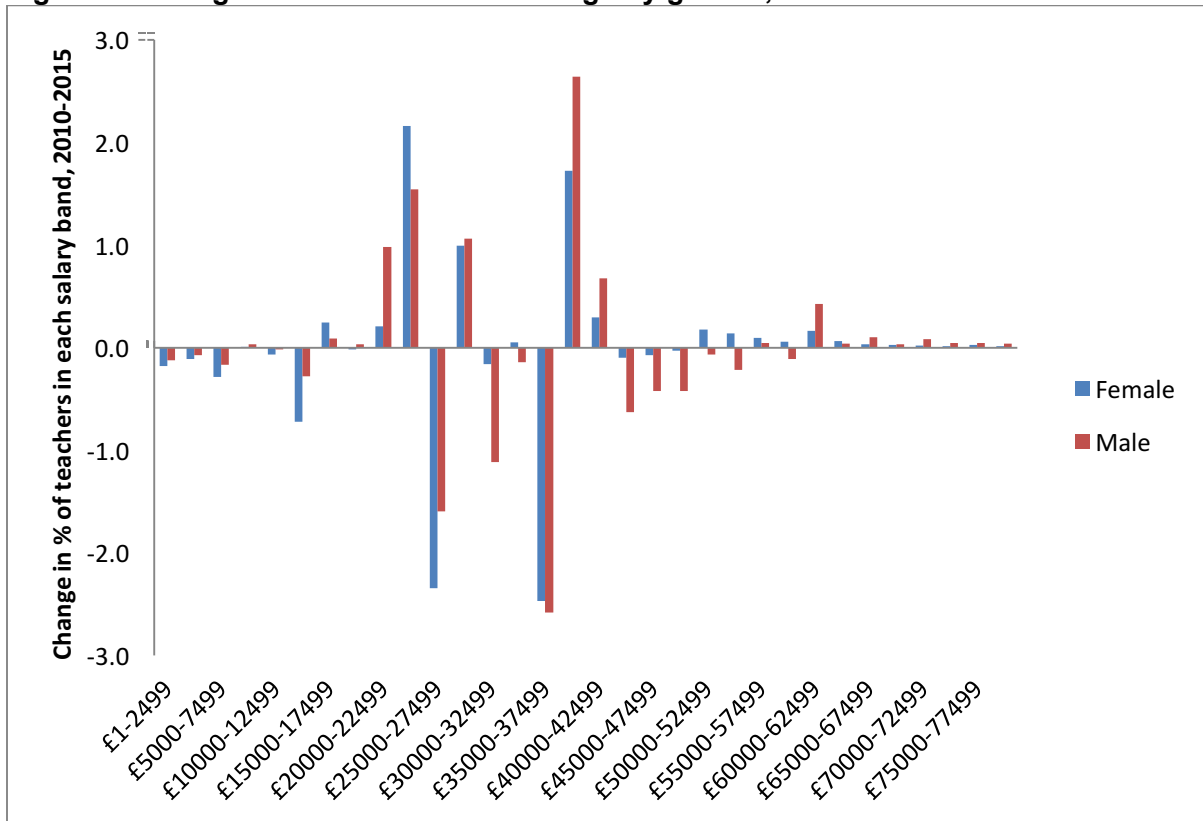
**Figure 7: Earnings distribution by age group, 2015**



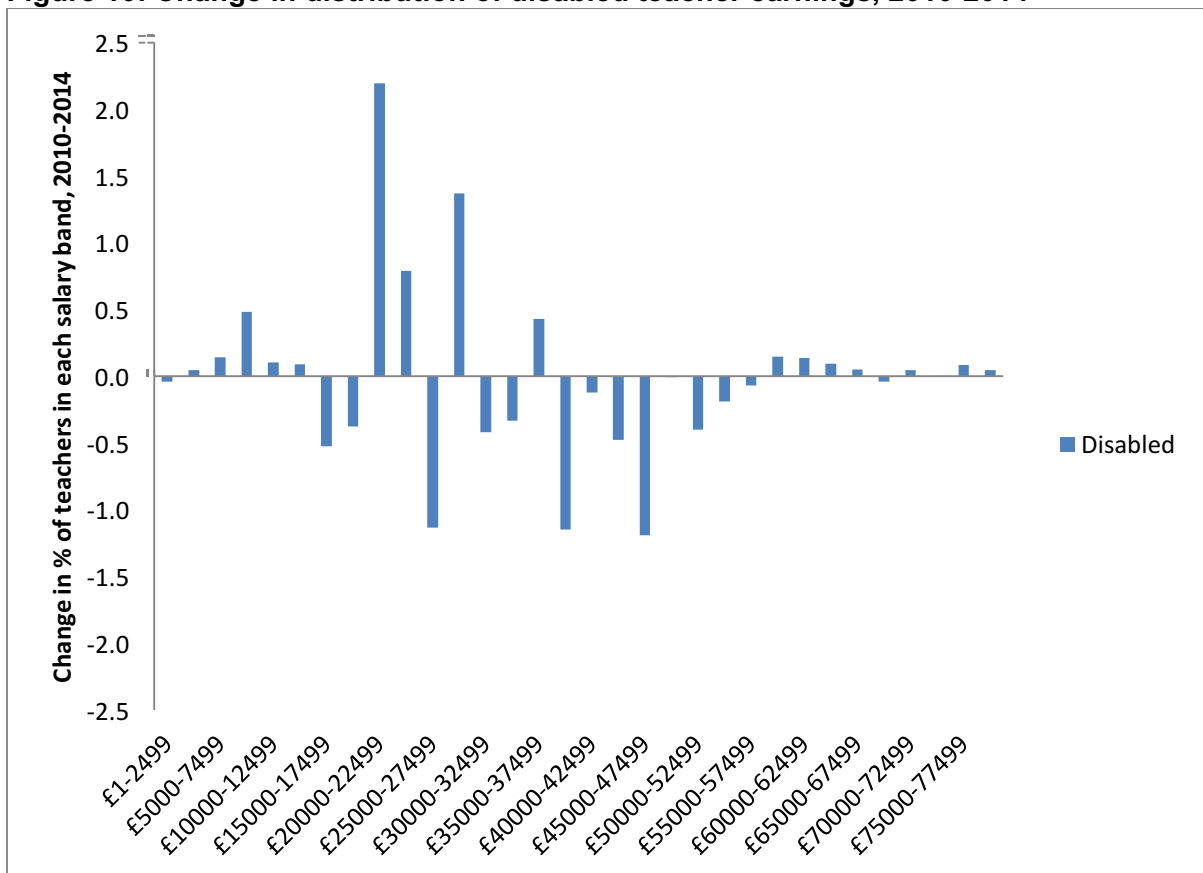
**Figure 8: Earnings distribution of by broad ethnic group, 2015**



**Figure 9: Change in distribution of earnings by gender, 2010-2015**

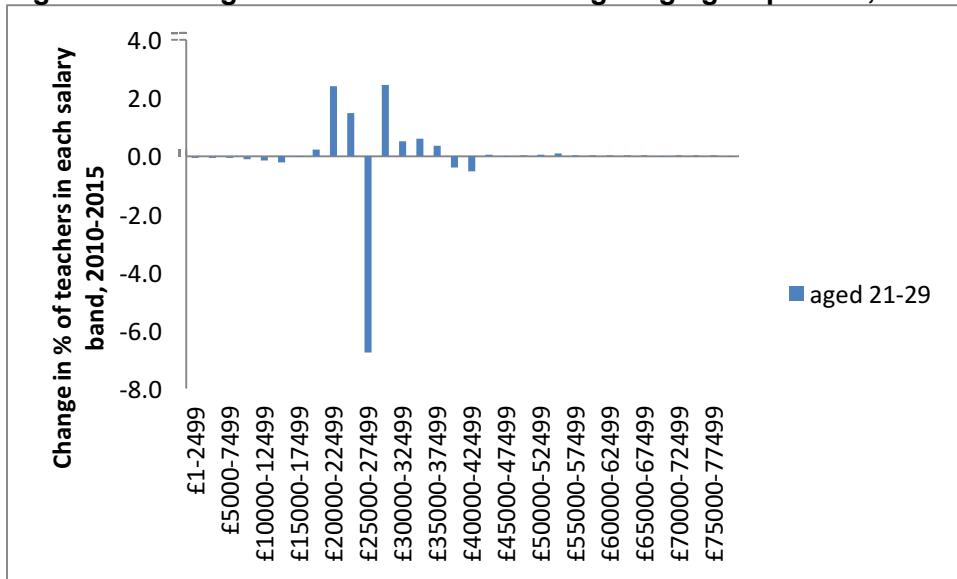


**Figure 10: Change in distribution of disabled teacher earnings, 2010-2014**

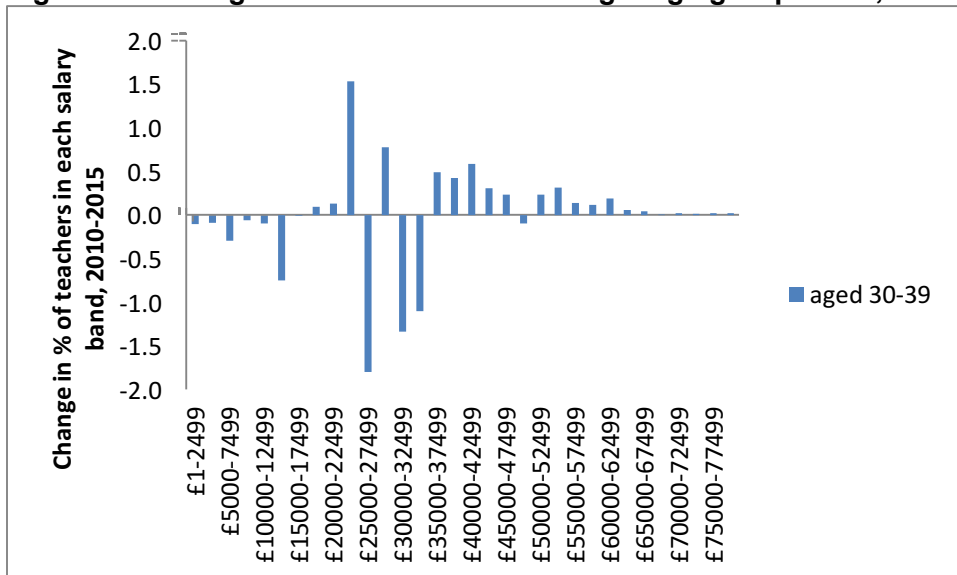


Note: No data on earnings by disability for 2015

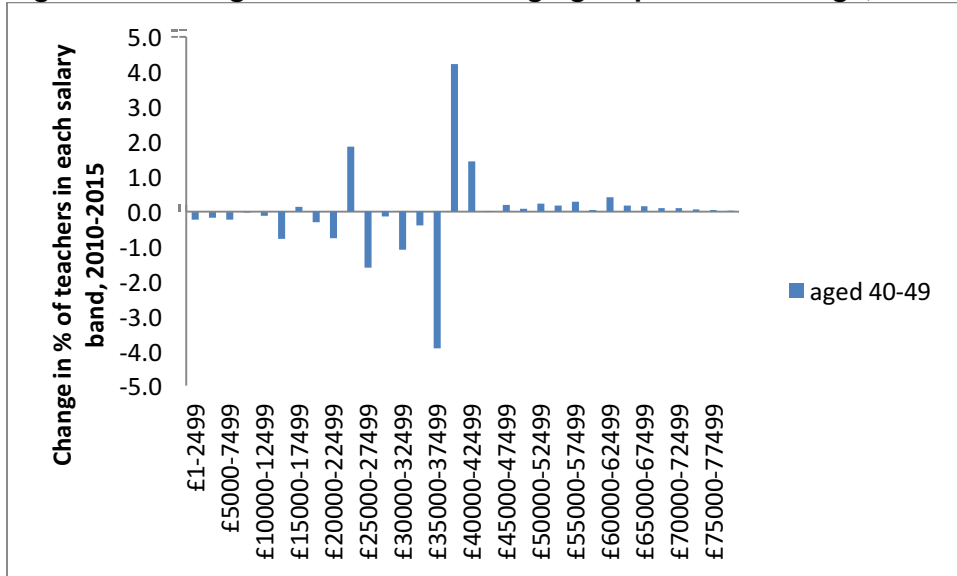
**Figure 11: Change in distribution of earnings: age group 21-29, 2010-2015**



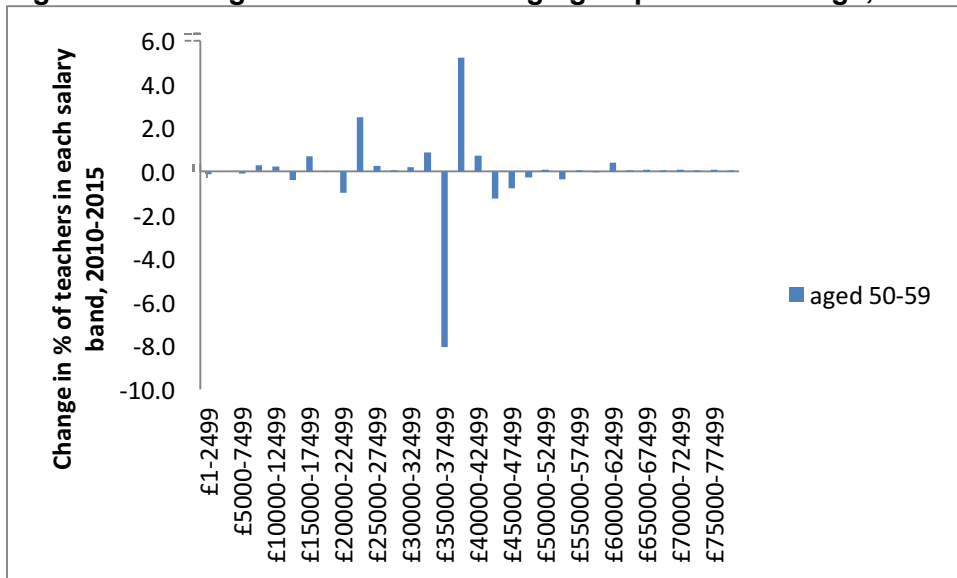
**Figure 12: Change in distribution of earnings: age group 30-39, 2010-2015**



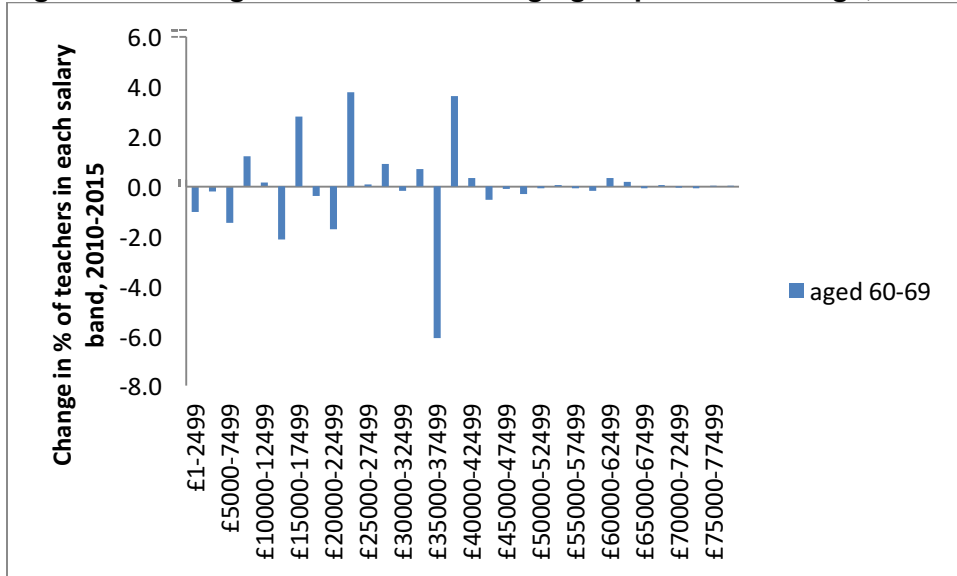
**Figure 13: Change in distribution of age group 40-49 earnings, 2010-2015**



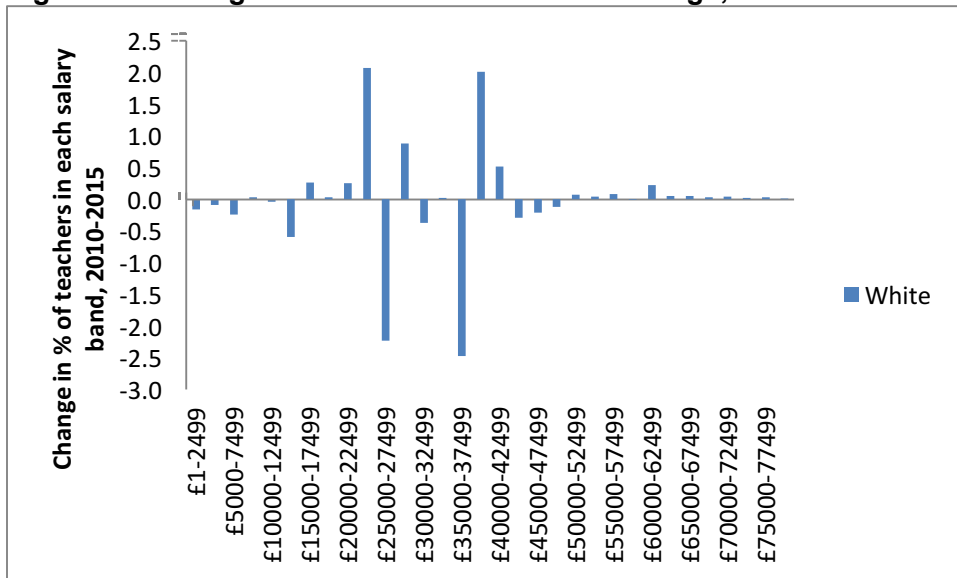
**Figure 14: Change in distribution of age group 50-59 earnings, 2010-2015**



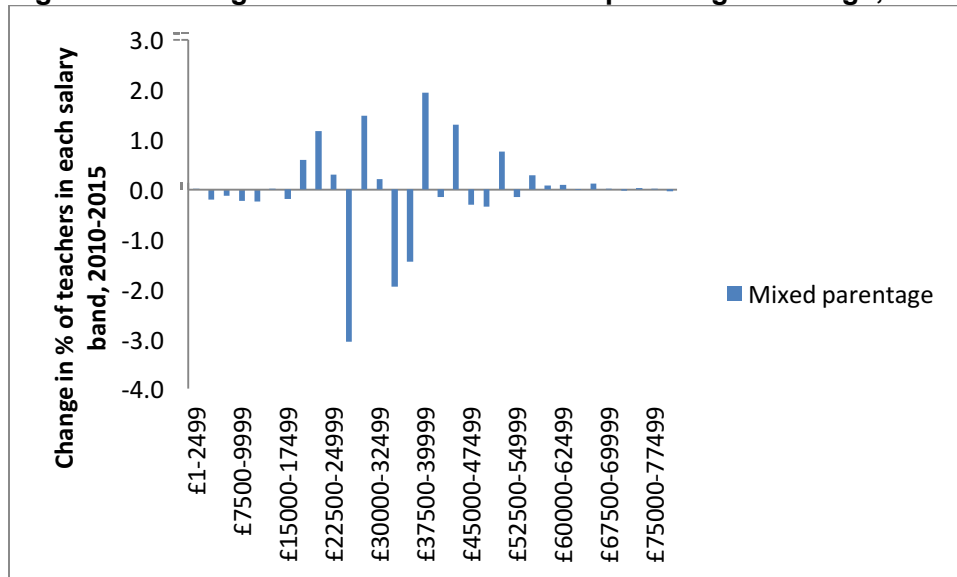
**Figure 15: Change in distribution of age group 60-69 earnings, 2010-2015**



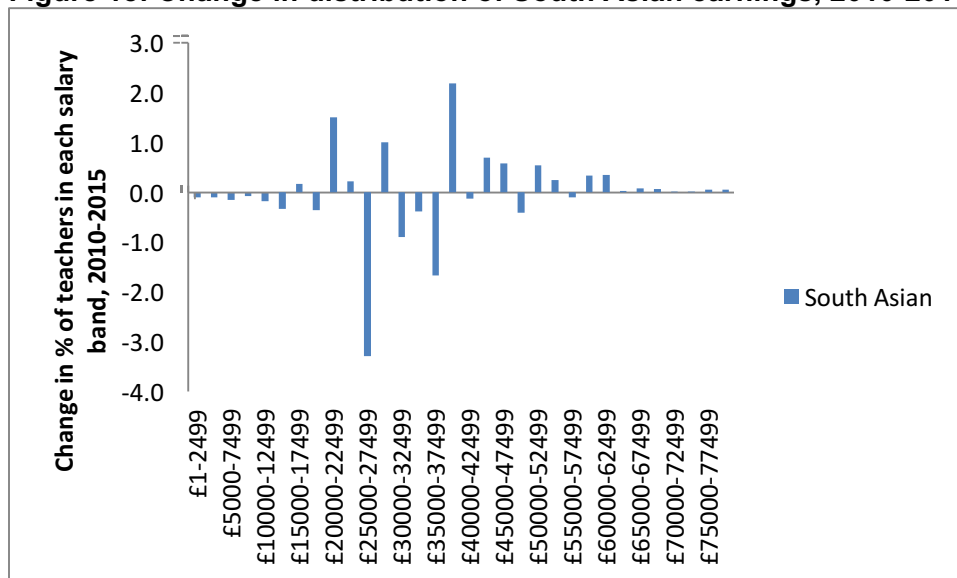
**Figure 16: Change in distribution of White earnings, 2010-2015**



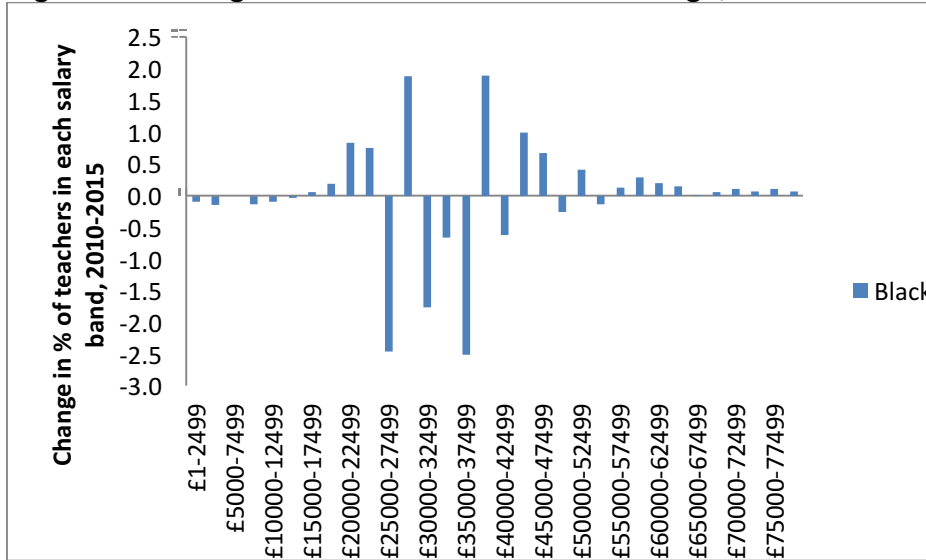
**Figure 17: Change in distribution of mixed parentage earnings, 2010-2015**



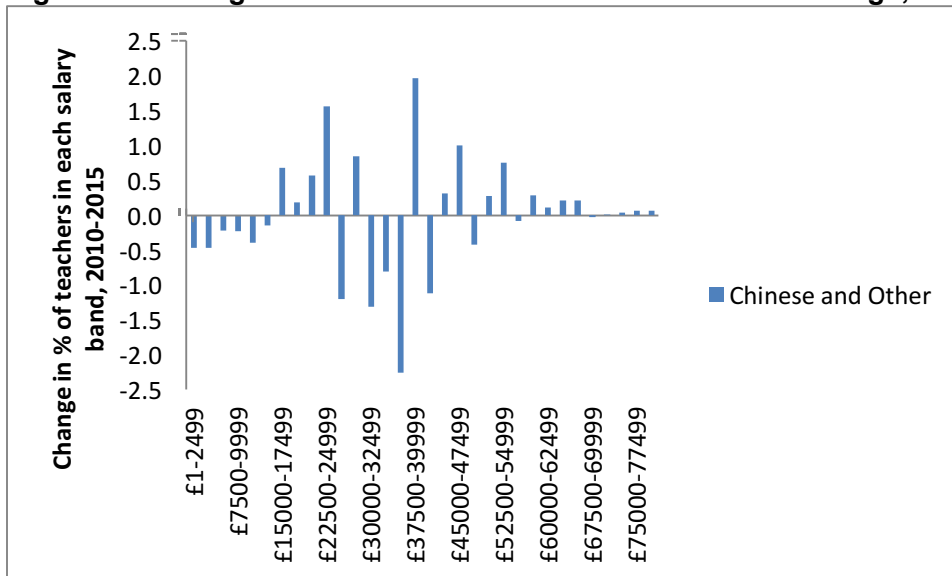
**Figure 18: Change in distribution of South Asian earnings, 2010-2015**



**Figure 19: Change in distribution of Black earnings, 2010-2015**



**Figure 20: Change in distribution of Chinese and Other earnings, 2010-2015**



#### 4.1 Earnings trends for teachers who were in work throughout the period 2010-2015

An alternative perspective on earnings change is provided by examining the earnings of the subset of teachers who appear in each of the School Workforce Censuses from 2010 onwards. This is possible because DfE statisticians have produced a dataset which links teachers across years of the Census using a unique teacher identifier.

The mean earnings of these teachers was 9.1 per cent higher in 2015 than in 2010. The earnings of men grew more quickly than those of women, which meant that the earnings differential of men relative to women increased slightly (Table 66).

**Table 66: Earnings trends by gender and disability for teachers in each Census, 2010-2015**

|   | Mean earnings (£) |              | Change 2010-2015 | Percentage change | Relative to all teachers |              |
|---|-------------------|--------------|------------------|-------------------|--------------------------|--------------|
|   | 2010              | 2015         |                  |                   | 2010                     | 2015         |
| Female                                  | 31885             | 34787        | 2902             | 9.1               | 96.0                     | 95.7         |
| Male                                    | 37308             | 41224        | 3916             | 10.5              | 112.4                    | 113.4        |
| Female as a percentage of male earnings | 85.5              | 84.4         |                  |                   |                          |              |
| <b>Persons</b>                          | <b>33205</b>      | <b>36350</b> | <b>3145</b>      | <b>9.5</b>        | <b>100.0</b>             | <b>100.0</b> |

The rate of change in earnings was fastest for the youngest age group, but was slower in each successively older age group (Table 67). The improvement in relative pay for young teachers is influenced by the fact that the youngest teachers are not included in this comparison; i.e. in those aged 29 in 2015 would have been aged 24 in 2010. The earnings of teachers aged over 60 was 19 per cent lower in 2015 than in 2010. This may have been because older teachers remaining in employment were accepting shorter hours of work. This effect might also be felt by teachers in the next younger age group (aged 51 to 59), whose relative earnings deteriorated sharply over this period. Differentials in earnings narrowed over this period as the teachers who remained in the Census grew older. Those aged over 60 in 2015 would have been in the highest earning ten-year age group in 2010, which accounts for their high pay relative to all teachers in 2010.

**Table 67: Earnings trends by age group for teachers present in each Census, 2010-2015**

| Age group in 2015 | Mean earnings (£) |              | Change 2010-2015 | Percentage change | Relative to all teachers |              |
|-------------------|-------------------|--------------|------------------|-------------------|--------------------------|--------------|
|                   | 2010              | 2015         |                  |                   | 2010                     | 2015         |
| 21-29             | 23572             | 33926        | 10354            | 43.9              | 71.0                     | 93.3         |
| 30-39             | 31330             | 35667        | 4337             | 13.8              | 94.4                     | 98.1         |
| 40-49             | 34614             | 37688        | 3074             | 8.9               | 104.2                    | 103.7        |
| 50-59             | 36922             | 37576        | 653              | 1.8               | 111.2                    | 103.4        |
| 60-69             | 36671             | 29717        | -6954            | -19.0             | 110.4                    | 81.8         |
| <b>All ages</b>   | <b>33205</b>      | <b>36350</b> | <b>3145</b>      | <b>9.5</b>        | <b>100.0</b>             | <b>100.0</b> |

The highest rates of earnings increase by ethnic group were experienced by the Pakistani and Black-Caribbean ethnic groups, followed by the Black-African and Indian ethnic groups (Table 68). The earnings of White British teachers grew more slowly than average and hence have deteriorated in relative terms over this period. The relatively slower growth of White British teacher pay may be a result of higher-performing teachers who have seen their pay grow relatively rapidly being relatively more common in minority ethnic groups (thus



exerting a relatively greater influence on average pay). In contrast, both White Irish and White Other teachers experienced a higher than average rate of earnings growth.

**Table 68: Earnings trends by ethnic group for teachers in each Census, 2010-2015**

| Ethnic group                  | Mean earnings (£) |              | Change 2010-2015 | Percentage change | Relative to all teachers |              |
|-------------------------------|-------------------|--------------|------------------|-------------------|--------------------------|--------------|
|                               | 2010              | 2015         |                  |                   | 2010                     | 2015         |
| White British                 | 33018             | 35989        | 2972             | 9.0               | 99.4                     | 99.0         |
| White Irish                   | 36081             | 40089        | 4009             | 11.1              | 108.7                    | 110.3        |
| Any Other White Background    | 34073             | 37910        | 3837             | 11.3              | 102.6                    | 104.3        |
| <i>Minority ethnic groups</i> | <i>34620</i>      | <i>39233</i> | <i>4614</i>      | <i>13.3</i>       | <i>104.3</i>             | <i>107.9</i> |
| Mixed parentage               | 33465             | 38342        | 4877             | 14.6              | 100.8                    | 105.5        |
| Indian                        | 33468             | 38400        | 4932             | 14.7              | 100.8                    | 105.6        |
| Pakistani                     | 32276             | 37589        | 5313             | 16.5              | 97.2                     | 103.4        |
| Bangladeshi                   | 33577             | 38550        | 4973             | 14.8              | 101.1                    | 106.1        |
| Any Other Asian Background    | 34056             | 38332        | 4276             | 12.6              | 102.6                    | 105.5        |
| Black African                 | 31942             | 36887        | 4945             | 15.5              | 96.2                     | 101.5        |
| Black Caribbean               | 33214             | 38515        | 5301             | 16.0              | 100.0                    | 106.0        |
| Any Other Black Background    | 34790             | 38913        | 4123             | 11.9              | 104.8                    | 107.1        |
| Chinese                       | 36506             | 41592        | 5086             | 13.9              | 109.9                    | 114.4        |
| Any Other Ethnic Group        | 34490             | 38736        | 4246             | 12.3              | 103.9                    | 106.6        |
| <b>All teachers</b>           | <b>33205</b>      | <b>36350</b> | <b>3145</b>      | <b>9.5</b>        | <b>100.0</b>             | <b>100.0</b> |

Note: This table presents earnings for teachers aged 21 to 69.

## 5 Explaining earnings differentials

This far, tables of means and medians for the protected characteristics being considered have been presented. However, individual teachers have a range of characteristics (i.e., they may be younger, male and from a BME ethnic group) which can combine to influence their pay differentials. Furthermore, there are other factors (such as the phase of school and organisation which might affect their pay).

In order to investigate the influence of all protected characteristics and type of school upon pay for an individual, multiple regression models were fitted to the data for all teachers for each year from 2010 to 2015. The model estimates the independent influence upon wages of a set of explanatory variables, and tests the statistical significance of the effect for each variable.

The data set contains total annual earnings for each teacher. The most important influence on total earnings will be the amount of hours worked. This was taken in to account by calculating a measure of hourly earnings for each teacher. This was calculated by assuming the standard working week to be 32 hours, multiplied by 52 weeks to give an approximation to total hours worked per year. Estimated hourly wages are therefore annual gross earnings divided by estimated hours of work. The logarithm of the hourly earnings estimate was used as the 'dependent' variable in the regression model, because transforming wages using logarithms made the distribution of earnings much closer to the 'normal' distribution assumed by the regression technique.

Table 69 presents the "beta coefficient" (the percentage change in wages for a 1 per cent change in the independent variable, holding the effect of all other variables constant) and the T-statistic (the larger the value of the statistic the more significant the effect, with T-values greater than 2 or -2 indicating there is a 95 per cent or greater chance that this is a real effect – i.e. has not occurred due to chance) associated with each explanatory variable. The larger the beta coefficient is, the stronger its influence upon wage levels.

Not all the values of the protected characteristics explored in the report are represented in the table of results. This is because the model is comparing the effect of particular aspects of each characteristic against a 'baseline' characteristic. Thus, in the case of gender, the explanatory variable is being female. For age, younger and older age groups are compared against the 40-49 year old age group. For ethnicity, minority White and BME groups are compared against White British people. Disability is not represented in this model, because disability was not present in the 2010-2015 linked data set.

Because the model is estimated for nearly half a million teachers in each year, nearly all the explanatory variables in the model have statistically significant influences on the wage level (Table 69). The only non-significant influence is working in an academy in the model for 2010 (highlighted in italics). The "adjusted R square" value indicates how well the model represents the data. It shows that the model explains more than a third of the variation in the data. This shows that there are other variables not taken account of which influence earnings levels. However, adjusted R-square values tend to be relatively low for "cross-sectional" data of the type being modelled (i.e. data for a set of individuals for a single time period) and tend to be low for large data sets, because of the amount of random 'noise' in the data. This level of explanation is quite high.

The models reveal that:

- The most important influence on hourly earnings is being young. The size of the beta coefficient is largest for people aged 21 to 29 in each year. It is negative, indicating that this age group has lower hourly earnings, after controlling for the effect of other

characteristics. This would reflect the influence of promotion and rewards for performance for older teachers.

- The next most influential variables are working in a London school, for which earnings are higher in each year of the survey. This effect is strongest in Inner London. This reflects the higher earnings ranges of pay scales covering London and South-East England.
- Being female is a powerful influence depressing earnings in each year.
- Being aged 31 to 39 led to slightly lower wages relative to the comparison age group (41 to 49).
- Being aged 51 to 59 increased wages relative to the comparison age group (with those aged 60 or more also experiencing a weaker positive effect). The positive effect of being aged 50 to 59 on earnings weakened over the period 2010 to 2015.
- Teachers in secondary schools had higher earnings relative to other phases of education in each year.
- Being employed in an academy had no statistically significant effect on earnings in 2010, but in subsequent years the effect is weakly negative.
- The effect of ethnicity on wages was weaker than phase or sector of education.
- The effect of being from a minority ethnic group was to reduce hourly earnings relative to those of White British teachers. The negative effect was strongest for the Black-African ethnic group, followed by the Pakistani ethnic group.

The regression analysis reveals that once other factors, being female or from a minority ethnic group acts to slightly reduce hourly earnings relative to men and the White British ethnic group, but these influences are much weaker than age and sector of education.

**Table 69: Beta coefficients and T-statistics from regression models of log wages for each year**

| Independent variable | 2010   |             | 2011   |             | 2012   |             | 2013   |             | 2014   |             | 2015   |             |
|----------------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
|                      | Beta   | T-statistic | Beta   | T-statistic | Beta   | T-statistic | Beta   | T-statistic | Beta   | T-statistic | Beta   | T-statistic |
| Female               | -0.042 | -33.0       | -0.036 | -28.7       | -0.031 | -25.2       | -0.022 | -17.6       | -0.029 | -23.6       | -0.022 | -18.0       |
| Secondary school     | 0.126  | 97.2        | 0.130  | 94.2        | 0.127  | 90.7        | 0.125  | 88.2        | 0.135  | 96.0        | 0.130  | 93.9        |
| Academy              | -0.002 | -1.2        | -0.007 | -5.4        | -0.022 | -16.0       | -0.027 | -19.8       | -0.005 | -3.4        | -0.026 | -19.2       |
| White Irish          | -0.004 | -2.9        | -0.006 | -4.9        | -0.006 | -5.3        | -0.007 | -5.8        | -0.007 | -5.8        | -0.004 | -3.7        |
| White Other          | -0.048 | -38.7       | -0.048 | -38.9       | -0.044 | -36.6       | -0.040 | -33.0       | -0.047 | -38.5       | -0.052 | -43.3       |
| Mixed parentage      | -0.016 | -13.3       | -0.016 | -13.4       | -0.015 | -12.4       | -0.019 | -15.4       | -0.018 | -14.8       | -0.019 | -15.6       |
| Indian               | -0.016 | -12.9       | -0.015 | -12.0       | -0.011 | -9.2        | -0.012 | -9.7        | -0.014 | -12.0       | -0.013 | -10.5       |
| Pakistani            | -0.020 | -16.7       | -0.017 | -13.9       | -0.016 | -13.6       | -0.016 | -13.5       | -0.018 | -15.2       | -0.019 | -15.6       |
| Bangladeshi          | -0.013 | -11.1       | -0.011 | -8.9        | -0.010 | -8.1        | -0.010 | -8.4        | -0.013 | -10.5       | -0.013 | -10.8       |
| Other Asian          | -0.015 | -12.2       | -0.012 | -9.6        | -0.012 | -10.3       | -0.012 | -10.2       | -0.012 | -10.3       | -0.016 | -13.6       |
| Black African        | -0.037 | -30.1       | -0.032 | -26.6       | -0.031 | -25.9       | -0.028 | -23.3       | -0.030 | -25.1       | -0.031 | -25.7       |
| Black Caribbean      | -0.018 | -14.9       | -0.016 | -13.2       | -0.015 | -12.8       | -0.014 | -11.5       | -0.017 | -13.9       | -0.020 | -16.7       |
| Black Other          | -0.012 | -9.9        | -0.010 | -8.5        | -0.011 | -9.3        | -0.010 | -8.6        | -0.011 | -9.5        | -0.012 | -10.4       |
| Chinese              | -0.015 | -12.6       | -0.013 | -11.2       | -0.015 | -12.5       | -0.013 | -10.9       | -0.015 | -12.5       | -0.017 | -14.3       |
| Other ethnic group   | -0.020 | -16.2       | -0.018 | -15.0       | -0.017 | -14.0       | -0.017 | -13.9       | -0.016 | -13.5       | -0.017 | -14.5       |
| Inner London         | 0.193  | 150.5       | 0.189  | 148.7       | 0.193  | 155.3       | 0.171  | 134.9       | 0.203  | 160.6       | 0.194  | 154.2       |
| Outer London         | 0.108  | 86.9        | 0.109  | 87.9        | 0.109  | 89.8        | 0.095  | 77.1        | 0.111  | 90.4        | 0.108  | 88.4        |
| London Fringe        | 0.024  | 19.7        | 0.022  | 18.1        | 0.021  | 18.0        | 0.007  | 5.7         | 0.014  | 11.3        | 0.015  | 12.8        |
| Aged 21-29           | -0.525 | -348.8      | -0.544 | -366.5      | -0.566 | -390.8      | -0.559 | -380.2      | -0.579 | -399.2      | -0.584 | -401.9      |
| Aged 31-39           | -0.078 | -50.3       | -0.088 | -57.4       | -0.101 | -68.0       | -0.102 | -68.0       | -0.121 | -81.3       | -0.117 | -79.0       |
| Aged 51-59           | 0.100  | 66.7        | 0.085  | 58.0        | 0.073  | 51.8        | 0.058  | 40.7        | 0.045  | 32.5        | 0.033  | 24.0        |
| Aged 61-69           | 0.016  | 12.5        | 0.015  | 11.7        | 0.014  | 11.4        | 0.015  | 12.2        | 0.007  | 5.7         | 0.006  | 4.5         |
|                      |        |             |        |             |        |             |        |             |        |             |        |             |
| Adjusted R-square    | .350   |             | .356   |             | .368   |             | .344   |             | .368   |             | 0.362  |             |
| Standard error       | .086   |             | .085   |             | .085   |             | .091   |             | .083   |             | 0.088  |             |

## 6 Conclusion

This report provides an update to the quantitative analysis presented in the report for Work Package 2. It updates the analysis of the School Workforce Census using linked data for the period 2010 to 2015. The analysis revealed that gender is the most significant element of disadvantage, with women still being less well represented than men in senior posts.

The other main factor underlying disadvantage is age. Younger teachers tend to be paid less than average and are less likely to be employed in senior posts. Older teachers are more likely to have higher pay and to be employed in senior posts. However, job loss has been greatest for older teachers. Employment growth has been fastest for younger teachers.

Differentials in earnings by age and ethnic group have narrowed over the period analysed. However, there has been some deterioration in the relative circumstances of women. The disadvantage of disabled teachers is relatively small and there is little evidence of it worsening between 2010 and 2015. The growth of academies and free schools may have had an influence in maintaining gender differentials in type of job and pay, since men have been more likely than average to work in this sector, especially in the early years. However, there is some evidence that earnings are lower in academies and free schools than in other sectors.

Teachers who remained in the profession between 2010 and 2015 saw their pay increase, and minority ethnic groups fared better than White British teachers, though women fared worse than men. The differences in experience of the teacher workforce as a whole and the subset employed continuously over this period is a result of the changing demographics composition of the workforce. The regression analysis aimed to delve deeper into the data by controlling for the effect of demography, geography and school characteristics to identify whether teachers from protected groups did experience disadvantage. Disadvantage relative to men and the White British ethnic group was revealed for women, younger teachers and those from certain minority ethnic groups.