

## Teacher workforce planning 2014

### 1. Model Inputs

#### 1.1. Pupil projections

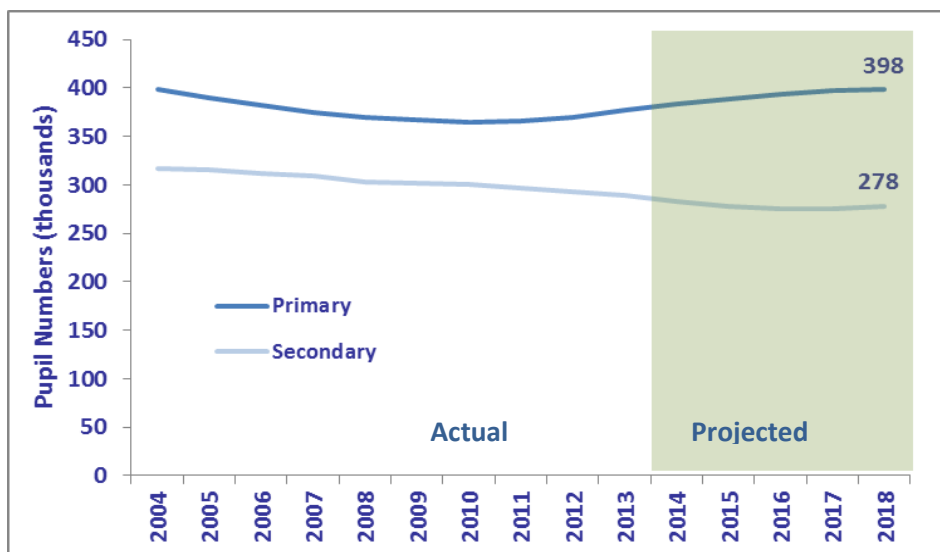
The 2010-based pupil projections indicated an expected increase in primary school roll and decrease in the secondary school roll. The recently published 2012-based pupil projections substantiated this pattern and, according to these figures (based on pupil census data and population projections), primary pupil figures are projected to steadily rise over the next four years (from 385,200 to 398,200) and secondary pupil figures are projected to decrease for the three years (from 284,800 to 275,100) and rise in 2018 (to 277,900).

#### 1.2. Pupil Census

The 2014 pupil census showed changes in school roll figures (not accounted for in the pupil population estimates, but in line with them) of +7,800 primary pupils and -4,400 secondary pupils, compared to 2013.

#### **Chart 1: Pupil Numbers (thousands) by primary and secondary school, Scotland, 2000-2018**

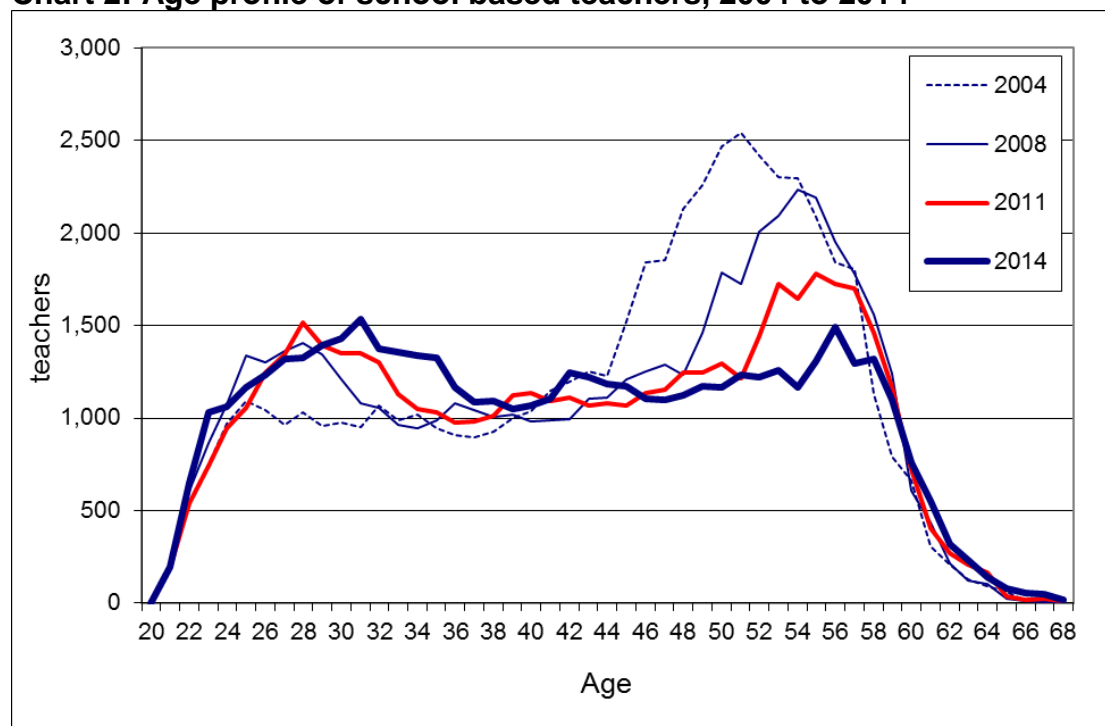
*Projections cover the 5 year period from 2014 – 2018, based on data to 2013.*



#### 1.3. Age profiles of teachers

The 2014 teacher census data shows that there is still a peak in the fifties age band (specifically 55 to 58), but the now established trend has continued and this peak is much less pronounced than it was in previous years. The largest peak is around the early thirties age band.

**Chart 2: Age profile of school based teachers, 2004 to 2014**



#### **1.4. Post-probationer employment rates**

The 2014 teacher census shows another small increase in the proportions of probationers in permanent or temporary posts (full and part-time). The census showed that the figure had risen from 66% in 2011 to 80% in 2014, with the largest increase in the proportion of post-probationers with full-time, permanent contracts (up from 28% in 2012 to 39% in 2014).

Monthly JSA claimant data also continue to show fewer people are unemployed and seeking work as a teacher. The 2014 figures have been consistently lower than the equivalent month for at least the last four years. The figure for October 2014 was 50, down from September's figure of 60 and lower than the October 2013 figure of 130.

#### **1.5. Working patterns**

The percentage of teachers now working part time has risen slightly between 2013 and 2014 (an increase of 0.6 percentage points) and is at its highest level over the past 6 years. The level has not been steadily increasing over time, it decreased in the preceding two years, following a previous peak of 20.1% in 2011.

**Table 1: Number of teachers (headcount) by mode of working, all sectors, 2009-2014**

	Full-time	Part-time	Total headcount <sup>(1)</sup>	Percentage part-time
2009	44,757	10,361	55,118	18.8
2010	43,660	10,767	54,427	19.8
2011	42,572	10,701	53,273	20.1
2012	42,497	10,568	53,065	19.9
2013	42,472	10,427	52,899	19.7
2014				
<i>Primary</i>	19,416	6,408	25,824	24.8
<i>Secondary</i>	21,079	3,967	25,046	15.8
<i>Special</i>	1,703	504	2,207	22.8
<b>Total</b>	<b>42,094</b>	<b>10,731</b>	<b>52,825</b>	<b>20.3</b>

(1) Teachers are counted as full-time if their total FTE across all schools where they teach is greater or equal to one.

(2) Data on pre-school, primary and total teachers for 2010, 2011 and 2012 have been revised to remove teachers who were double counted as a result of working in both sectors.

Excludes centrally employed and pre-school teachers.

## **2. Assumptions**

### **2.1. Leaver rates**

Due to the unstable nature of the workforce, leaver rates are based on teachers in permanent employment only, as these are more stable. Leaver rates are around 3% of total teacher for all teacher ages up to around mid-fifties.

### **2.2. Returner rates**

Returner numbers would also need to be based on permanent teachers only. However, the number entering permanent posts may be changing compared to recent years as the workforce settles down following recent (and on-going) restructuring. The model currently uses an assumption of 500 returners per year in each sector.

### **2.3. Supply**

The model accounts for the need of a pool of supply teachers and increases the student intake figure by a factor of 8% for this purpose.

This year, student intakes have also been recalculated on the basis of an additional 10% and 12% in order to quantify the required increase if an increased pool of supply teacher was deemed preferable.

This analysis resulted in the following outputs:

- increasing supply pool from 8% to 10% would require an additional 25 students for both primary and secondary PGDE
- increasing supply pool from 8% to 12% would require an additional 50 students for both primary and secondary PGDE

## 2.4. PTRs

The model is based on the assumption of maintaining pupil teacher ratios. Therefore it projects future teacher requirements in line with pupil projections on the basis of latest PTRs.

According to the 2014 pupil and teacher census results published this week, secondary PTRs have decreased since 2013, special school PTRs have remained the same and primary school PTRs have increased very slightly from 16.5 to 16.7. Therefore the model estimates future teacher requirements based on a primary PTR of 16.7.

In order to quantify the effect of the change in PTRs on the model outputs, primary student intakes were estimates based on the 2013 primary PTR of 16.5. This resulted in an extra requirement of 25 primary PGDE places per year.

## 3. Model Results

The results suggest a need to reduce the intake of students in 2015 in both sectors. However, caution should be exercised given other evidence from the primary sector and the expected rise in the secondary sector in 2017 onwards.

This large rise in modelled student intakes in the secondary sector in 2017 is driven by a combination of a high number of leavers (particularly females of retirement age) and 2018 being the first year where the demand for teachers at the start of the academic year is projected to be greater than the previous year (creating a demand for new teachers for the first time in the time series).

The above assumptions have been used in the following projections. Other assumptions would result in different outcomes.

The model outputs have been rounded to the nearest fifty.

**Table 2: Modelled Student Intakes**

<u>Entry Year</u>	<u>Primary</u>		<u>Secondary</u>		
	<u>BEd</u>	<u>PGDE</u>	<u>BEd</u>	<u>PGDE</u>	<u>Combined</u>
<b>2014</b>	800	1050	150	950	200
<b>2015</b>	700	700	200	850	200
<b>2016</b>	700	750	200	1050	200
<b>2017</b>	700	650	200	1650	200
<b>2018</b>	700	600	200	1550	200
<b>2019</b>	700	650	200	1300	200
<b>2020</b>	700	600	200	1250	200
<b>2021</b>	700	550	200	1250	200

**Table 3: Projected Deficit of Primary and Secondary Teachers, 2014-2021**

<b>Primary</b>	Projected pupils (pre-school, primary and half of special)	Demand for teachers at start of academic year	Change in demand from previous year	Leavers during previous year	Vacancies arising during previous year	Teachers returning to profession in previous year	Projected Deficit at start of year
<b>2014</b>	481,288	25,658					
<b>2015</b>	489,049	25,982	324	1,556	1,795	500	1,295
<b>2016</b>	492,601	26,220	239	1,530	1,693	500	1,193
<b>2017</b>	495,927	26,384	163	1,499	1,634	500	1,134
<b>2018</b>	499,314	26,519	135	1,450	1,517	500	1,017
<b>2019</b>	501,206	26,587	67	1,416	1,432	500	932
<b>2020</b>	501,945	26,603	16	1,398	1,485	500	985
<b>2021</b>	504,048	26,689	86	1,387	1,454	500	954

<b>Secondary</b>	Projected pupils (secondary and half of special)	Demand for teachers at start of academic year	Change in demand from previous year	Leavers during previous year	Vacancies arising during previous year	Teachers returning to profession in previous year	Projected Deficit at start of year
<b>2014</b>	288,257	25,175					
<b>2015</b>	282,995	24,810	-365	1,421	1,215	500	715
<b>2016</b>	279,849	24,605	-205	1,399	1,321	500	821
<b>2017</b>	278,595	24,526	-78	1,382	1,494	500	994
<b>2018</b>	280,168	24,639	113	1,680	2,008	500	1,508
<b>2019</b>	284,924	24,968	328	1,541	1,979	500	1,479
<b>2020</b>	291,300	25,405	437	1,448	1,758	500	1,258
<b>2021</b>	295,751	25,715	310	1,379	1,695	500	1,195