

## AGENDA

### TEACHER WORKFORCE PLANNING ADVISORY GROUP

2.00pm ON TUESDAY 26 OCTOBER 2021

1. Welcome and apologies
2. Minutes of meeting on 28 June 2021 (Paper TWPAG/2021/4)
3. Publication of a new post-probationer teacher employment statistical dashboard:  
<https://scotland.shinyapps.io/sg-post-probationer-employment-dashboard/>
4. Recruitment to initial teacher education (ITE) in 2021  
(Paper TWPAG/2021/5A&B – provisional - for information)
5. Teacher Workforce Planning (Paper TWPAG/2021/6)
6. Agreement/summary of advice the group should offer to  
Scottish Ministers on ITE and target intakes in 2022/23
7. Next steps
8. AOB

## **Teacher workforce planning 2022 Exercise – October 2021 Statistical Model**

The teacher workforce planning model estimates future student teacher intake numbers by rolling forward recent patterns in the school pupil and staff censuses and other data including national population projections.

The most recent data used in this model are the 2020 school pupil and staff censuses and the 2018 based national population projections. It is based on a set of assumptions - other assumptions would result in different estimates.

### **1. Teacher Targets – PfG and SGP agreement commitments**

“Over the course of the Parliament, we will provide funding to support the recruitment of at least 3,500 teachers and 500 classroom assistants - over and above the 1,400 recruited during the pandemic”

At the time of the last teacher census in September 2020 there were 53,400 (FTE) teachers recorded. Local authorities reported that the total of 53,400 teachers included an estimated 1,200 additional teachers funded through covid recovery funding.

Returns from local authorities showed that by November the number of teachers recruited using the initial covid recovery funding had increased to 1,400. We can assume that these further 200 covid recovery teachers were additional to those 1,200 teachers reported at census time.

This means that we can assume our starting point for calculating the total number of teachers that need to be in the system to achieve the PfG/SGP agreement commitments is 53,600. This is the 53,400 from the census plus the additional 200 teachers recruited by the end of November 2020. The total number of teachers needed to meet the PfG/SGP agreement commitments is therefore **57,100**, based on adding 3,500 to the estimated total number of teachers at the point when all 1,400 covid recovery teachers were in place (i.e. 53,600 in November 2020).

### **2. Modelling approach**

Workforce planning model has historically been based upon the assumption of maintaining pupil teacher ratios across each sector. With pupil numbers projected to fall overall by 2025, the modelled requirement for teachers would be 52,700 by 2025 if PTRs were matched.

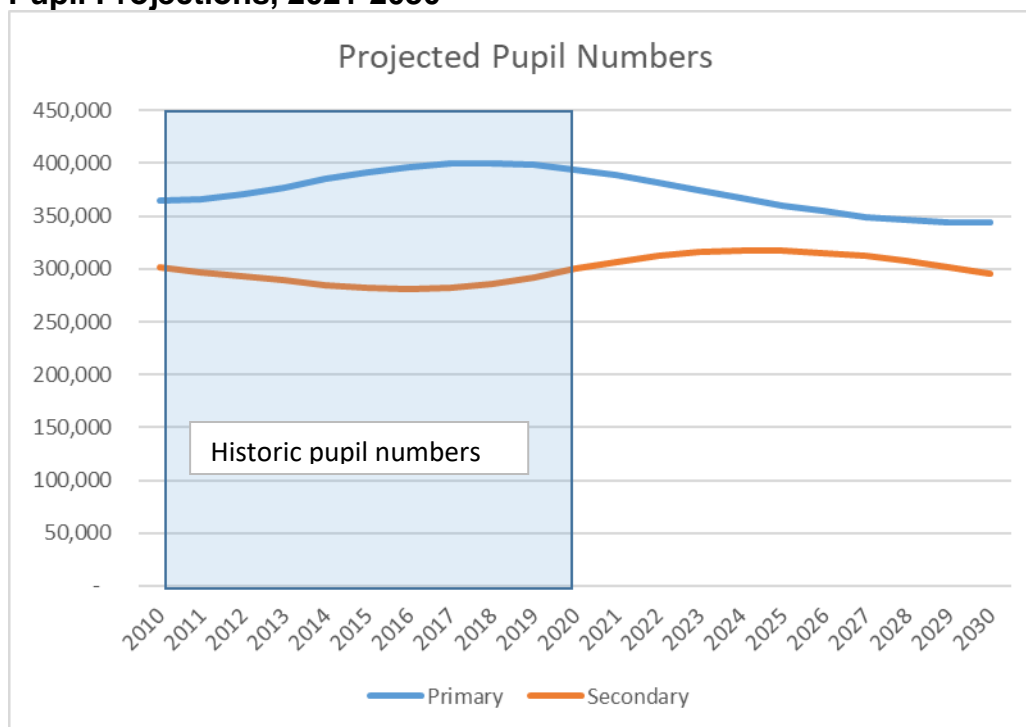
Instead of this approach, the statistical modelling has looked at the ITE students required to meet the PfG targets by 2025.

Beyond 2025 two scenarios have been considered, maintaining teacher levels as at 2025 and maintaining pupil teacher ratios as at 2025

### 3. Model Inputs

#### 3.1. Pupil projections

##### Pupil Projections, 2021-2030



The primary school roll has begun to fall having risen up to a peak in 2017. The projections show numbers are projected to drop to the end of the projection period.

At secondary level, the pupil roll increased in 2017 for the first time in 14 years and is projected to continue increasing until 2024. After which they will fall back to current levels by the end of the projection period in 2030.

These projections are based on the 2018 population projections which, following a fall in recent births, are assuming a lower birth rate than previous projections. Pupil projections based on cohorts that were not yet born are less reliable than projections for earlier years (beyond 2024 for Primary and 2030 for Secondary). It's worth noting that actual births in 2019 and 2020 were lower than the projected totals and so pupil rolls are likely to be lower than currently projected.

### 3.2. Teacher Numbers

In the past 5 years we have seen a large rise in teacher numbers of 2,700 (a 5% increase). There have been increases across both the primary and secondary sectors. The 10% increase in primary teachers (compared to 1% increase in pupils) has meant that there are fewer pupils per teacher and consequently the primary pupil teacher ratio (PTR) has decreased to the lowest ever level. However, in secondary schools the number of pupils grew at a faster rate (7%) than the number of teachers (4%), meaning there were more pupils per teacher. The result of this is that the secondary PTR is now at the highest level since 2004.

#### Increase in teacher numbers 2015-2020

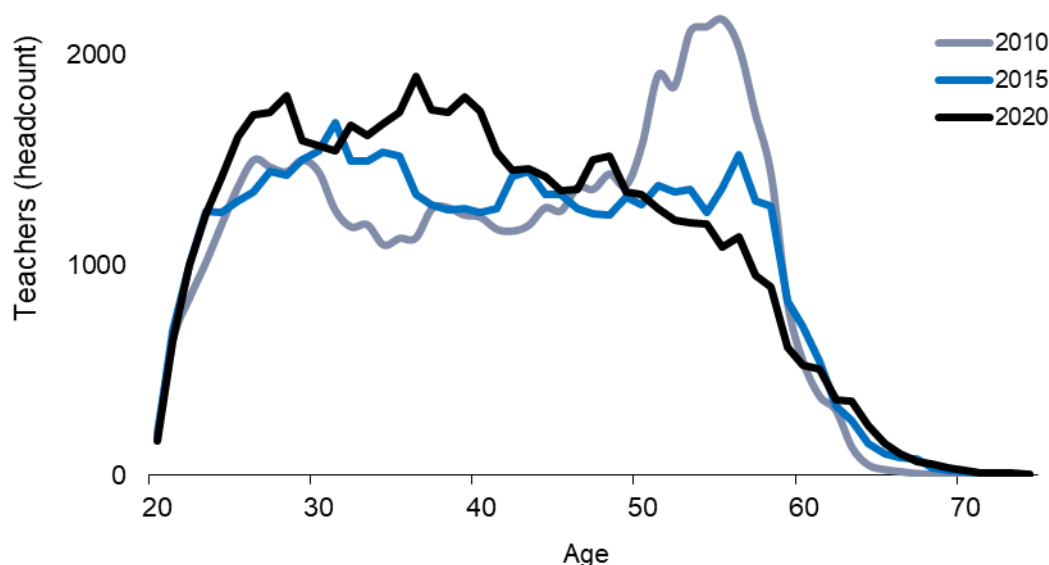
	Primary	Secondary	Total*
2015 - 2020	10%	4%	5%

\*Total change across this period also included reductions to centrally employed teachers and ELC teachers.

### 3.3. Age profiles of teachers

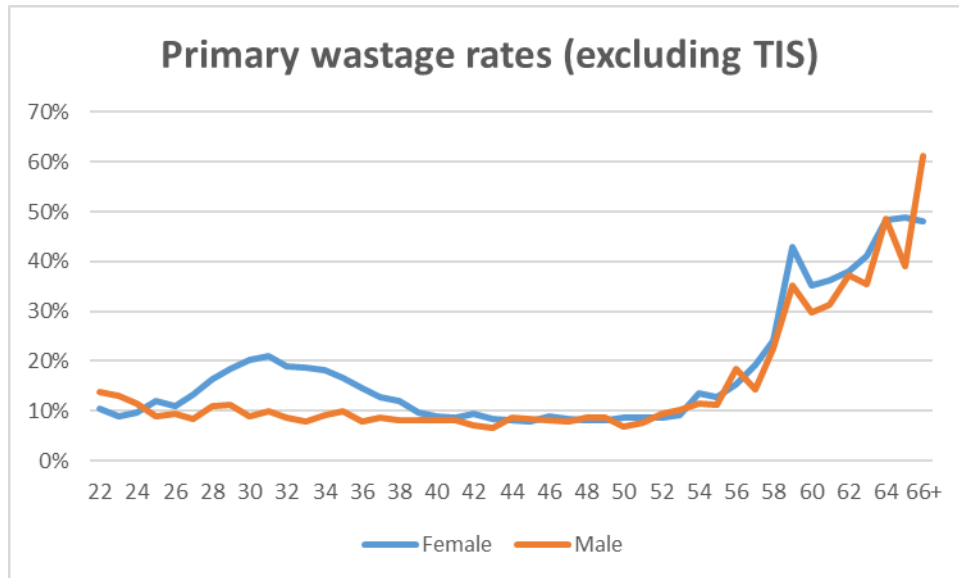
The 2020 Teacher Census data shows that the age profile of teachers has changed much over the past 10 years. The prominent peak of teachers in their fifties, as seen in 2010, no longer exists. The largest group of teachers are now aged 25 to 40.

#### Age profile of school based teachers

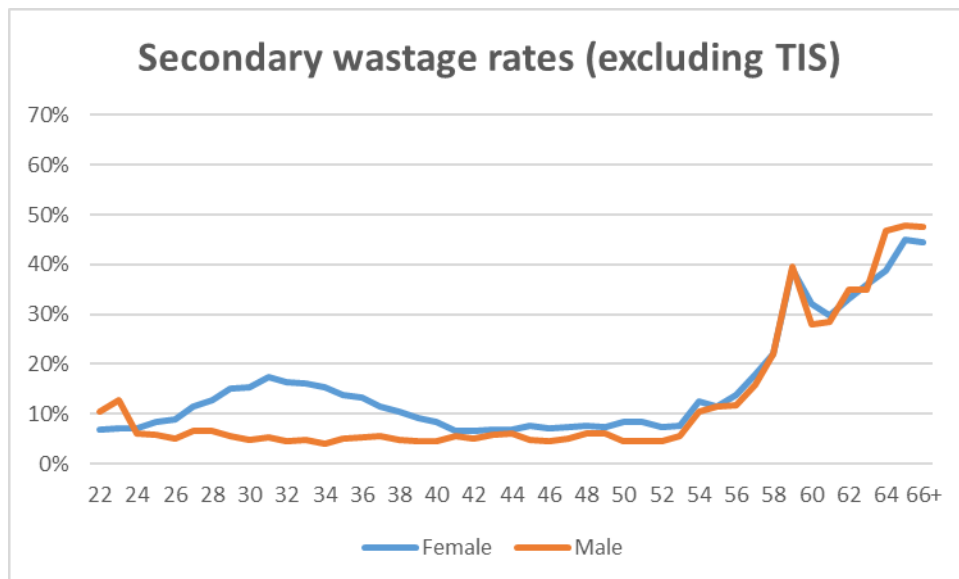


### 3.4. Wastage Rates (Excluding probationers)

Wastage rates are based on an average of the past five years' figures. They represent the sum of all reductions in FTE as a proportion of total FTE. Higher rates for women under 40, include maternity leave, whilst higher rates for those from their late 50s reflect retirement (both full and partial).



Total projected 2020 primary wastage – 3,600 FTE



Total projected 2019 secondary wastage – 2,700 FTE

### 3.5. Returners

Returner numbers are based on an average of five years of data. They represent the sum of all increases in FTE. Numbers are used instead of rates for returners since as we do not have details of the pool of non-working teachers in any year.

The average of the last five years' figures have been used for Primary (2,500) and secondary (1,900).

### 3.6. Teacher Induction Scheme (TIS) Wastage rates

Teacher Induction Scheme wastage rates are based on an average of the last 5 years of data. These rates calculate the percentage reduction in FTE of TIS teachers in the year following their probation year.

Primary – 19%

Secondary – 16%

### 3.7. Working patterns

There has been a steady increase in the proportion of teachers working part time over recent years up to 24.0% in 2019. This was reversed slightly in 2020 with the proportion of teachers working part time reducing to 23.4%. The overall move to part time working has been accounted for in the model within the wastage and returners assumptions.

**Table 1.3: Number of teachers (headcount) by mode of working, all sectors, 2017 - 2020**

	<u>Full-time</u>	<u>Part-time</u>	<u>Total headcount<sup>(2)</sup></u>	<u>Percentage part-time</u>
2017	43,016	12,693	55,709	22.8
2018	43,198	13,265	56,463	23.5
2019	43,246	13,620	56,866	24.0
2020				
Primary	20,732	8,338	29,070	28.7
Secondary	21,175	4,627	25,802	17.9
Special	1,558	619	2,177	28.4
Centrally Employed	702	612	1,314	46.6
Total	44,387	13,564	57,951	23.4

### **3.8. Retention rates**

Retention rates (ITE students who go on to the Teacher Induction Scheme) vary between routes. Retention rates for Primary undergraduate and PGDE courses are around 75% and 90% respectively. Rates for Secondary courses are around 60% (Undergraduate including combined degrees) and 80% (PGDE).

We measure retention rates as a proportion of those leaving university to those starting the teacher induction scheme. Probationers who chose the flexible route are not captured in these retention rates, but are captured in the model amongst the pool of 'returners'.

### **3.9. Supply pool**

Supply pool teachers are not accounted for in the staff census which counts either the normal complement member of staff or their replacement. Teachers moving from a teaching position which is counted in the census to a supply post will be accounted for in the wastage (leaver) rates. No additional provision for supply staff has been included. We expect that the current level of supply pool will be maintained by staff entering it from the on-roll population, accounted for by the wastage rates.

### **3.10. Vacancy data**

In previous years, data on teacher vacancies has been collected in September at staff census time. This data has not been collected this year and vacancies have not been accounted for in the model.

#### 4. Routes to meeting the 2025 commitment (PGDE targets 2022-2024)

Meeting the commitment to increase teacher numbers to 57,100 by 2025 equates to a 7% increase in teachers over the 5 year period. The modelling has focussed on PGDE programmes as there is insufficient time for changes to undergraduate programmes to impact on teacher numbers in this parliamentary term.

The first scenario considered (Scenario A below) looked at whether meeting the current ITE levels would be sufficient to meet the additional teacher numbers we have committed to by 2025. The modelling shows that meeting the current ITE target levels would be likely to be sufficient to meet the commitment.

**Scenario A** assumes that ITE targets are met – although it is important to note that we haven’t seen this happen in secondary in recent years. **Scenario B** shows the impact of increasing primary places to make up for any shortfalls from secondary targets not being met whilst still training enough students to meet the overall target.

##### Modelling of ITE places to meet the target of a 7% increase in teachers

	Primary	Secondary	Total
Projected changes in pupils 2020-2025	-9%	5%	-2%

	Projected change in teacher numbers 2020-2025			Average postgraduate ITE places 2022-2024	
	Primary	Secondary	Total	PGDE Primary	PGDE Secondary
Scenario A: Maintaining current ITE targets	4%	10%	7%	1,150	1,800
Scenario B: Maintain achievable ITE levels	6%	8%	7%	1,350	1,600
Scenario C: Sector split matching projected pupil change	0%	14%	7%	700	2,300

\* Scenario C is considered later in this submission.

The results show that maintaining current ITE targets across sectors and subjects, as modelled in scenario A, would – if targets were met – mean a big increase in primary teacher numbers relative to the falling number of primary pupils (4% rise in teachers vs 9% fall in pupils). This is in contrast to secondary where the 10% rise in teachers would be more closely matched by the 5% rise in pupils. This effect would be more pronounced if primary targets were raised to make up for any shortfalls from secondary targets not being met, as modelled in scenario B.

The impact of adopting either of these approaches, where primary PGDE intake levels are maintained or increased, is that the primary sector, where



pupil teacher ratios are at the lowest (best) ever level and there are already signs of oversupply, will have an increased availability of teachers at the expense of the secondary sector, where the PTR level is at its highest (worst) point since 2004.

An alternative to this approach would be to set targets for universities to train sufficient teachers to allow a proportionate increase in teachers compared to changes in pupil numbers across both primary and secondary sectors. **Scenario C** in the table above allows for the increase in teacher numbers to be split relative to projected changes in the pupil population (i.e. no increase for primary, significant increases for secondary). This means no change in primary teacher levels from the 2020 census position (because we are expecting a fall in primary pupil numbers) and a 14% increase in secondary teachers.

The modelling for Scenario C shows that to meet these sector specific targets would require a reduction in primary ITE places and a substantial increase in secondary ITE places.

## 5. Beyond 2025

Pupil projections show a continued decrease in pupil numbers beyond 2025. We have considered two options for teacher requirements beyond 2025.

- Option 1 – PTRs are maintained in each sector (resulting in a decrease in teacher numbers)
- Option 2 – teacher numbers are maintained in each sector

Both options result in a reduced requirement for ITE provision compared to the period up to 2025 when teacher numbers are increasing.

For modelling purposes undergraduate provision remains fixed. An alternative to reducing postgraduate provision from 2025 onwards, would be to reduce undergraduate provision from 2022 onwards.

The underlying position assumes that ITE targets have remained fixed until 2024 (scenario A presented above).

### **Option 1 - Primary and Secondary Student Intake Projections, 2025-2029, Maintaining PTRs**

The model outputs for the PGDE courses have been rounded to the nearest fifty. Targets for undergraduate courses have been fixed at 2021 target levels.

Entry Year	Primary		Secondary		
	U/G (including combined)	PGDE	BEd	PGDE	Combined
2024	780	1150	1165	1800	170
2025	780	600	165	1000	170
2026	780	500	165	900	170
2027	780	650	165	700	170
2028	780	700	165	500	170
2029	780	750	165	400	170

### **Option 2 - Primary and Secondary Student Intake Projections, 2025-2029, Maintaining teacher numbers**

The model outputs for the PGDE courses have been rounded to the nearest fifty. Targets for undergraduate courses have been fixed at 2021 target levels.

Entry Year	Primary		Secondary		
	U/G (including combined)	PGDE	BEd	PGDE	Combined
2024	780	1150	1165	1800	170
2025	780	1000	165	1300	170
2026	780	1000	165	1200	170
2027	780	1000	165	1200	170
2028	780	1000	165	1200	170
2029	780	1000	165	1200	170