

# WA teacher demand and supply projections



The following paper analyses the projected supply and demand for teachers in Western Australia and identifies key factors influencing these trends and projections to 2017. It focuses on the impact of the return to a full Primary student establishment, decline in specialist secondary teaching areas, teacher retirements, the 'half student cohort' and declining university enrolments.

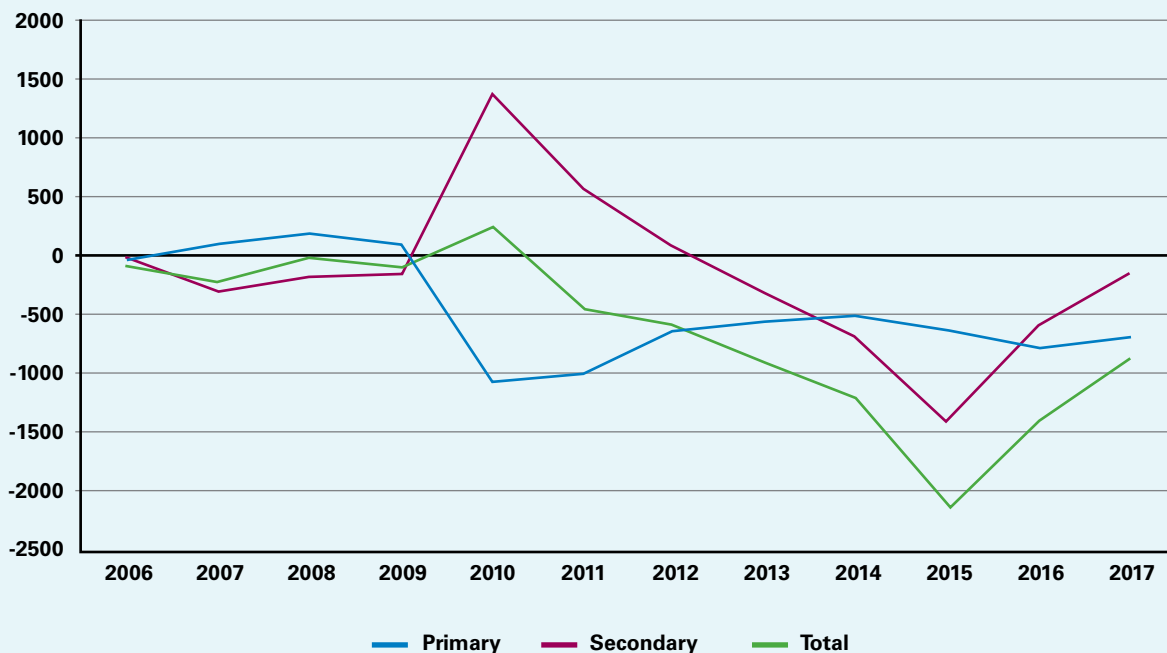
## Projection

The Teacher Demand and Supply Model shown below predicts that in 2009 there will be a minor oversupply of primary teachers and a shortage of secondary teachers that will equate to an overall minor teacher shortage. These figures include both the public and private sectors.

The trend for 2010 shows the impact of the full student cohort in primary schools (thus producing a large shortfall) and the flow of the half-year cohort into the secondary sector. This half-year cohort alleviates the shortages in the secondary sector over the short-term, however, from 2012 to 2017 the modelling indicates there will be a major shortfall in teachers in both sectors.

It should be noted that these projections (1) are based on the continuation of current trends and (2) do not take into consideration a range of new initiatives currently being implemented across the education sector.

**WA Teacher Workforce Shortfall/Surplus 2007 to 2017**



## Analysis

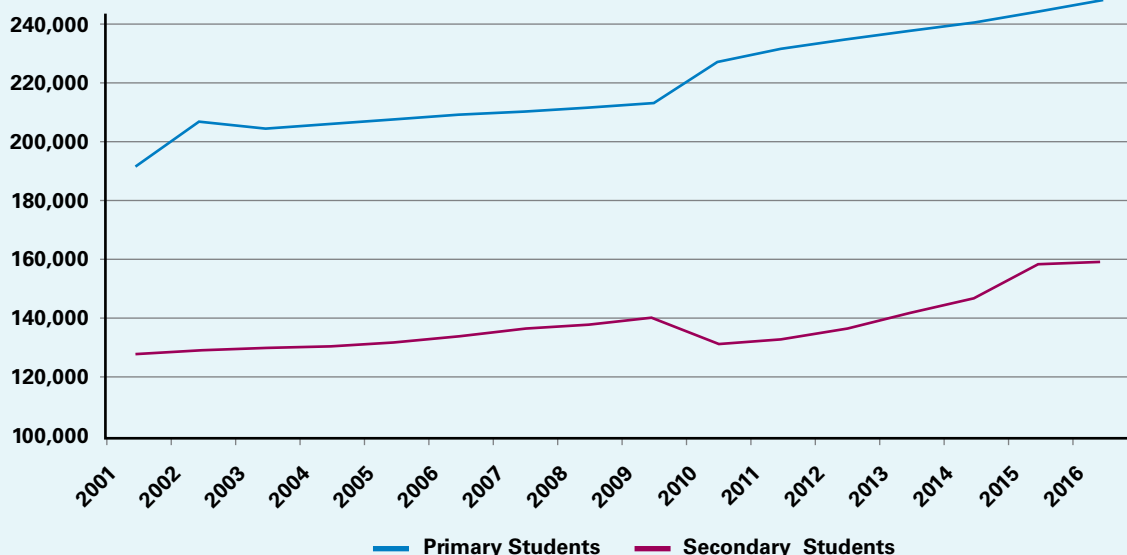
In WA it is anticipated that teacher shortages will increase beyond 2011, primarily due to a projected increase in retirements, based on recent exit patterns of older teachers projected against the current age profile. Teacher retirements will peak towards the mid to late part of the next decade, then decline beyond the period presented in this forecast as the peak of the 'baby boomer' workforce would have retired.

It is noteworthy that this retirement impact will be significant for the public sector where the age profile is notably older than the private sector.

There will be a divergence of the primary and secondary teacher labour market over the forecast period as a result of the 'half cohort' of students currently in Year 6, progressing into secondary school.

A shortage of primary (including early childhood education) teachers is anticipated in 2010 due to the impact of the return to a full primary student establishment. It should be noted that the proposed expansion of early childhood education by the Commonwealth Government has not been included into these projections. The number of primary students is also projected to increase over this period due to a significant increase (over 20 per cent) in the number of births in WA and high interstate and international migration.

### WA Primary & Secondary Student Trends & Projections



A contrasting surplus of secondary teachers from 2010 to 2012 is also a result of the half cohort, noting that the surplus is quickly eroded due to accelerating retirements over this period. This surplus projection is an optimal position that has an underlying assumption of a 'perfect' allocation of students to teachers according to current student-teacher ratio trends. The surplus, for example, could be smaller if class sizes fall significantly. The reduction in demand for secondary teachers is also unlikely to alleviate the difficulties in specialist secondary teaching areas (Mathematics, Physical Science) and in the more difficult-to-staff locations.

A spike in Secondary teacher demand anticipated in 2015 is brought about by the return to full secondary student establishment as the 'half cohort' exit the school system.

There are further ramifications of the 'half cohort' for the DET. The 'half cohort' of students may impact to a large extent on the teaching staff of the Government sector, particularly if the non-Government sector actively seeks to maintain student establishment. The effect could mean the Government secondary sector has as few as 25 per cent of their normal students in that year (i.e. 2010 flowing through to 2014).

The 'half cohort' has further implications for teacher supply starting from 2019. This is because the number of students entering university in 2015 will be much lower than the normal levels and competition from courses other than teaching may mean a very low intake into education courses for that year. Hence the pool of graduates could be extremely low in 2019.

The projected number of graduates is based on the universities' current student numbers and planned intakes. As such the projected increase in the supply of graduates may be overstated as TISC data indicates a decline in interest in teaching.

Further work is required to develop subject specific forecasts to determine if the current and projected mix of graduates appropriately addresses current and future shortages, and to assess the impact of the 'half cohort' on individual schools.

## WA Teacher Workforce Trends

### Vacancies

The filling of public school vacancies has become relatively more difficult in recent years, with 2007 being a particularly difficult year. The commencement of the 2008 school year was considerably better than 2007, with 79 vacancies compared with 206 vacancies in 2007.

It is important to note that the projected teacher shortages do not necessarily indicate the number of teacher vacancies. Teacher vacancies fluctuate significantly during the school year for a number of reasons such as, teachers taking extended leave, acting in other roles or changing positions.

Over 80 per cent of the vacancies at the commencement of the 2007 and 2008 school years were for secondary school teachers, with the largest number of vacancies occurring in Science, English, Mathematics, and Design and Technology.

All States and Territories are experiencing shortages and recruitment difficulties across a number of learning areas, but particularly Mathematics, Science (especially Chemistry and Physics) and Design and Technology. A MCEETYA report in 2003 highlighted that replacement demand for such learning areas would become a significant issue in the short-term as a significant proportion of these secondary teachers are males over the age of 45.

It is particularly difficult within WA to attract and retain teachers within these learning areas as the skill set of teachers and graduates is highly sought after within the resources sector.

The following factors are the key issues impacting on the worsening shortage of teachers in WA.

## Demand Factors

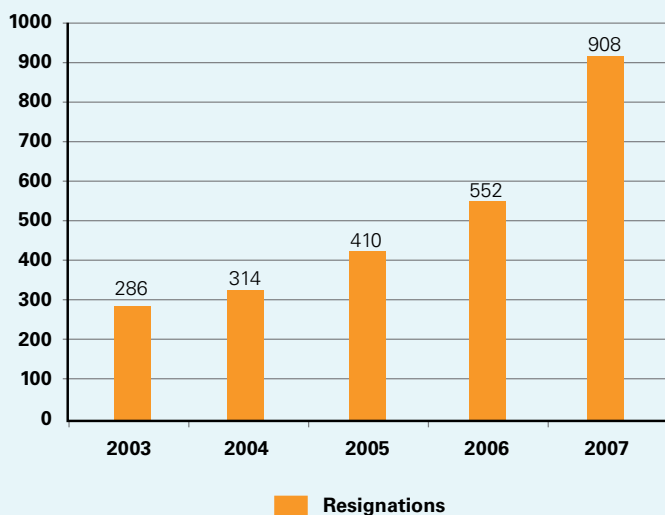
The number of teacher resignations in the public education system has increased 220 per cent since 2003, up from 286 in 2003 to 908 as at the end of 2007. The booming WA economy continues to provide excellent job opportunities, and the number of teacher resignations due to other work has increased from 58 teachers in 2003 to 210 teachers at the end of 2007.

The number of teachers retiring has increased significantly in recent years as the 'baby boomer' workforce moves into retirement age. It is estimated that 45 per cent of WA's total registered teachers are over the age of 45, and 26 per cent are in the age range of 55 to 59. The retirement intentions survey<sup>1</sup> highlighted that, within the Government sector alone, 30 per cent of the teaching workforce will retire in the next five years.

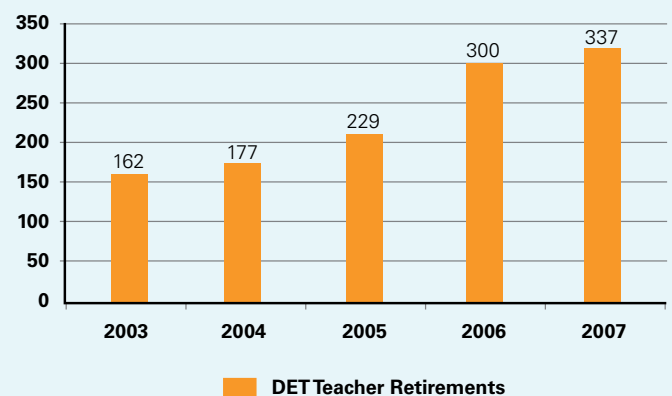
The number of retirements in the public education system has increased significantly from 162 in 2003 to 300 in 2006. At the end of December 2007 there were 337 teacher retirements, with many more expected to retire before the start of the new school year. It should be noted that there are over 3,000 teachers who are of retirement age (55 and over) and in excess of 1,000 teachers who are over 59 years of age currently employed by DET.

The number of students in WA continues to increase. WA full-time pre-compulsory, primary and secondary students in Semester 1, 2007 totalled 359,139 students. Based on current demographic trends (increased birth rates and international and interstate migration), this figure is expected to grow by up to 12 per cent to over 400,000 students by 2017.

### Resignations of Teachers (DET)

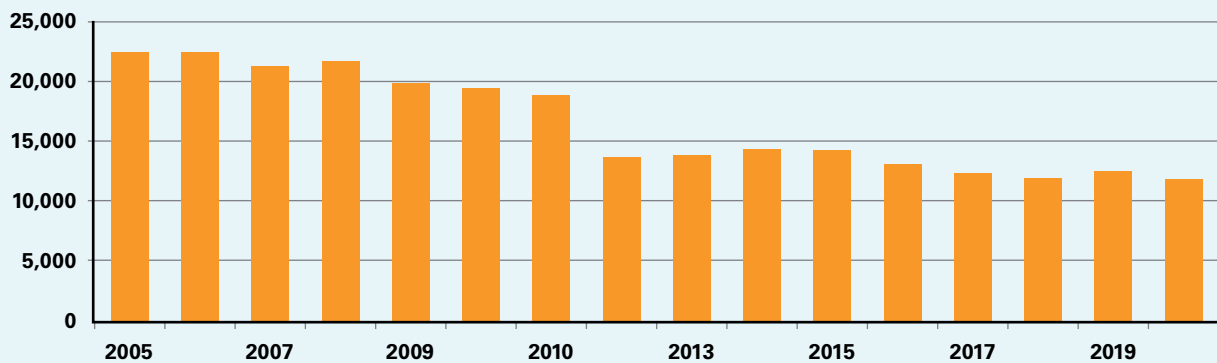


### Retirement of Teachers (DET)



<sup>1</sup> DPC unpublished, *Retirement Intentions Survey*

## Working Population (15-65 Year Olds) Annual Increase



### Supply Factors

The number of teacher graduates available to teach is only expected to increase marginally in the coming years, from 1,500 available to teach for 2007 to 1,557 for 2008 and 1,598 for 2009.

In the absence of any significant intervention, the DET will face tough competition for graduates from the private sector as student numbers in that sector are expected to grow by approximately 2.5 per cent in 2008 and 2.6 per cent in 2009. This growth will create greater competition for graduates and opportunities for public school teachers to find employment in the private sector.

Moreover, there has been a marked decline in the number of teacher education applications in WA in recent years. WA TISC data indicates a total of 2,646 students had first preference applications for education courses (bachelor degrees and graduate diplomas) over the 2007/08 year, which is down significantly (almost half) from the peak of 4,706 first preference applications in 2003/4.

The number of offers made from the local universities has also fallen significantly from 3,175 in 2003/04 to 2,088 in the 2007/08 year. The number of estimated new teacher enrolments has not been finalised this year, however last year's figure of 1,760 new enrolments for 2006/07 was well below the 2003/04 estimate of 2,569. The preliminary number of enrolments for 2007/08 is 1,740.

While the decline in university teacher training enrolments is primarily a result of the decline in mature age students, there may be further difficulties attracting an adequate number of school leavers if the local labour market continues to boom.

Of more concern is the medium-term labour market outlook for WA, and in particular the falling inflow of people into the prime working age population in WA (15–65 years) which is the source of employment growth. The influx of people into this group is expected to fall from the current growth trend of 25,000 people a year to almost 10,000 persons per year by 2018 due to the current demographic profile of WA.

This will not be affected by the current birth boom in WA over the short-term and there would need to be a significant and enduring increase in net migration to WA to address this fall. This will have significant ramifications for the WA labour market and economy, particularly if strong employment growth continues over this period.

