



Submission to the Productivity Commission's Education and Training Workforce Study:

Schools

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1. Executive Summary

The NSW Government acknowledges the unique and significant role of teachers in schools across our state and the community, particularly in the provision of quality education.

The key challenge for the schools workforce lies in how to attract and retain the highest quality and most suitable candidates to the teaching profession. There are a number of factors that influence who becomes a teacher, including career structures, pay, working conditions and the prestige of the profession.

This submission seeks to highlight the current challenges for the NSW education sector, with a focus on the characteristics of the teaching workforce in government schools. The submission recognises issues being faced in balancing supply and demand as well as describing incentives designed to address these issues in the medium to long-term.

The Productivity Commission review provides a timely opportunity to identify ways in which the Commonwealth and State governments in particular can work together to ensure that Australia has a world class teaching workforce.

There is scope for better co-operation between governments in training our teachers, attracting them to the profession, supporting them as beginning teachers, recognising their professional dedication, and ensuring all schools have access to teachers with the appropriate content knowledge. The national reform process embedded within the National Partnership Agreement on Improving Teacher Quality is making sound progress within NSW in addressing these issues, but there remain additional areas for reform.

A particularly acute issue is the need to better align the supply of new teachers from universities with the needs of schools. At present, teacher supply is dramatically mismatched to the needs of the schools workforce. There is an over-supply of primary teachers and an under-supply in a number of secondary subject areas such as maths and science.

An imbalance between supply and demand can undermine other actions to enhance the teaching profession. An over-supply of university teaching places dilutes the quality of those seeking to enter education courses. It also places pressure on what is already an over-stretched professional experience system which needs to provide genuine learning and development opportunities for potential teachers.

Specifically, this submission identifies areas where additional action is needed from all levels of Government, employers and teacher education bodies:

- The need to better align workforce supply with demand is particularly acute in the context of the removal of the cap on funded higher education enrolments from 2012. The Commonwealth Government has the greatest influence here and needs to take appropriate action to ensure university teaching places align with workforce needs.
- Strengthening the teaching profession also requires teacher education graduates who are well-prepared for employment. Ensuring that graduate teachers have strong skills in literacy and numeracy, assessment data analysis and classroom management is important.
- Attracting and retaining high quality teachers in rural and regional areas is critical to lifting educational outcomes for students in these areas. The makeup of rural and regional

communities and their economies plays an important role in attracting professionals to work in these areas. There is additional scope for policies in areas such as taxation and housing to attract and retain high quality teachers in regional areas.

- To improve schooling outcomes for Aboriginal students, steps that can be taken include integrating Aboriginal education elements into pre-service training; providing professional development and training opportunities; targeting development opportunities for Aboriginal employees; and building relationships with local Aboriginal communities.
- Reducing barriers to movement for teachers between the early childhood and schools sector would benefit both sectors, addressing over-supply of primary teachers while boosting the number of qualified teachers working in the early childhood sector.
- Additional research and data can be undertaken to enable more effective responses to the supply, recruitment and retention of high quality teachers in the areas of greatest need.

2. Snapshot of the permanent teaching workforce in NSW Government Schools

In 2010, the NSW Department of Education and Communities (the Department) employed approximately 49,000 permanent school teachers across the State, with near equal numbers of primary and secondary school teachers.

Age profile

In 2006, a significant proportion of the teachers in NSW government schools were in the 45 and over age group. Whilst this group narrowed in the 2011 data, the general trend of the age profile continued.

The projections for 2016, however, reveal a changing profile as older teachers leave the workforce and the effect of increased new appointments becomes evident. The trend line begins to level with increases in the proportion of teachers aged less than 30 years and between 30 and 44 years.

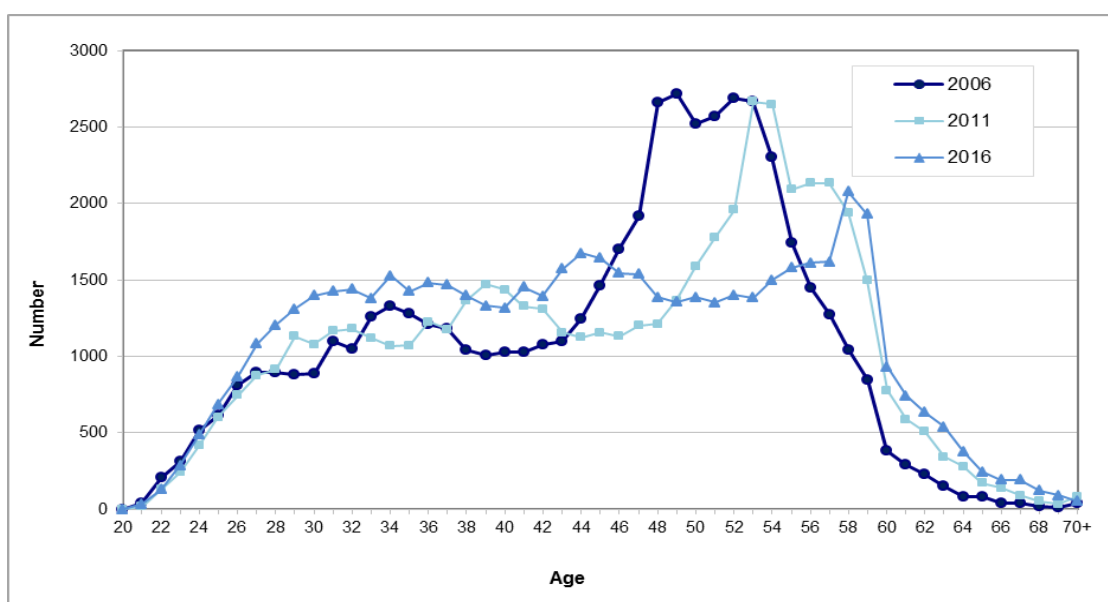
The age profiles of the permanent teaching workforce in 2006 and 2011 and the projected profile for 2016 are shown in Table 1 and Figure 1 below.

Table 1: School teacher age distribution, 2006, 2011, 2016 (projected)

Age-group	2006 (actual %)	2011 (actual %)	2016 (projected %)
Under 30	9.8	9.6	11.0
30–44	31.8	34.5	39.3
45 and over	58.4	55.9	49.7
Total	100.0	100.0	100.0

Source: NSW Department of Education and Communities

Figure 1: Teacher age trends, 2006 (actual), 2011 (actual), 2016 (projected)



Source: NSW Department of Education and Communities

Length of service

Data for March 2011 show that teachers in NSW government schools have an approximate length of service of 15.4 years. This, coupled with low levels of resignations (1.1 per cent in 2010), indicates a stable workforce in the government sector.

Table 2: Average length of service (years), 1 March 2011

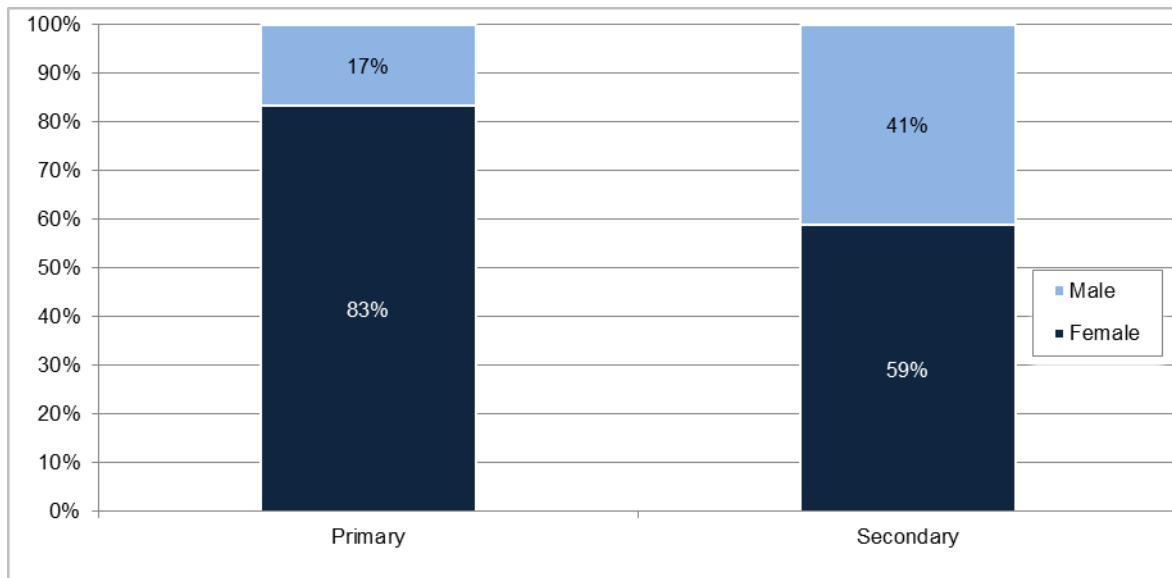
	Primary	Secondary	Total
Female	14.5	14.1	14.4
Male	19.2	17.6	18.1
Total	15.3	15.5	15.4

Source: NSW Department of Education and Communities

Gender profile

The gender composition of the current permanent teaching workforce is shown in Figure 2. The figure demonstrates the historical trend of a highly feminised labour force, with 83 per cent of primary teachers and 59 per cent of secondary teachers being female. The declining numbers of male teachers, particularly in primary schools, are not peculiar to NSW government schools and are evidenced in schools systems across Australia and the rest of the world.

Figure 2: Teacher gender by school level, 2011



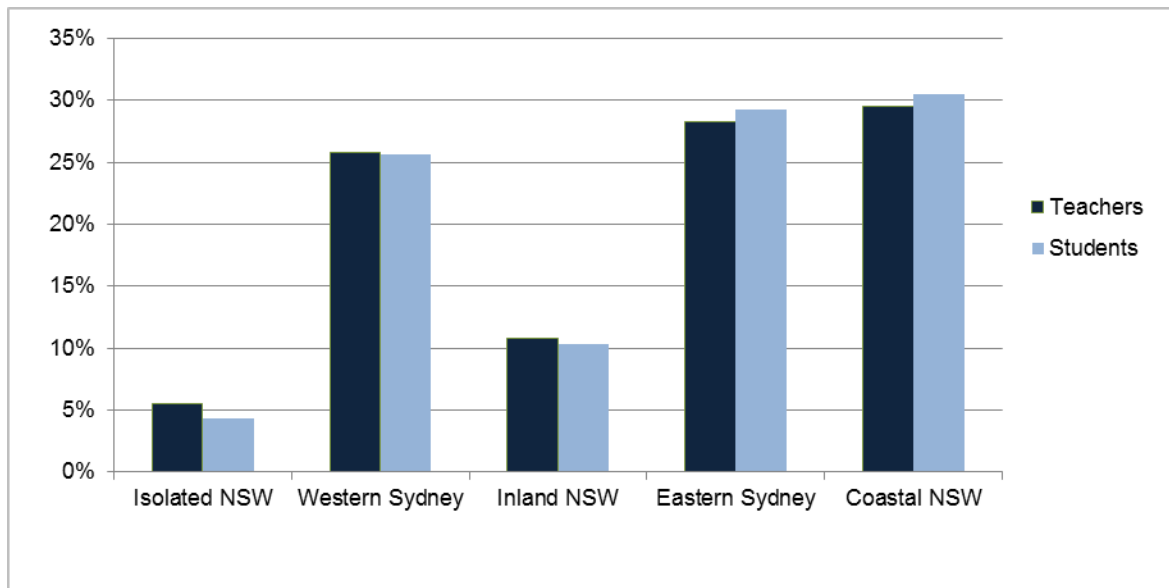
Source: NSW Department of Education and Communities

Geographical profile

The distribution of the current permanent teacher workforce and student enrolments by geographical location is shown in Figure 3. Together, the Sydney metropolitan area and coastal

NSW account for approximately 83 per cent of the workforce and 84 per cent of the student enrolments, reflecting the heavy concentration of the population along the east coast of NSW.¹

Figure 3: Teacher workforce and student enrolments by location, 2011



Source: NSW Department of Education and Communities

¹ Further detail on the composition of each geographical location is available at Appendix A.

3. Standards and incentives for teacher quality and development

Initiatives to support increased teacher quality need to take place across the teaching 'life cycle':

- Attracting the best entrants into teaching, including through flexible pathways
- Training pre-service teachers as well as principals, teachers and school leaders for new roles
- Recruiting teachers and school leaders in schools to minimise skills shortages
- Developing and enhancing the skills and knowledge of teachers and school leaders through their careers
- Retaining and rewarding quality principals, teachers and school leaders

3.1 Teacher quality standards

A renewed focus on teacher quality is rapidly emerging internationally in recognition that it is the most significant contributing factor in achieving high quality student outcomes.

NSW was the first State to fully implement a legislated teacher accreditation system applying to teachers in all education sectors. This provides consistency in the quality of the teaching workforce across NSW and recognises the need for a structure to underpin careers, quality and employment standards.

NSW has established standards to provide benchmarks for quality; incentives for continuous improvement; opportunities for career enhancement and a structure to underpin employment decisions. These standards can be achieved while teaching in the classroom coupled with targeted professional development; classroom practices are an essential element for achievement of the standards.

In NSW, all teachers who started teaching after 1 October 2004² are required to meet standards of professional practice. These teachers are called New Scheme Teachers.

The Standards are set at four levels:

- Graduate teacher
- Professional Competence
- Professional Accomplishment
- Professional Leadership

The first two levels are mandatory for New Scheme Teachers. All programs of initial teacher education are underpinned by the Graduate Teacher Standards and accredited by the NSW Institute of Teachers.

² In addition, any teacher who has been away from teaching for 5 or more years is required to be accredited.

There are two distinct pathways to mandatory accreditation under the *Institute of Teachers Act 2004*: conditional accreditation for graduates who hold subject content degrees and teacher education students who have completed a substantial part of a teaching degree, and provisional accreditation for fully qualified teachers possessing a teaching degree or undergraduate degree plus teaching qualification.

After a teacher is conditionally or provisionally accredited, they are required to meet the Standards at Professional Competence. There is a prescribed time period to meet these Standards. If a teacher is unable to meet the Standards, their accreditation to teach may be removed.

The next two levels describe benchmarks of outstanding teaching.

Accreditation processes at Professional Accomplishment and Professional Leadership levels are based on the use of externally moderated professional judgements and multiple sources of evidence to make an accreditation decision.

The accreditation processes were designed after an extensive analysis of national and international certification practices. The strength of the NSW process is its capacity to reflect authentic workplace performance.

The numbers of teachers applying for accreditation at these levels has steadily increased since the system was implemented in 2008.

Recently, there have been a number of national developments designed to describe and promote quality teaching. National Professional Standards for Teachers were endorsed by the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA). The Standards are also set at four levels:

- Graduate teacher
- Proficient
- Highly Accomplished
- Lead.

The Standards describe quality teaching at each of the four levels. The first two levels of Standards describe what teachers need to know, understand and be able to do to be proficient teachers.

The Standards reflect the views of a wide range of teachers. They are designed to accommodate changing pedagogy resulting from the impact of new information technology. They also refer to diverse student populations including explicit descriptors for teaching Aboriginal and Torres Strait Islanders, Students with Special Needs and students from non-English Speaking Backgrounds.

It is anticipated that the National Professional Standards will replace the NSW Professional Teaching Standards. The timeline for full transition is currently under discussion.

3.2 Quality of teacher education

Quality initial teacher education is a critical element in efforts to improve teacher quality.

States have limited powers to influence the number and quality of teacher graduates. NSW appoints approximately 2,000 new teachers per annum in government schools. However, the waiting list for permanent employment in government schools is approximately 33,000. Also, the number of completions of teacher education courses at NSW universities is over 5,500 per year, and likely to grow with the removal of the cap on funded higher education enrolments in 2012.

With the volume of students undertaking teacher education courses, concerns have grown about the literacy and numeracy skills of entrants into teaching. For example, the Australian Tertiary Admission Rank entry requirements for primary teaching courses at different NSW universities can range widely. This variance in the standards required of candidates is of concern. This variance in the entry requirements is likely to be exacerbated with the removal of the cap on funded higher education places.

NSW has introduced its own measures to assure the community that teachers have the necessary skills. For example, the NSW Institute of Teachers has introduced prerequisites to gain admission to a primary teaching course in NSW universities. The prerequisites set minimum levels of achievement for Higher School Certificate mathematics and English courses.

Other skills required by teachers include the ability to analyse and interpret assessment data. There needs to be training in the SMART (School Measurement, Assessment and Reporting Toolkit) system which helps teachers evaluate strengths and weaknesses in student literacy and numeracy performance.

These factors need to be taken into account as part of the Australian Government's responsibilities for funding teacher education courses.

Professional experience

Any uncontrolled growth in teacher education candidates, particularly in teaching areas of over-supply, will place significant strain on the relationships between higher education institutions and schools/teacher employers with respect to providing quality professional experience placements (referred as the "practicum").

The current number of teacher education students in training who require professional experience placements in schools through their university program is high. Many school systems are providing professional experience support for significant numbers of teacher trainees who may never enter the teaching workforce. It has been estimated that meeting the requirement for practicums (based on the number of students in teacher education and the number of hours expected for professional experience) would mean approximately one in four practising teachers would need to supervise a student on professional experience. A growth in the number of students in training, which exceeds growth in the teaching workforce, will increase this burden.

Currently there are few incentives for teachers to take on supervision of professional experience.

The placement of a teacher education student in a school relies on the good will of the school and supervising teacher. The teacher will be required to model good teaching practice, observe and mentor the teacher education student, supervise them in the classroom, and provide feedback on lesson delivery. There will also be some time taken out of the classroom for the teacher to work with the student including vetting lesson plans and providing feedback. One incentive for teachers is that time spent supervising teacher education students can be used as evidence towards accreditation at higher level standards. However, the standards are not explicit about time spent supervising professional experience, rather this is captured under collegial practice elements.

Centres for Excellence established under the National Partnership Agreement on Improving Teacher Quality have demonstrated some good practices in working with universities and schools to improve the number and quality of professional experience places for teacher education students. These practices need to be expanded and made more widely available. The Australian Institute of Teaching and School Leadership has been advocating for stronger processes including mandating a minimum number of days of professional experience. Centres for Excellence are described in more detail in Section 3.4.

The new national standards endorsed by MCEECDYA will commence in 2012 and are intended to:

- boost the quality of the teacher professional experience;
- lift the structure and content of teacher education programs; and
- improve entry requirements and make graduate outcomes explicit.

The practicum or professional experience requirement will:

- specify a minimum numbers of days of supervised teaching practice;
- be structured on a developmental continuum;
- be sequenced to reflect effective connections between theory and practice; and
- incorporate an internship component.

However, improvements in quality in the practicum will not overcome the huge demand for places which is likely to grow with the removal of the higher education cap.

3.3 Professional Development Policy in NSW

The quality of teachers and school leaders makes the greatest difference to student performance. Professional development ensures that teachers continually enhance their capacity to meet the varied and complex needs of students.

The NSW Institute of Teachers has developed and implemented a specific Professional Development policy for accredited teachers, across all sectors. This ensures that all professional development undertaken by teachers is linked to the NSW Professional Teaching Standards. This provides a mechanism for teachers to demonstrate that they have maintained their level of accreditation and expands the number and range of Professional Development courses and programs available to teachers.

Professional Development in Government schools

The Department is committed to developing the capacity of government school staff and staff who support schools to meet key accountabilities.

Professional learning provision is articulated through the *NSW Department of Education and Communities Professional Learning Continuum*. The continuum provides a framework for professional learning programs for school staff at every stage of their career. The continuum begins with pre-service teachers and classroom teachers and continues to teacher leaders, school executives, school leaders and senior officers. It also describes the professional learning for school administrative and support staff.

Development of leaders

Just as teacher quality has been shown to be an essential ingredient to improving student outcomes, school leadership is also vital.

School principals are responsible for the culture and attitude of the school to teacher quality and improved learning outcomes. This is a critical area of focus for the Department. Strategies to build effective leaders include performance targets, feedback systems, monitoring of school achievement and professional development.

The Department provides an extensive suite of professional learning programs for aspiring, newly appointed and experienced school leaders aligned with key accountabilities and capability frameworks of the NSW Institute of Teachers. The content of these modules is underpinned by current research in leadership effectiveness.

Professional learning can be accessed by school leaders wherever they are in the state through a variety of delivery methods and can be tailored to individual needs.

Higher education qualifications can also be obtained by undertaking accredited training delivered by the Professional Learning and Leadership Development Registered Training Organisation within the Department.

School administrative and support staff quality

School administrative and support staff make an important contribution to student performance through their support of school management, teaching practice and the maintenance of positive relationships with parents and the community.

The Department provides professional learning programs for all school administrative and support staff at every stage of their career.

Professional Learning Information Management System – My PL@DET

The Department has developed a professional learning record management system (MyPL@DET). My PL@DET can be used to track and report on both individual and system-wide professional learning. It provides teachers with a personal account to keep a record of all their professional learning which follows them when they move from one government school to another.

3.4 Incentives to improve teacher quality

The 2010-2011 NSW Budget provided \$409 million over the next four years for teacher quality and supply initiatives in NSW government schools. This includes an investment in the Smarter Schools National Partnership on Improving Teacher Quality in NSW.

The Smarter Schools National Partnership on Improving Teacher Quality in NSW

Significant initiatives implemented under this National Partnership include the establishment of school Centres for Excellence, and the new classifications of Highly Accomplished Teachers and Paraprofessionals.

School Centres for Excellence

Centres for Excellence schools demonstrate, develop and share high quality teaching, leading to improved outcomes for students. Centres for Excellence also play a significant role in facilitating quality professional experience placements and internships for initial teacher education students.

There are 50 Centres for Excellence across all school sectors in NSW, of which 35 are government schools.

Centres for Excellence use a 'hub and spoke' model to engage other schools in a range of activities linked to the improvement of teacher quality, including shared professional learning activities.

Centres for Excellence 'hub' schools receive additional resources for the two-year period of operation, including a Highly Accomplished Teacher, a paraprofessional and an additional allocation of \$50,000 per annum.

Centres for Excellence support teachers in gaining and maintaining accreditation with the NSW Institute of Teachers, particularly at the higher levels of accreditation. Highly Accomplished

Teachers are working with teachers across their “hub and spoke schools” to increase awareness of the process and benefits of higher levels of accreditation for experienced teachers.

Highly Accomplished Teachers

Highly Accomplished Teachers are a new classification under the Smarter Schools National Partnership and a key NSW innovation for improving teacher quality.

The program has benefits for the individuals recognised as Highly Accomplished Teachers and for the schools they work with. A condition of employment as a Highly Accomplished Teacher is the achievement of accreditation at Professional Accomplishment or Professional Leadership during the two year temporary appointment. Highly able teachers are therefore motivated to achieve higher levels of accreditation by the NSW Institute of Teachers and are remunerated at a pay level that recognises their high quality ability to lead other teachers.

The Highly Accomplished Teacher focuses on supporting schools to improve teacher quality, leading their colleagues in the development and refinement of quality teaching practices to continually improve student learning outcomes. A key focus of the work of Highly Accomplished Teachers is the development of quality professional experience placement programs for initial teacher education students, in partnership with universities.

Highly Accomplished Teachers have access to career enhancing opportunities that would not normally be available to them as a classroom teacher. These include membership of the school executive and helping to develop the school plan. They may also have the opportunity to guest lecture at university on professional practice and school and system orientation. However, they still continue to teach, albeit it with a reduced teaching load. This innovative approach to rewarding excellent teachers helps address the conundrum that good teachers are often promoted out of the classroom.

By the end of 2010, 118 Highly Accomplished Teachers had been appointed across all NSW school sectors. While this is a great achievement, and was given impetus under the national education agenda, it requires a high level of resources if it is to be maintained and expanded.

Paraprofessionals

The newly established paraprofessional classification is another significant resource linked to the Smarter Schools National Partnerships that has been designed to support teacher quality. Paraprofessionals undertake a range of tasks to directly support teachers, allowing teachers to focus on the delivery of quality teaching and learning programs.

There are two categories of paraprofessional: educational, where the paraprofessional provides in-classroom support, and operational, where the paraprofessional undertakes non-classroom related tasks.

A number of operational paraprofessional classifications have been identified to provide schools with the flexibility to employ paraprofessionals to meet the specific needs of the school. These include information management support, technology learning facilitation, community engagement, professional experience placement coordination and general support.

Teacher Mentor Program

The Teacher Mentor Program, commenced in 2003, provides teacher mentors to government schools which show trends of significant numbers of new permanent teacher appointments.

Teacher Mentors are outstanding teachers who build confidence, give feedback and guide beginning teachers towards sound student management and quality teaching programs. Teacher Mentors are appointed at the level of Assistant Principal or Head Teacher.

Teacher Mentors support the induction and development of new teachers in the school. They provide valuable support to beginning and early career teachers in meeting the NSW Institute of Teachers' requirements of achieving and maintaining accreditation at Professional Competence.

Schools supported by Teacher Mentors show strong trends of improved retention rates for beginning teachers in their first year of teaching.

In the 2011-2012 Teacher Mentor Program, 50 full time equivalent Teacher Mentors are supporting new teachers in 92 NSW government schools.

Benefits of Teacher Quality initiatives in NSW government schools

A range of evaluation and monitoring activities are currently underway to collect evidence to assess the impact of the teacher quality initiatives in NSW government schools. Feedback indicates that principals place a high value on the provision of dedicated, education related positions and resources in their school that provide real support to the ongoing professional development of teaching staff.

3.5 Incentives for teachers in rural and remote NSW

Attracting and retaining high quality teachers in rural and regional areas is critical to lifting educational outcomes for students in these areas. The makeup of rural and regional communities and their economies plays an important role in attracting professionals to work in these areas. There is additional scope for policies in areas such as taxation and housing to attract and retain high quality teachers in regional areas.

The Department currently offers a range of incentives to attract and retain teachers in rural and remote locations.

A number of the incentives are based around the accumulation of transfer points. Each school is allocated a number of transfer points, with schools in rural and remote areas being allocated the greatest number of points (i.e. 8 transfer points). The incentives available under the scheme include:

- priority for transfer to a vacancy in an agreed location or area following the accrual of a sufficient number of transfer points;
- rental subsidies for teachers in 8 or 6 transfer point schools;

- an annual retention benefit of \$5,000 gross for a maximum of 5 years in 40 of the most isolated schools;
- the provision of enhanced personal leave for teachers in isolated rural schools so that they can attend to personal and/or family commitments;
- four additional training and development days per annum for teachers in 8 and 6 transfer point schools and one additional day for teachers in remote 4 transfer point schools; and
- locality allowances for teachers in schools in specified locations which provide compensation for additional costs incurred in living in those areas.

In some cases, rural and remote areas experience difficulties in attracting a qualified workforce across a number of fields and professions. In consideration of this, there may be scope to consider broader regional specific initiatives to attract workers across a number of fields, including some specific teaching areas. Such initiatives may incorporate incentives through tax policy or housing subsidies that make working in these areas more attractive.

3.6 Incentives for teachers working with Aboriginal students

To improve schooling outcomes for Aboriginal students, steps that can be taken include integrating Aboriginal education elements into pre-service training; providing professional development and training opportunities; targeting development opportunities for Aboriginal employees; and building relationships with local Aboriginal communities.

In 2010, MCEECDYA endorsed a set of specific requirements, including Aboriginal issues, to be addressed by all teacher pre-service courses. Engagement with higher education providers to improve the quality of pre-service teacher education courses and graduate teachers is one of the NSW Government's most important strategies across all sectors to sustain a quality supply of teachers.

The NSW Government is also providing pathways for Aboriginal education workers and staff to increase their qualification levels. These pathways provide opportunities for shadowing, coaching and leadership programs for Aboriginal teachers, and teacher training opportunities for Aboriginal paraprofessional staff in NSW government schools.

The Department offers the Enhanced Teacher Training program for fourth year students in schools with high Aboriginal student enrolments. This program's 'in country' immersion placement places pre-service students in communities with high Aboriginal populations for a minimum of six weeks. Aboriginal mentors support the teacher education students to further develop their capacity to understand the issues facing Aboriginal communities and to support their engagement with these communities. Twenty scholarships will be available for teacher education students to undertake enhanced pre service training in their final year of study for 2012.

A number of government schools and their communities have formed school advisory committees and signed partnership agreements with their local Aboriginal Education Consultative Groups and Aboriginal communities over the past year. Together they have

developed school plans and enhanced educational practices intended to contribute to improved learning outcomes for Aboriginal students. This is being expanded in 2011.

The number of scholarships available to Aboriginal or Torres Strait Islander students to train as school teachers has increased from 60 in previous years to up to 80 each year from 2010. For the 2011 program, over 100 applications were received from Aboriginal and Torres Strait Islander applicants and 90 scholarships were offered with 86 being accepted. Further scholarships will be offered under the 2012 program.

The designation of School Administrative and Support Staff positions for Aboriginal people in schools with significant Aboriginal student enrolments provides greater opportunities for Aboriginal people to be employed in NSW government schools. They provide strong role models and build connections to Aboriginal communities, contributing to a positive impact on educational outcomes for Aboriginal students. The support for these staff members includes mentoring, an orientation program, and personalised support from Aboriginal Project Officers in the Department.

4. Balancing supply and demand in the schools sector

There is a misalignment in the supply and demand for teachers in NSW. The reasons behind the ongoing misalignment are complex and varied and largely beyond the control of any one employer or authority. Some of the main reasons that have been highlighted as issues in NSW are:

- Personal perceptions of teaching as a career choice;
- Changing patterns of senior school subject choice;
- Changing patterns of enrolments in undergraduate discipline degrees and the popularity of certain disciplines over others;
- Relativities and attractiveness of salaries and conditions; and
- Employment and professional recognition policies and practices.

As discussed below, the removal of the cap on higher education places and emphasis on student demand will likely exacerbate this misalignment.

4.1 Supply in the NSW government school sector

Supply of teaching graduates in NSW

The need to better align workforce supply with demand is particularly acute in the context of the lifting the cap on funded higher education enrolments from 2012. The Commonwealth government has the greatest influence here and needs to take appropriate action to ensure university teaching places align with workforce needs.

The Department conducts an annual survey of university commencements and completions. The projected completions from 2002 to 2010 are shown in Table 3.

The most evident trend, demonstrated in the data below, is of significantly low levels of completions for teachers of mathematics and sciences (particularly in the area of physics), yet a high rate of completions for primary teachers. This is an indication of a misalignment between teacher demand and supply.

The completions data show that primary teaching completions have risen 66 per cent between 2002 and 2010. This rate of growth in primary qualified teachers is well in excess of the education sector's needs.

The number of secondary school teachers has grown by 20 per cent between 2002 and 2010. However, given the level of speciality required at the secondary level, there are some fundamental gaps between supply and demand that do not meet the needs of the current schools workforce.

For example, the supply of mathematics teachers continues to fall whilst growth remains constant for English, Creative Arts and Human Society and Its Environment teachers.

Completions for Creative Arts are two and a half times those for Mathematics, which has seen a drop in numbers since 2004.

Table 3: University projected completions, 2002–10

Discipline	2002	2003	2004	2005	2006	2007	2008	2009	2010
Primary	1,795	2,136	2,205	2,437	2,434	2,409	2,457	2,426	2,997
Secondary subtotal	2,392	2,533	2,712	2,728	2,866	3,016	2,892	2,806	2,874
English	213	281	256	280	363	352	366	365	410
Mathematics	139	173	225	224	217	228	210	208	182
Science	305	305	311	371	393	432	382	376	383
Human Society & Its Environment	522	507	560	562	602	668	692	708	698
Languages Other Than English	73	87	98	48	83	98	105	65	83
Technology & Applied Studies	299	328	371	354	289	320	295	244	263
Creative Arts	371	366	339	423	475	485	470	459	458
Personal Development, Health & Physical Education	349	341	390	360	382	373	303	333	356
Other	121	145	162	106	62	60	69	48	41
Total primary and secondary	4,187	4,669	4,917	5,165	5,300	5,425	5,349	5,232	5,871

Source: NSW Department of Education and Communities, University Special Survey.

Supply of teachers

A similar development in supply patterns can be demonstrated through the Department's teacher employment list. At 1 March 2011 there were over 33,000 persons seeking permanent employment as a teacher. Graduates and applicants from other sources continue to replenish the list. This needs to be considered in the context of approximately 49,000 teachers currently employed in NSW government schools, with up to 2,000 new permanent teachers recruited each year.

4.2 Demand in the NSW government schools sector

The main factors considered in calculating demand for teachers in NSW government schools are:

- Projected changes in student enrolments;
- Projected teacher separations (such as expected retirement or resignation rates);
- Government policy; and
- Data on teacher mobility.

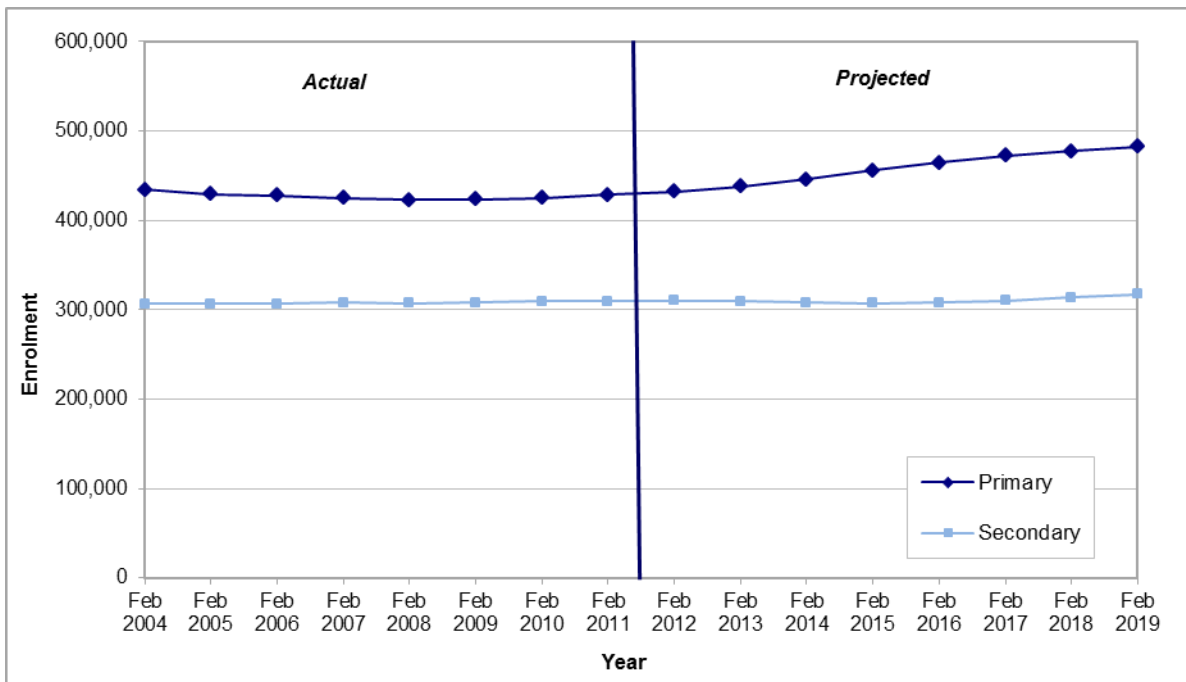
On average the Department recruits between 1,800 and 2,000 new permanent teachers each year. As a result of increased retirement levels, annual recruitment is projected to peak in 2016 and then reduce slowly.

Projected changes in student enrolments

Student enrolment projections provide a gauge of the level of growth or decline that is expected in the student population in NSW schools. Figure 5 shows both actual enrolments and enrolment projections for primary and secondary government students for the period between 2004 and 2019.

The Australian Bureau of Statistics reported an increased total fertility rate for NSW of 1.82 babies per woman in 2009. As demonstrated in the projections below, this will result in increased primary school enrolments in coming years and subsequently, increased secondary enrolments.

Figure 5: NSW Government school enrolments and projected enrolments, 2004-19



Source: NSW Department of Education and Communities

Projected teacher separations from NSW government schools

Potential separations from employment with the Department are unable to be projected for all circumstances, such as medical retirements, terminations and deaths. However, records of previous numbers of resignations and retirements are a useful estimate of separations.

Retirements

Retirement rates are expected to increase until 2014 as a result of the ageing workforce. From then, retirement rates are projected to decrease slowly. As a result, all school education sectors will have to prepare for increased training and recruitment to replace those teachers retiring. This will place greater pressure on schools in coastal NSW that experienced a retirement rate of 4.1 per cent in 2010.

Table 4: Retirement rates by geographical location, 2010*

Geographical Location	Primary (%)	Secondary (%)	Total (%)
Isolated NSW	2.5	1.9	2.2
Western Sydney	2.1	1.9	2.0
Inland NSW	2.5	3.1	2.8
Eastern Sydney	2.6	3.2	2.8
Coastal NSW	4.1	4.1	4.1
Total	2.9	3.1	3.0

* Note: includes medical retirements

Source: NSW Department of Education and Communities

Resignations

The resignation rate for the entire teaching service of around 49,000 permanent school teachers is low by industry benchmarks. Overall in 2010, it was 1.1 per cent.

The retention rate of teachers in NSW government schools compares very favourably with retention rates for teachers in other countries.

In the United States of America in 2008/09, 8 per cent of government school teachers left the profession and in the United Kingdom in 2008 the resignation rate of teachers was 11.7 per cent.³ In addition, in the United Kingdom in 2008 the resignation rate of teachers with 1-3 years of service was 33.9 per cent.⁴

Tables 5 and 6 provide the resignation rates for teachers in their first five years of teaching and the resignation rates for teachers in their first year of teaching.

Table 5: Resignation rates of teachers

Year	2006 (%)	2007 (%)	2008 (%)	2009 (%)	2010 (%)	Average (%)
in first five years	10.3	11.3	12.1	9.6	9.1	10.5
in first year	2.6	3.7	3.7	3.3	3.4	3.3

Source: NSW Department of Education and Communities

³ *Teacher Attrition and Mobility: Results from the 2008-09 Teacher Follow-Up Survey*, National Centre for Education Statistics

⁴ Passy, R. and Golden, S. (2010). *Teacher Resignation and Recruitment Survey: Report No. 41* (LGA Research Report). Slough: NFER.

4.3 Teacher demand in the early childhood sector

Reducing barriers to movement for teachers between the early childhood and schools sector would benefit both sectors, addressing over-supply of primary teachers while boosting the number of qualified teachers working in the early childhood sector.

In examining the schools workforce and planning for the future of the workforce, it is necessary to consider how the schools workforce interacts with other education sectors particularly the early childhood sector which provides the foundations of the education process.

On 1 January 2012, a new regulatory regime for early childhood education and care services will commence. The new regime will require more university qualified teaching staff. As a result of this, the sector is experiencing an under-supply of qualified early childhood teachers.

It is important to consider the under-supply of university qualified early childhood teachers alongside the over-supply of university qualified primary teachers. There is a potential opportunity to increase the mobility of teacher workforces to address both the over-supply of primary teachers and the need for additional teachers in the early childhood sector.

This issue will need to be further explored at a state and national level.

5. Strategies to improve teacher supply

The Department regularly undertakes a comprehensive analysis of school teacher supply and demand.

The Department's workforce planning projections are used to advise the Deans of Education in NSW and ACT universities of the Department's permanent teacher demand and supply needs. However, as previously outlined in this paper, it is not apparent that the Department's projections are having an influence on planning in the university sector.

As previously indicated, there is a more than adequate supply of primary teachers. However, from time to time a very small number of primary positions in remote rural locations may take some time to fill. These vacancies are managed by the Department and do not imply a shortage.

For the majority of subjects there is an adequate supply of secondary teachers. However, secondary teachers are needed in:

- mathematics and science (physics);
- specialist teachers;
- specific subjects in particular geographical locations; and
- some subjects in the technology and applied studies area.

The Department has a number of initiatives in place to attract people to the areas of shortfall, including active promotion of teaching as a career through the *teach.NSW* campaign, teacher education scholarships and retraining programs.

5.1 Scholarships

Teacher Education Scholarships

The Teacher Education Scholarship Program was first implemented in 2002 with all recipients being chosen on the basis of academic achievement.

Since the commencement of the program the number of scholarships offered have gradually increased and in 2010 up to 300 teacher education scholarships were offered, of which up to 80 were awarded to Aboriginal or Torres Strait Islander students to train as teachers in primary or any secondary teaching area.

The remaining 220 scholarships are awarded to students in the secondary key learning areas of mathematics, science (physics), English and in primary and secondary special education, for employment as teachers in western and south western Sydney and non-coastal rural NSW.

Currently, the scholarship program is available to: Higher School Certificate students; students who are graduates from appropriate degrees who wish to complete a post graduate secondary teacher education program; undergraduates in appropriate degrees who wish to complete post graduate study in teacher education; and undergraduates undertaking a teacher education study program.

Successful scholarship recipients receive an annual \$5,000 training allowance for the duration of their scholarship and an additional grant of \$3,000 on appointment to a school. In addition, scholarship recipients may be eligible for the HECS-HELP benefit from the Commonwealth Government following their appointment as a teacher.

Scholarship recipients sign a deed of agreement and agree to teach in a NSW government school for at least three years. Aboriginal or Torres Strait Islander scholarship applicants agree to serve in any three staffing areas, while all other applicants agree to work either anywhere in the State or in three or more areas of workforce need. Should the conditions of the deed of agreement not be met, the Department seeks reimbursement of payments made.

In general, principals have commented that scholarship holders appointed to their schools have been excellent professional teachers who have brought new ideas and knowledge to share with their teaching colleagues.

Incentive Scholarship Program

In 2008, an Incentive Scholarship Program for mathematics, science (physics) and special education was introduced for final year teacher education students who were not already receiving a Teacher Education Scholarship.

The aim of the incentive scholarship pilot was to secure the best mathematics and science graduates for appointment in NSW government schools.

Up to 40 scholarships will be awarded to mathematics, science and special education graduates for appointment to government schools in 2012.

Incentive scholarship holders receive a training allowance of \$2,500 in their final semester of study, a guaranteed permanent teaching position in an agreed location, and a further payment of \$1,000 to assist them in settling into their new permanent teaching position the following semester.

Internships

To improve the supply of quality teachers, the Smarter Schools National Partnership targets teacher quality through offering internships that deliver valuable professional experience opportunities.

An internship is an unpaid professional placement for an extended period of time (for example, one school term) for a teacher education student who has completed the course work of their degree. The internship is normally the final requirement to complete the degree and is usually graded. Interns do not carry a full teaching load.

At least 59 teacher education internships were offered in NSW in 2010, across all sectors, through the National Partnership.

The Department also offers programs to support teacher education students to access a diverse range of professional experiences in government schools during their pre-service training. These are not internships, but are targeted to teacher education students currently undertaking degree courses.

5.2 Retraining

Retraining Programs

Retraining programs are implemented to enhance the supply of qualified teachers in curriculum and specialist areas of shortage. Retraining programs build on existing qualifications, skills and experience of trained teachers. Selected teachers who are undertaking retraining are supported by the Department to complete additional tertiary qualifications in another curriculum or specialist area. They agree to work in schools of workforce need.

For primary schools, the retraining focus is on school counselling, special education, teacher librarianship, and ESL.

Initiatives for secondary schools focus on mathematics, science (physics), engineering studies, school counselling, special education, careers advisers, teacher librarianship, ESL and vocational education and training.

Retraining programs provided by the Department are rigorous tertiary programs (from graduate diploma to masters level). The Department conducts a tender process for the delivery of programs on a regular basis from recognised higher education institutions.

Retrainees are selected following a rigorous process and sign a deed of agreement with the Department to work in the area retrained for a period of time in an area of workforce need including schools in western or south western Sydney or in a rural area that is not on the coast.

5.3 Promotion of teaching as a career

Promotion of teaching as a career in NSW government schools

teach.NSW is a comprehensive and ongoing promotion and recruitment campaign, which is the key vehicle for promoting the career of teaching in NSW government schools across the community.

teach.NSW actively promotes programs such as:

- The Graduate Recruitment Program which targets high quality graduates who are considered for appointment when a school chooses to fill a position with a new graduate;
- The Explore Your Future initiative which provides opportunities for students in the final years of their teacher education program to visit schools in rural locations or in western or south western Sydney to encourage them to consider teaching in these locations; and
- The Orientation to Teaching program which provides in school experience for overseas trained teachers before they are provided with a full approval to teach.

teach.NSW is also driving initiatives for the promotion and recruitment of Aboriginal teachers, casual and temporary teachers, males teachers, teachers for rural areas and the retraining and retention of existing teachers.

Increased school-based decision-making for recruitment, staffing mix and budget

A key innovation for NSW has been the Increased School Based Decision Making Pilot which provides principals with increased flexibility in school recruitment, staffing mix and budget. The pilot commenced in January 2010.

Principals of pilot schools are engaging with the new management processes and demonstrating innovative leadership.

Improving teaching and learning is the major focus for pilot schools in determining how to apply the new flexibilities. Strategies largely consist of tailoring the staffing mix to better meet the needs of the school. The pilot will be the subject of an independent review on its completion.

Promoting teaching to males

The Department implements a number of strategies to promote teaching to males. These include making sure that male teacher role models are promoting the profession, including at high school and university careers fairs. The Department also works with sporting organisations in Western and South Western Sydney to promote teaching as a career to males.

5.4 Promotion of teaching in rural areas

Promoting teaching in rural NSW government schools

As previously mentioned, the Department promotes teaching as a career in rural NSW. It does this through its *teach.NSW* visits to careers expos, including the three day Country and Regional Living Expo, promotional materials, and through its promotion programs in universities, including Beyond the Line, which provides student teachers an opportunity to visit schools in regional and rural NSW.

The Beyond the Line program also supports teacher education students to access a professional experience placement in Western NSW and rural schools.

Teacher education students making a school community visit to schools in Western NSW or other rural areas through the program are supported with transport and accommodation. Participants undertaking a longer professional experience placement are provided with financial assistance by the Department to assist with accommodation and travel expenses.

In 2010/2011, 38 teachers who had previously participated in a Beyond the Line program were permanently appointed to a school in a rural location.

The Beyond the Line initiative for school executive provides an opportunity for executive or aspiring executive staff to undertake school community visits in a rural location.

Temporary Teachers and Rural Area Relief programs

The Department provides intensive support to assist schools in obtaining casual and temporary teachers to cover relief needs. In rural areas, support is provided through:

- Casual.Direct, the fully automated state wide casual teacher staffing system which has an overall success rate of 92 per cent including fast tracking approvals;
- The Teacher Relief Scheme, which provides temporary teachers to schools experiencing difficulty in obtaining a casual teacher to cover both short term and long term leave vacancies;
- The Rural Area Relief Program, which operates with a pool of temporary teachers assigned to schools in regional and isolated communities in NSW;
- The Inbuilt Relief Program, which provides up to two additional teachers to cover absences in each of a very small number of identified challenging secondary and central schools; and
- Free advertising at particular websites, which can be used by school principals seeking casual teachers.

6. Identifying gaps in information or research needs for schooling

Additional research and data can be undertaken to enable more effective responses to the supply, recruitment and retention of high quality teachers in the areas of greatest need.

The Productivity Commission's issues paper raises a number of questions in relation to information gaps or research needs.

To map the current needs of the schools workforce, detailed and accurate data on the characteristics of schools and their workforces is needed. A number of econometric studies have been undertaken internationally, to evaluate the effects on school and student outcomes using detailed quantitative and qualitative data. These studies tend to focus on a series of factors, including:

- School finances;
- School workforce characteristics (age, qualifications, experience, etc.);
- School dynamics (size, class size, allocation of teaching methods, etc.) and
- A combination of student, parental and community characteristics.

The primary purpose of these studies is to gauge how current school resources achieve improvements in student and school outcomes. A comprehensive study of this kind is yet to be conducted in Australia for the purposes of schools resourcing and would be a welcome resource for school workforce planning.

Appendix A: Explanation of geographical classifications

The NSW Department of Education and Communities workforce supply and demand data are analysed by five geographical locations across NSW: Eastern Sydney, Western Sydney, Inland NSW, Isolated NSW and Coastal NSW. These areas are based on school groupings used by the Department to staff schools; they consist of schools which are broadly similar in terms of workforce demographics such as teachers' employment location preferences and mobility between schools.

The following maps provide an indication of the distribution of school groupings across NSW, for the purposes of the data analysis used in this submission.

