Australian Government

Productivity Commission

Schools Workforce

Productivity Commission Research Report

April 2012

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au) or by contacting Media and Publications on (03) 9653 2244 or email: maps@pc.gov.au

Foreword

A well-performing school system is fundamental to building Australia's 'human capital' and is integral to the nation's economic and social futures. Teachers, with the support of other school workers, play a central role in promoting positive outcomes for students and the community generally.

This report, the final in a series on the education and training workforces, is concerned with the schools workforce. Two previous reports examined the workforces for vocational education and training, and early childhood development.

The Commission has proposed a package of reforms for the schools workforce that gives priority to improving teacher quality and reducing teacher shortages, including to ameliorate educational disadvantage. It identifies a need to strengthen the use of evidence in policy making.

In the course of its study, the Commission consulted widely within the schools sector, as well as with governments, non-government organisations and individuals. The Commission acknowledges the valuable contribution of all those who participated.

The study was overseen by Deputy Chairman Mike Woods and Commissioner Alison McClelland. It was undertaken by a research team located in the Commission's Melbourne office, headed by Ian Gibbs until November 2011 and then by Greg Murtough.

Gary Banks AO
Chairman
April 2012

Terms of reference

EDUCATION AND TRAINING WORKFORCE STUDY
Productivity Commission Act 1998

I, Nick Sherry, Assistant Treasurer, pursuant to Parts 2 and 3 of the Productivity Commission Act 1998 hereby request that the Productivity Commission undertake a research study to examine issues impacting on the workforces in the early childhood development, schooling and vocational education and training sectors, including the supply of and demand for these workforces, and provide advice on workforce planning, development and structure in the short, medium and long-term.

Background

The Council of Australian Governments (COAG) has agreed on common strategic frameworks to guide government action on early childhood development, schooling and vocational education and training (VET) across Australia.

Building the capability and effectiveness of the workforces in these sectors, particularly for Indigenous people, will be critical to achieving the outcomes agreed in these frameworks. This study is to be undertaken in this context, and responds to a request from the COAG Working Group on the Productivity Agenda that the Productivity Commission undertake a research study examining workforce issues in these sectors.

Scope

The Commission is to provide advice on workforce planning, development and structure of the early childhood development, schooling and VET workforces in the short, medium and long-term.

In undertaking this study, it should consider and provide advice on:

1. The current and future demand for the workforces, and the mix of knowledge and skills required to meet service need. This will include consideration of:
    (a) population distribution and demographic trends, jurisdictional and regional analysis;
    (b) significant shifts in skill requirements; and
    (c) policy and regulation given the agreed COAG outcomes (particularly the National Early Childhood Development Strategy, relevant National Partnerships, the National Education Agreement and the National Indigenous Reform Agreement).
2. The current and future supply for the workforces, including:
    (a) demographic, socio-cultural mix and composition of the existing workforces, and jurisdictional and regional analysis;
    (b) elements such as remuneration, pay equity/differentials, working conditions, professional status and standing, retention, roles and responsibilities, professional development, and training and support structures; and
    (c) qualifications pathways particularly pathways that will ensure accessibility and appropriateness of training to meet the qualifications and competencies required for the various occupations in the workforces.
3. The current and future structure and mix of the workforces and their consequential efficiency and effectiveness, including:
    (a) the composition and skills of the existing workforces;
    (b) the productivity of the workforces and the scope for productivity improvements; and
    (c) the most appropriate mix of skills and knowledge required to deliver on the outcomes in the COAG national framework.
4. Workforce planning, development and structure in the short, medium and long-term, including:
    (a) policy, governance and regulatory measures to maximise the efficiency and effectiveness of the workforces in order to achieve the outcomes set out in the COAG frameworks; and
    (b) changes to ongoing data collection to establish a robust evidence base, provide for future workforce planning and development and meet reporting requirements.

In addressing the Terms of Reference, a key consideration will be the extent to which sectoral and jurisdictional boundaries limit innovation and flexibility in workforce planning, development and practices. In addition to sector-specific issues, the Commission is therefore requested to consider whether reducing sectoral divides between workforces in these sectors could support a more learner-focused approach, achieve better individual outcomes and increase the efficiency of workforce development and planning.

Cross-sectoral and integrated service delivery

In recognition of some lowering of cross-sectoral boundaries and the growth of cross-sectoral delivery and integrated service delivery models, the Commission is asked to consider and provide advice on:
1. workforce skill and training needs;
2. the extent to which job design and employment agreements in the sectors are aligned to contemporary work practices;
3. implications for workforce planning across the sectors from integrated service delivery; and
4. the extent to which existing employer practices encourage attracting and retaining employees.

In addition, the Commission is to give consideration to factors that impact on building Indigenous workforce capability in recognition of the effect this will have on improving outcomes for, employment of and services to Indigenous Australians.

The Commission is also to give consideration to factors that have particular impact on each sector. These will include:

1. The Early Childhood Development Workforce

The Early Childhood Development (ECD) workforce can include, but not be limited to: coordinators and managers, early childhood teachers, teaching assistants and para-professionals, childcare workers for pre-primary and primary aged children, early childhood intervention professionals, administrative staff, community service workers and relevant health and social welfare professionals.

In relation to the ECD workforce the Commission is asked to specifically consider and give advice on:

1. Factors affecting the current and future demand and supply for the ECD workforce, and the required mix of skills and knowledge, including:
   a. delivery of fully integrated ECD services including maternal and child health, childcare, preschool, family support services and services for those with additional needs;
   b. market requirements for broader leadership, management and administrative skills in operating both mainstream universal service providers and integrated service hubs;
   c. the availability and quality of pre-service education programs, including through undergraduate and postgraduate education and VET, and consideration of training pathways;
   d. ECD workforce participation, including ease of access to the early childhood development workforce in different sectors and net returns to individuals and recognition of expertise; and
   e. the quality and skills of the workforce, job design and workplace practices and arrangements and their contribution to achieving COAG outcomes and setting future direction.

2. Workforce planning, development and structure in the short, medium and long term, covering:
   a. career pathways, the structure of existing employment arrangements and practices and the extent to which they are dis/incentives to attracting and retaining employees, including pay and conditions across settings; strategies to address possible pay equity issues as necessary; options for funding pay increases as necessary; and the implications for purchasers of ECD services and all levels of government and funding responsibilities;
   b. potential labour market failures;
   c. the impact of government, community and private provision; and
   d. the concept and workforce implications of integrated service delivery.

2. The Schooling Workforce

The schooling workforce refers to teachers and those who support the practice of teaching. These can include, but are not limited to: leaders and managers; teaching assistants and para-professionals; administrative staff; and relevant health professionals.

In relation to the schooling workforce the Commission is asked to specifically consider and give advice on:

1. The current and future supply for the schooling workforce, including:
    a. the availability and quality of pre-service education programs, including through undergraduate and postgraduate education, and VET;
    b. government programs targeting supply pressures, including the extent to which there is national cohesion in relation to these programs;
    c. motivation for entering, remaining in and exiting the school workforce and the attraction and retention of principals in changing contexts; and
    d. school workforce participation, including ease of access to the teacher profession and/or schooling workforce, net returns to individuals, recognition of industry expertise, wastage rates in teacher training and underutilisation of qualified teachers (such as loss of qualified teachers to other occupations or overseas).

2. The structure and mix of the workforce and its consequent efficiency and effectiveness, including:
    a. the composition and skills of the existing workforce;
    b. the productivity of the workforce and the scope for productivity improvements, qualifications pathways; and
    c. how the current delineation of duties supports or impedes the achievement of COAG outcomes.

3. Workforce planning, development and structure in the short, medium and long term:
    a. the extent to which current sectoral boundaries promote or limit efficiency and effectiveness in schooling workforce;
    b. interface with suppliers of pre-service training (undergraduate, post-graduate and VET) and
    c. the quality and culture of the workforce and its employers, and their contribution to achieving COAG outcomes and setting future directions.

3. The VET Workforce

The status of VET practitioners as 'dual professionals', deploying both industry and education skills delivered in schools, VET only, dual sector and industry settings, is unique among education sectors, and poses both challenges and opportunities for the VET sector in attracting and retaining staff. In addition, the increasingly commercial environment in which many providers operate creates a significant role for VET professionals who are engaged in organisational leadership and management, but not directly involved in training delivery. The impact of this trend on the required capabilities of VET professionals is of policy interest.

In relation to the VET workforce, the Commission is asked to consider both the VET workforce as a whole, including trainers and assessors in enterprises, adult community education and community organisations, and the TAFE workforce as a subset, and provide advice on:

1. Factors affecting the current and future demand for the VET workforce, and the required mix of skills and knowledge:
    a. change in participation in VET as a result of increasing labour market emphasis on formal training and lifelong learning;
    b. change in volume and type of training delivered to each VET participant as a result of the trend towards higher level qualifications, and as a result of the impact of the Recognition of Prior Learning (RPL) and the Recognition of Current Competencies (RCC);
    c. likely future patterns of training demand by industry and sector, including as a consequence of responses to emerging economic and environmental issues and to gap training and skills assessment;

d. requirement for broader skills in VET professionals as a result of increasing system focus on client needs, including flexible delivery, greater focus on employability skills, catering for a more diverse student base, and partnering with enterprises and communities;

e. demand for managerial and entrepreneurial skills as a result of growing commercial dimensions of the VET sector and strategic market positioning and branding;

f. the impact of delivery of higher level VET qualifications (eg Associate and Bachelor Degrees); and

g. training pathways and the provision of 'second chance' education and training such as for migrant and Indigenous students.

2. The current and future supply of the VET workforce, including:
    a. motivation for entering, remaining in and exiting the workforce; and
    b. competition from other employers including industry and other education sectors.

3. The structure of the workforce and its consequent efficiency and effectiveness, including:
    a. the extent to which job design and employment agreements in the VET sector are aligned to contemporary work practices in a commercially competitive environment;
    b. the adequacy of support for high-quality professional practice, including consideration of practitioner qualifications and standards for VET practitioners across sectors;
    c. the current and potential impact of workforce development activities within the VET sector on the capability and capacity of the VET workforce, including a workforce development plan; and
    d. the implications of emerging workplace and employment practices, including increasing casual and part-time employment, the 'core/periphery' model and blurring of teaching and non-teaching roles.

Study Process

In undertaking its study, the Commission should consult widely with relevant professionals and interested parties. It should use, but not replicate, existing work such as that underway by COAG, the relevant Ministerial Councils, Senior Officials' Working Groups and jurisdictions, including on:

- the early childhood quality reform agenda;
- teacher quality reforms;
- further reforms arising from policy directions of the National Agreement on Skills and Workforce Development;
- Indigenous reforms; and
- previous work commissioned by the Victorian DHS for the Community Services Ministers Advisory Committee.

This should include relevant recent survey work and workforce studies in each sector and research undertaken by NCVER, ACER, various university research centres, TAFEs and Industry Skills Councils, and the OECD.

The study should include a comparative element, both in terms of comparing the education and training workforce to other community/public service professions such as the health sector, and of relevant international comparisons, particularly with regard to the ECD workforce which is undergoing significant reform in Australia.

The Commission should provide a report, dealing with the VET workforce, within twelve months of receipt of this reference; and a second and third report, dealing with the early childhood development and schooling workforces, within eighteen and twenty four months respectively of receipt of this reference. The reports will be published.

Nick Sherry
Assistant Treasurer
[received 22 April 2010]

Contents

Abbreviations and explanations

Abbreviations

ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
ACER	Australian Council for Educational Research
AEU	Australian Education Union
AITSL	Australian Institute for Teaching and School Leadership
APC	Australian Parents Council
AQF	Australian Qualifications Framework
AST	advanced-skill teacher
ATPMPP	Australian Teacher Performance Management Principles and Procedures
ATSI	Aboriginal and Torres Strait Islander
COAG	Council of Australian Governments
CRC	COAG Reform Council
DEC	Department of Education and Communities (NSW Government)
DECD	Department for Education and Child Development (SA Government) (since November 2011)
DEECD	Department of Education and Early Childhood Development (Victorian Government)
DEEWR	Department of Education, Employment and Workplace Relations (Australian Government)
DET	Department of Education and Training
ECD	Early Childhood Development
ESL	English as a Second Language
Gonski Review	Review of Funding for Schooling
IEUA	Independent Education Union of Australia

MCEECDYA	Ministerial Council for Education, Early Childhood Development and Youth Affairs
Melbourne Declaration	Melbourne Declaration on Educational Goals for Young Australians
MGSE	Melbourne Graduate School of Education
MTeach	Master of Teaching
NAPLAN	National Assessment Program — Literacy and Numeracy
NARIS	National Alliance for Remote Indigenous Schools
NEA	National Education Agreement
NPA	National Partnership Agreement
NPAITQ	National Partnership Agreement on Improving Teacher Quality
OECD	Organisation for Economic Cooperation and Development
PAI	Principals Australia Institute
PC	Productivity Commission
PISA	Program for International Student Assessment
PSP	Priority Schools Program
RATEP	Remote Area Teacher Education Program
SCSEEC	Standing Council on School Education and Early Childhood
SEAM	Improving School Enrolment and Attendance through Welfare Reform Measure
SES	socioeconomic status
SIAS	Staff in Australia's Schools
STR	student–teacher ratio
TALIS	Teaching and Learning International Survey
TIMSS	Trends in International Mathematics and Science Study
VAGO	Victorian Auditor General's Office
VET	Vocational Education and Training
VicSRC	Victorian Student Representative Council

OVERVIEW

Key points

- Australia's future depends on how well it develops the 'human capital' of its population. A well-performing schooling system is fundamental.

- Australian schools generally deliver good student outcomes at reasonable cost, but improvements are required.
  - Student literacy and numeracy have declined in recent years, and Australia has fallen behind other high-performing countries, despite increased spending per student and falling class sizes.
  - Australia does not perform as well as other countries in offsetting educational disadvantage, especially for Indigenous students.

- More effective teachers and other school workers would achieve better student outcomes, and a more efficient schools workforce would achieve a greater improvement from any given level of resources.

- An extensive range of workforce-related reforms are already in place or prospect, but it is too early to fully judge their impacts.

- This study has focused on identifying cost-effective measures that would build on the existing reform program, address some problematic initiatives, and deal with matters that have received insufficient attention.

- The Commission's proposed package of reforms gives priority to:
  - raising teacher quality — by improving: teacher training, induction and mentoring; teacher appraisal; the management of unsatisfactory performance; and the link between teacher performance and career progression
  - reducing teacher shortages — through greater use of pay differentials for hard-to-staff positions, and more flexible entry requirements for teacher training
  - ameliorating educational disadvantage — through targeted initiatives based on evidence, alongside the broader reforms recommended in this study
  - strengthening the use of evaluation and research in policy making — by governments individually reviewing and reforming their approaches, and jointly initiating policy evaluations on educational disadvantage and teacher shortages.

- Many of the recommended reforms would raise the attractiveness of teaching as a profession, and so help to turn around the widely held perception that the status of teachers has declined.

- The Commission has also made a range of policy-related findings, including on the:
  - importance of school leadership and autonomy in driving workforce innovation
  - benefits of greater flexibility in the industrial relations regime for school workers.

Overview

Australia's future will depend on how well it develops the 'human capital' of its population. A well-performing schooling system is fundamental. It benefits individuals, the functioning and cohesion of society and the performance of the economy. The importance of school education has increased with the shift to a more knowledge-based economy.

Australia's schooling system generally delivers good, though not outstanding, outcomes at reasonable cost. The foundation skills of the 'average' Australian student are at the upper end of international rankings, while total expenditure on school education, as a percentage of gross domestic product, is marginally below the OECD average. However, other aspects of school performance point to a need for improvement.

- Despite an increase in spending per student and falling class sizes, there is evidence that student literacy and numeracy have declined in recent years, and that Australia has fallen behind other high-performing countries.

- Australia does not perform as well as comparable countries in giving students equal opportunity to realise their educational potential, irrespective of their background or ability. The resulting educational disadvantage is particularly evident among Australian students who are Indigenous, from low socioeconomic backgrounds, have a disability or other special needs, or reside in a rural or remote area.

To raise student outcomes, there will need to be an improvement in the effectiveness and efficiency of teachers and other school workers. A more effective schools workforce would achieve better student outcomes, and a more efficient one would achieve a greater improvement from any given level of resources.

In this report, the Productivity Commission proposes a package of reforms that gives priority to improving teacher quality, reducing teacher shortages, ameliorating educational disadvantage, and strengthening the use of evaluation and research in policy making. Many of the recommended reforms would raise the attractiveness of teaching as a profession, and so help to turn around the widely held perception that the status of teachers has declined.

This is the final in a series of three Productivity Commission studies on the education and training workforce which were requested by the Australian Government on behalf of the Council of Australian Governments (COAG). The previous studies examined the workforces for vocational education and training, and early childhood development. The Government requested that this study of the schools workforce advise on:

- factors affecting the supply of, and demand for, teachers and other school workers

- whether the knowledge and skills of the workforce, and its deployment within and across schools and regions, are appropriate to meet the community's needs

- whether current or proposed policy, governance and regulatory arrangements are conducive to maximising the efficiency and effectiveness of the schools workforce and, if not, what changes may be required.

Concurrent with this study, the Review of Funding for Schooling (the Gonski Review) examined the overall resourcing of the schooling system. Its proposals are under consideration by the Australian Government, in collaboration with state and territory governments and in consultation with other stakeholders.

Profile of the schools workforce

Teachers and other school workers are employed by state and territory governments, Catholic education offices and independent school operators in a diversity of environments. They work in primary and secondary schools, schools in urban, rural and remote areas, and schools with high proportions of Indigenous students or students with disabilities or other special needs.

On a full-time equivalent basis, the paid workforce includes more than 250 000 teaching staff, principals and other school leaders (table 1), and about 80 000 teaching assistants and administrative staff. There is also a sizeable volunteer workforce of parents and others from local communities. In the government system, a higher proportion of teachers work in primary schools, whereas the reverse applies in Catholic and independent schools.

The structure and nature of this workforce has been changing in various ways.

- The proportion of the teaching workforce employed in non-government schools has steadily risen in line with a similarly changing pattern of student enrolments.

- The workforce is ageing, with the rate of age-related exits anticipated to rise in the coming two decades.

- Contract and casual employment has been growing, with the workforce also more feminised (the overall ratio of female to male teachers is about two to one, and at the primary level it exceeds four to one).

- There is evidence to suggest that the average literacy and numeracy skills of those entering teacher training courses has declined.

- Class sizes have been progressively reduced.

Table 1   **Numbers of teaching staff, 2010[a]**

	Primary	*Secondary*	*Total*
Government	91 821	73 451	165 272
Non-government	38 777	51 062	89 839
Catholic	*22 681*	*25 712*	*48 393*
Independent	*16 096*	*25 350*	*41 446*
Total	**130 598**	**124 513**	**255 111**

a Full-time equivalent number of teachers, principals and deputy principals.

There have been various initiatives to foster leadership skills and to give government school leaders greater control over the hiring and deployment of staff and the management of other resources, to suit the particular circumstances of individual schools. However, custom and practice and conditions in awards and enterprise agreements can continue to constrain school-level workplace flexibility.

Considerable rigidities in remuneration arrangements remain. In most jurisdictions, teachers still reach the top of the pay scale in around 10 years. And there is relatively little explicit differentiation in teachers' pay on the basis of either performance or shortages in particular subject areas. Increases in teachers' pay do not appear to have kept pace with those in other professions. Indeed, the evidence is that, since 1995, there has been no increase in the average real salaries of Australia's more experienced teachers.

A more complex and demanding teaching environment

Today's classrooms and schools place more demands on teachers and other school workers than in the past. The student population is more diverse, due to a more varied influx of immigrants, a greater diversity of family structures and parental engagement in the workforce, a higher number of less academically engaged or proficient students being encouraged to finish year 12, and an increasing number of

special-needs students being taught for at least some of the time in mainstream classrooms.

The demands on curriculum and pedagogy have expanded and become more complex. For example, teaching methods place more emphasis on tailored, personal interaction with students. A greater amount of testing and reporting of student outcomes has increased the administrative load on teachers and principals. And while technological change is opening up new opportunities to enhance students' learning experiences and increases the avenues for undertaking professional development, it is also requiring many teachers and other school workers to learn new skills.

Parents and communities also have higher expectations about what schools can and should deliver. Schools are required to respond to an increasing range of social issues. Moreover, parents now have more information on the performance of their child's school, and there is a greater emphasis on transparency of school outcomes and governance.

Current reform agenda

An extensive range of workforce-related reforms are already in place or prospect (box 1). While most are implemented by state and territory governments and non-government school operators — reflecting their historic responsibility for schools education — many have been brought under national umbrellas by COAG and its Standing Council on School Education and Early Childhood.

Broad educational goals were articulated by Australian education ministers in the 2008 'Melbourne Declaration', and in the COAG National Education Agreement (NEA). Key objectives are to promote both excellence and equality of educational opportunity in Australia's schooling systems. Among the specific goals, the NEA explicitly targets closure of the gap in schooling outcomes between Indigenous and non-Indigenous students.

Several education-related National Partnership Agreements (NPAs) accompany the NEA and make additional funding from the Australian Government to facilitate reforms agreed to be of national significance. This includes the 'Smarter Schools' NPAs, which focus on improving teacher quality, raising student literacy and numeracy outcomes, and addressing educational disadvantage in low-SES communities.

Box 1 An overview of current schools workforce policies

The extent and nature of workforce-related policy initiatives varies across jurisdictions and different components of the schooling system. Broadly however, these initiatives fall into one of three overlapping groups.

First, there are initiatives to promote an appropriate balance between the demand for, and supply of, school workers. This grouping includes policies intended to:

- boost recruitment in areas of shortage — through scholarships and employment incentives for students, by fast tracking the pedagogical component of teacher training for certain individuals (Teach for Australia and Teach Next), and by targeted initiatives to increase the number of Indigenous school workers

- increase early-career retention — through more rapid salary progression, stronger classroom support and mentoring, and greater access to professional development

- encourage qualified teachers to fill hard-to-staff positions — through allowances, retraining and incentives relating to future placements.

Second, there is a growing focus on improving the efficiency and effectiveness of the workforce, with a particular emphasis on enhancing the quality of teachers and school leaders. As well as the agreement on new national professional standards, specific measures include:

- new pre-service course offerings

- minimum entry-level literacy and numeracy standards for teacher training courses

- improved performance-management systems, and increased pay dispersion to reward quality teaching

- programs to build leadership skills and, through school autonomy initiatives, the provision of greater opportunities to exercise those skills

- improved support for students with disabilities.

Third, and in support of the other reforms, attention has been directed to strengthening policy governance. While individual jurisdictions have been pursuing improvements in these areas, the extent of national-level performance evaluation and oversight has increased considerably. For example:

- the COAG Reform Council has responsibility for assessing jurisdictional performance against the targets agreed to under the education-related NPAs

- beyond curriculum development, the Australian Curriculum, Assessment and Reporting Authority's functions include the facilitation of national student assessments, and compilation and publication of data on school and system performance

- though established in the first instance to develop national professional standards and course accreditation requirements, the Australian Institute for Teaching and School Leadership is expected to collect and disseminate information relating to the performance of teachers and school leaders.

To support these arrangements, steps have been taken to enhance national-level performance reporting and assessment. Provided the new performance data are soundly based and comprehensive, they should assist policymakers to measure progress in meeting broad educational goals and help to empower parents and students — and thereby provide an additional spur for improved performance.

Governments have endorsed a set of national professional standards for teachers and principals, developed by the recently created Australian Institute for Teaching and School Leadership (AITSL). They have also agreed to the introduction of a national curriculum, which is currently being developed by the Australian Curriculum, Assessment and Reporting Authority (ACARA). But for the most part, the new reform framework will retain scope for experimentation with different policy approaches across jurisdictions.

The Commission's approach to this study

It is too early to fully judge the impacts of the extensive reform agenda, given that most of the changes are recent or have yet to be implemented. It is also evident that governments face fiscal constraints that will limit the scope for significant new spending initiatives. The Commission therefore focused on identifying cost-effective measures that would:

- build on reforms that are in train or in prospect
- address some problematic initiatives
- deal with matters that have so far received insufficient policy attention.

In accordance with the Commission's legislation, this study overlaid the specific terms of reference with a concern to promote the wellbeing of the community as a whole. This included the interests of students, the schools workforce and society more generally.

The Commission assessed the productivity of the schools workforce in ways that recognised the benefits accruing both to school students (private benefits) and the wider community (public benefits). The term 'productivity' is used in this context to refer to the ratio of inputs (a given school's workforce and how it is deployed) relative to outputs (school education). Research has shown that the private benefits from education include higher future incomes and higher rates of employment. The public benefits can include increased innovation and diffusion of new ideas, greater social cohesion, and lower crime rates. Given the considerable difficulties in quantifying these benefits, and hence workforce productivity, this study largely drew on qualitative evidence.

The Commission was cognisant of the objectives of the Melbourne Declaration and the NEA, particularly that schools policies should promote equity in educational outcomes. Like the OECD and Gonski Review, the Commission interpreted equity to mean that all students should have equal opportunity to realise their educational potential, irrespective of their background or ability.

The Commission was particularly mindful of the importance of improving teacher quality, especially among existing teachers, given their relatively low turnover. Quality teachers work closely with their peers and other school workers, recognise the diverse ways that students learn, challenge them by setting high expectations, provide them with continuous feedback and bring to the classroom a deep knowledge of the subject matter (box 2).

The Commission was also conscious of the importance of:

- considering the cost-effectiveness of alternative policy options
- recognising the advantages of using a combination of measures, such as improving teacher quality through pre-service training, regular performance appraisal, and professional development
- basing policies on robust evidence, and putting in place arrangements that will generate more such evidence in the future
- balancing the benefits from national consistency against the greater opportunity for policy experimentation under a jurisdictional approach.

The capacity to increase the effectiveness and efficiency of the schools workforce will clearly depend on overall school resourcing and its distribution, which was the subject of reform proposals made by the recent Gonski Review. Policy action in other areas, such as health and housing, also has an important role to play in delivering better and more equitable educational outcomes.

Box 2   What makes for quality teaching?

Schools workforce reforms in Australia and around the world have a strong focus on improving the quality of teaching.

Fully understanding what constitutes quality teaching remains an ongoing policy challenge. This is partly due to the diverse ways that individual students learn. Mapping the professional dimensions (content and pedagogy) and personal capability dimensions of teaching is also complex. Even so, there are some recurring themes in the available evidence.

Box 2 (continued)

In a synthesis of the research evidence, Professor Geoff Masters concluded that highly effective teachers are those who:

- create an environment where all students are expected to learn successfully

- have a deep understanding of the subjects they teach

- direct their teaching to student needs and readiness

- provide continuous feedback to students about their learning

- reflect on their own practice and strive for continuous improvement.

Similarly, a comprehensive examination of the evidence by Professor John Hattie found that the best teachers are those who challenge, have high expectations, encourage the study of their subject, and value surface and deep aspects of their subject.

These sorts of skills and behaviours were also prominent in commentary on quality teaching by the Victorian Student Representative Council in its submission to this study. It pointed to the importance of teachers being sensitive to the different learning approaches and needs of individual students, relating to students as 'partners' in their learning process, providing students with the freedom and responsibility to explore a range of learning options, having high expectations of both students and themselves, and hearing and responding to feedback from both students and other teachers.

The collegial dimension to teacher quality — and, in particular, the provision of leadership for less experienced or less capable colleagues — was also raised by the Australian Institute for Teaching and School Leadership in its submission.

Addressing workforce surpluses and shortages

Projections by the Department of Education, Employment and Workplace Relations indicate that, over the period 2010 to 2022, the total number of students in Australia will increase by around 26 per cent (or about 900 000), with the forecast rates of growth highest in Queensland (45 per cent) and Western Australia (40 per cent). There will also be workforce pressures coming from competing demands from the early childhood sector, ageing of the schools workforce, and age-induced tightening of the broader labour market.

There are areas with a surplus of teachers, as evidenced by the substantial number of (mainly primary) teachers who are on standby for positions in metropolitan areas. At the same time, there are areas of longstanding shortages, particularly teachers in secondary subjects such as mathematics and science and those qualified to educate students with disabilities and other special needs. And schools in rural and remote centres and in Indigenous communities are often hard to staff, as can be some

schools in urban areas catering mainly for low-SES students. Some jurisdictions report that high quality principals are in short supply.

Such imbalances are costly for both students and the wider community.

- Surpluses mean that the community is subsidising the provision of 'underutilised' pre-service training and schools are providing practicum training to more prospective teachers than needed.

- Shortages are directly detrimental to the learning of the students affected and, to the extent that they often have the biggest impacts on disadvantaged students, undermine equality of educational opportunity.

A concern in relation to the surplus of teachers is that new university funding arrangements that commenced in 2012 have given universities greater scope to increase the number of teachers they train. The Australian Government is monitoring whether this will exacerbate general surpluses. It would be premature, therefore, to consider additional measures to restrict entry into particular pre-service teacher education courses. Moreover, future demand pressures may, of their own accord, act to reduce surpluses to more reasonable levels (and in high-growth jurisdictions, even eliminate them).

However, the Commission is concerned that university fee repayment discounts, which are offered to recent graduates of teacher education courses who are employed in the teaching profession, are not the best use of scarce education funding. These discounts are provided irrespective of where or what subjects a graduate teaches. Given current surpluses, the Australian Government should phase out these fee discounts for general education degrees.

Instead, the Commission considers that the focus should be on more targeted measures that address specific teacher shortages. Initiatives currently employed by education authorities include scholarships, fast-tracked training arrangements and financial allowances — most commonly to attract teachers to (and compensate them for living in) rural and remote locations. These various measures should be evaluated to determine their effectiveness.

More explicit and greater use of salary differentials has a legitimate role to play in overcoming subject-based teacher shortages and the needs of hard-to-staff schools. For example, mathematics and science graduates working outside teaching, on average, earn considerably more than their teaching counterparts (box 3).

Workplace culture, as well as custom and practice, in many schools could be a barrier to greater pay differentials. Some study participants were concerned that the cohesiveness and collegiality of the teaching profession would be undermined.

However, this view is not consistent with the experiences of other developed countries where such schemes have achieved wide acceptance among teachers. Moreover, variation in teacher pay is already accepted along rural–urban lines in Australia. Thus, the Commission considers that opposition to subject-based differentials would likely soften over time.

Box 3   Pay differentials and teacher shortages

A number of study participants highlighted the substantially higher pay that teachers in subjects like mathematics and science can earn in other professions. This is supported by data from the 2006 Australian census, which show that only 6 per cent of individuals with a teacher education degree reported gross weekly earnings above $1600, compared to 19 per cent of those with a degree in natural and physical sciences, and 34 per cent who had a degree in mathematical sciences. There is a large body of empirical evidence that suggests such pay differences are associated with lower teacher supply.

Participants' input to this study and available data clearly highlight the undersupply of teachers in particular subject areas. Moreover, the incidence of mathematics and science teacher shortages in Australia is above the average for OECD countries.

Estimates from the latest Staff in Australia's Schools survey indicate that, at the start of the 2010 school year, 8 per cent of Australian secondary schools had an unfilled position for mathematics teachers, with notable shortages also in English (8 per cent) and science (7 per cent). However, this understates the magnitude of shortages because it does not take account of 'out-of-field' teaching by individuals who are required to teach subjects in which they are not qualified. Estimates from the 2010 Staff in Australia's Schools survey suggest that more than half of teachers for IT and lower secondary mathematics courses did not have a three-year qualification in the relevant subject. The equivalent figure for upper-secondary physics classes was just under 50 per cent.

The policy environment should encourage experimentation and evaluation in situations where salary differentials could potentially help to address shortages and thereby enhance student outcomes. Hence, the Commission has recommended that the Australian, state and territory governments, as part of broader efforts in this sphere, use the foreshadowed second phase of the Empowering Local Schools initiative to encourage individual schools to trial explicit remuneration-based incentives to attract teachers to hard-to-staff positions. State and territory governments should also continue to experiment with other arrangements for remuneration-based incentives.

Alternative pathways into the teaching profession (that is, pathways that do not involve traditional pre-service training) can also assist in ameliorating shortages.

Examples include the Australian Government's 'Teach for Australia' initiative and the Victorian Government's Career Change Program. However, current and proposed standards for entry into postgraduate teacher education courses can be a barrier to such alternative pathways. The recently developed national accreditation standards for teacher training are of particular concern. The Commission has proposed that these be amended so that skills learnt in highly-related degrees and professions be considered when assessing whether candidates have the necessary discipline-specific knowledge required to enter a postgraduate teaching course.

Improving teacher quality via training and professional development

Teachers acquire and develop their skills and knowledge through a combination of pre-service training (instruction and practicum) and employment (professional development and practical experience, including being mentored).

Although there is a large investment in the pre-service training of future teachers, the international and local evidence on the effectiveness of different modes of training on teacher quality is ambiguous. Building the evidence base through the trialling and evaluation of different modes of delivery, and through better tracking of the impacts of training on the subsequent performance of teachers in the classroom, is therefore a high priority.

On the other hand, there is already sufficient evidence to suggest that the practicum component of pre-service training, together with the induction and mentoring received by teachers when they first enter the workforce, is important from a teacher quality perspective. There is also evidence from surveys that these aspects of the training process could be improved, so that new teachers are able to better interact with students and manage classrooms, perform assessment and reporting tasks, and relate to parents.

A number of promising avenues for improvement have been suggested, including developing university–school partnerships to strengthen the links between the theoretical and practical components of pre-service training, and more heavily involving experienced teachers in both practicum and induction. But again, trialling and evaluation is the key to better understanding what forms and combination of practicum and induction, and what types of university–school relationships, are most cost-effective in improving teacher quality.

Course accreditation

The process for accrediting teacher training courses is an important part of the agenda for improving teaching quality. The states and territories have agreed to a

new national system, based on standards developed by AITSL. The new system places more emphasis on outcomes — the quality of graduate teachers — in addition to setting requirements for course 'inputs', such as the length of training. It has the potential, over time, to improve pre-service training and start to improve the quality of graduate teachers.

However, the level of improvement will depend critically on how well the system is implemented. Some study participants were concerned that the relevant standards for graduate teachers are too generic and the requirements for evidence too vague for accreditation panels to be able to objectively and consistently assess whether courses are producing high quality graduates. AITSL plans to develop additional guidance for course providers. This guidance should require multiple sources of evidence, allow training providers some flexibility to choose which outcome measures they provide, include processes for verifying the validity of the evidence, and be cost-effective.

The Standing Council on School Education and Early Childhood should commission research to aid the development of this guidance. The research should evaluate the reliability of different outcomes measures, which could be used to assess teachers' professional knowledge and performance against the newly developed Graduate Teacher Standards.

The new course accreditation standards require entrants to pre-service teaching courses to have literacy and numeracy skills broadly equivalent to those of the top 30 per cent of the population. The Commission supports this as a way of improving the quality of future teachers. It appears that a significant number of current pre-service student teachers would not have met the new entry requirement at the time of their enrolment, based on their Australian Tertiary Admission Rank scores. There will be a need to evaluate whether the new system is effective in helping to ensure that pre-service training courses produce graduates who have the requisite knowledge and skills. The success of this initiative will depend, in part, on the effectiveness of other reforms in attracting high-quality individuals into teaching as a profession.

The Commission is not convinced that the benefits of one component of the new accreditation requirements — an increase in the minimum length of graduate courses from one year to two years (or equivalent) — would justify the costs involved. As well as the direct costs, this longer training duration could potentially exacerbate some workforce shortages. If the requirement is maintained, governments should implement measures to limit the adverse impact on teacher shortages. This could involve assisting the continued development of employment-based pathways, including arrangements where individuals can begin teaching after

one year of training on the condition that they continue to work towards their teaching qualification. The new national accreditation system should appropriately recognise courses which substitute university-based training for additional practical experience. Moreover, a forthcoming review of the new accreditation system should evaluate the impacts of the new two-year requirement and it should be removed if found to be unwarranted.

Professional development

Professional development is an important vehicle for maintaining and building new skills and, for teachers, is integral to the achievement of higher-level teacher classifications in the new national standards. It could also be a useful means of reducing the adverse impacts of out-of-field teaching used to address areas of teacher shortages in the short to medium term. This is important as it will take some time for universities to produce sufficient graduates in shortage areas such as maths and science to meet demand.

While all jurisdictions require teachers to undertake a minimum amount of professional development to maintain their registration, there is little hard evidence concerning the effectiveness of these activities. Factors that could enhance the contribution of professional development to increases in teacher quality include: improved school leadership (with those leaders having a commitment to professional development); better performance appraisal; the linkage of appraisals to development activities; and the reasonable prospect of remuneration or other rewards and recognition where professional development results in substantially enhanced skills and teacher quality.

Longitudinal data and research

To complement the trialling and evaluation of specific initiatives, the Commission has proposed that the Australian Government expand the recently commissioned Longitudinal Teacher Workforce Study. This is tracking the experiences of recent entrants to the teaching workforce and will, with the Commission's recommended additions, be a valuable resource for future assessments of what aspects of pre-service training, induction and professional development are most effective in improving student outcomes. To facilitate such assessments, the Australian Government should make the collected data readily available to all interested parties.

Enhancing teacher quality through appraisal and remuneration

Providing regular feedback to teachers on how they are performing is important to their development. While a majority of schools can claim to have a performance-appraisal system, many teachers do not receive the regular feedback and support they need. Past reviews of teacher-appraisal systems have been critical of the lack of clear criteria, the complexity of the paperwork, and the lack of focus on effectiveness rather than just compliance with required processes.

The Commission considers that performance appraisals would be more effective if principals and teachers had a major role in determining how appraisals are undertaken in their school, and if school-based indicators and criteria were used. More than one method of gathering evidence — including an indicator of student outcomes — should be used to enable the various dimensions of performance to be captured (box 4).

Box 4   **Methods of gathering evidence for teacher appraisals**

Many different methods can be used to gather evidence for teacher appraisals, including:

- indicators of student learning, such as test scores and samples of student work

- observation of classroom practices by the principal, a peer, or an external party (such as a principal or leading teacher from another school)

- a portfolio showing examples of the teacher's recent work

- surveys of students and/or parents

- evidence of teamwork with colleagues

- teacher interviews

- tests of teacher knowledge

- teacher self-evaluation

- evidence of professional development.

There is a consensus in the literature that more than one method should be used because no single approach can adequately capture the various dimensions of teacher performance. It is also important to use evidence from more than one source because principals, peers, parents, students and others have different perspectives.

Central agencies that oversee schools should require them to have a school-based appraisal system for teachers. There should also be support from central agencies, including broad guidelines and templates, sufficient resources to maintain an

appraisal system, training, and advice on performance measures and data management.

Addressing unsatisfactory performance

One dimension of performance management that has received insufficient policy attention is dealing with unsatisfactory teacher performance. Though there appears to have been little formal research on this issue, available data indicate that very few teachers in government schools are ever deemed to be underperforming.

State and territory governments should delegate to school principals the authority to take disciplinary action — including dismissal — when a teacher's performance fails to rise to the relevant standard after being given reasonable time and support to do so. The prerequisites for such delegation would have to be that the school has the necessary leadership, resources and an effective system of regular performance appraisal. For schools that do not meet these prerequisites, state and territory governments should reform the centrally determined procedures they require schools to follow in cases of teacher underperformance, so that there is more timely and effective intervention.

What role for performance-based remuneration?

There has been considerable interest internationally in exploring alternative remuneration systems to more closely tie teacher rewards to performance. However, there has been little use of performance-based remuneration in Australian schools.

Pay increments for teachers who have yet to reach the top of the pay scale are notionally conditional on satisfactory performance. In practice, they are almost never withheld. As a result, where teachers sit on the pay scale is largely determined by their length of service. This may be a reasonable proxy for the early career improvements in performance and student outcomes which, the research suggests, come with the experience gained in the first few years of teaching. However, rewarding performance beyond that associated with this initial accumulation of experience requires mechanisms other than current increment systems.

One option is the payment of performance bonuses. While they are rarely offered to Australian teachers, current trials of alternative approaches in a small number of Victorian government schools will provide some insights. Early results from these trials, together with the long history of mixed results from the US and elsewhere, suggest that an effective and widely-applicable bonus system is unlikely to emerge in the foreseeable future.

Another approach, common in most Australian school systems, is the creation of advanced-skill teacher positions, which are a single higher-paid classification for more effective teachers, subject to a selection process. However, the resulting effect on student outcomes appears to be of limited benefit due to the relatively small number of positions made available, the requirement that successful candidates take on non-teaching duties, and selection processes that are not necessarily linked directly to the contribution a teacher has made to improving student performance.

A potentially more beneficial option for performance-based remuneration is to create a performance-based career structure. In broad outline it could have, as its foundation, the four career stages in the National Professional Standards for teachers. Teachers would be assessed and, if found competent, would be certified accordingly, but this would not, of itself, result in a change to their salary. Separately, the staffing profiles of individual schools would include limited numbers of positions at the different career stages, with appropriate salaries. Principals would be able to amend profiles within overall staffing budgets to meet local needs. As vacancies arose, teachers certified at the relevant (or higher) level could apply. Selection would be on the basis of merit. The appointment could be time limited and/or subject to periodic review.

The cost and implementation of such a reform would require careful consideration.

The cost of a move to a career structure could be significant. Of particular concern is that if a career structure was linked in some way to the national teaching standards, it should only be considered after the integrity of those standards and assessment processes have been demonstrated.

Moving to such a career structure could also involve significant implementation issues.

- How would remuneration that is based on a career structure operate in conjunction with incentives to attract teachers to hard-to-staff schools and positions?

- Would existing supplements for taking on additional responsibilities, such as head of a department, be retained?

- Would the salaries of principals have to be substantially increased to maintain their level relative to the best-paid teachers?

As an interim step, the Australian Government should reformulate its proposed Reward Payments for Great Teachers initiative as a temporary program to provide lessons about linking additional financial rewards to higher levels of the national teaching standards. The Government should design the initiative so that reward

payments are only provided to high-performing teachers, and do not entrench an expectation that higher certification automatically entitles teachers to increased pay.

Promoting innovation in workplace arrangements

Over time, there have been changes to the roles of teachers, principals and other school workers in response to such factors as changes in pedagogical understanding, increased parental and community expectations, greater reporting and consultative demands and technological innovation. Many of these changes have been initiated at the individual school level in order to better meet the needs of their students and the communities they serve.

Further changes in workforce structure and deployment could (among other things) improve student performance, better meet student welfare needs, increase community engagement with schools, boost the status and job satisfaction of school workers, or deliver comparable outcomes more cost-effectively. The persistent pressures facing the sector — such as problems in securing a sufficient supply of some schools workers — might be ameliorated through greater innovation in how the workforce is used.

However, the policy focus in relation to the schools workforce has tended to concentrate more on teacher numbers, particularly by reducing class sizes. While there is no direct time-series measure of Australian class sizes, a common proxy is student–teacher ratios. Between 1964 and 2003, the average student–teacher ratio in Australian schools fell by more than 40 per cent, and has since declined further (figure 1). Such reductions have been pursued partly on the presumption that, by enabling teachers to give more individual attention to each student, there will be better student outcomes. However, below a relatively high threshold level, both the Australian and international research suggests that smaller class sizes will only benefit some student groups, such as those with learning difficulties, disabilities or other special needs.

It therefore appears that the across-the-board approach to class-size reductions has been a costly policy that has not translated into a commensurate improvement in overall student outcomes. It has tied up funding that could otherwise have been used for a range of more worthwhile purposes, including to better reward quality teaching and use pay differentials for hard-to-staff positions.

The Commission considers that a wider range of class sizes might facilitate greater diversification of teaching roles and methods, and be more cost-effective. It could also be an avenue for exploring changes in the allocation of teachers' time between teaching and professional development. There are various approaches for deploying

teachers and other school workers differently and more effectively — including some that would make better use of teacher assistants and aides, administrative staff, and health and student welfare specialists. Better use of the non-teaching workforce could, over time, also help to improve the professional status of teaching and thereby its attractiveness to a greater number of highly talented individuals.

Figure 1   **Student–teacher ratios, 1996–2011[a]**
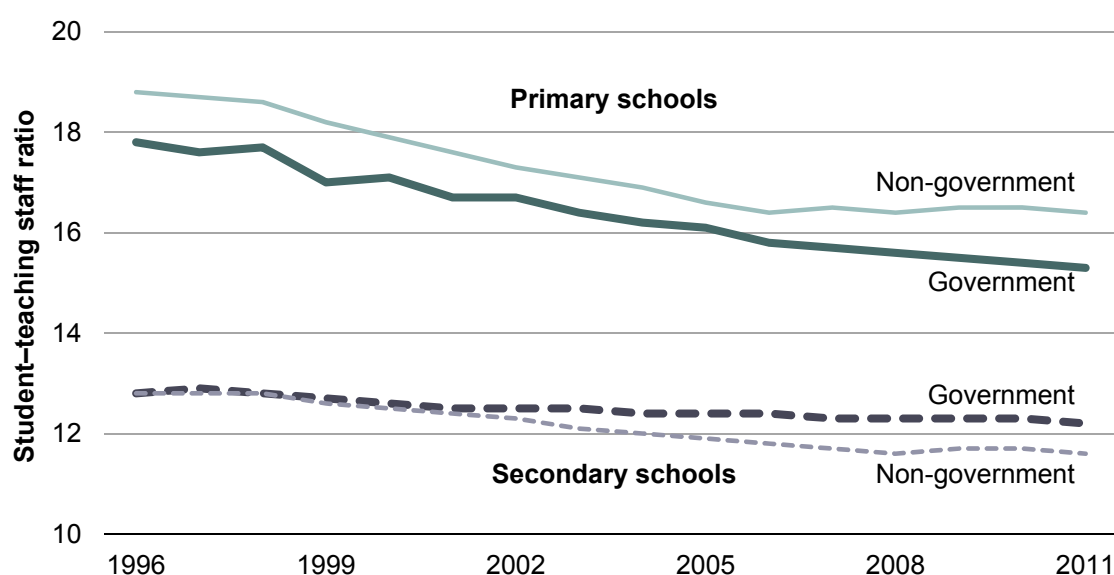
a Student and teaching staff numbers are both calculated on a full-time equivalent basis. Teaching staff include non-classroom teachers, such as principals.

The Commission has not endorsed particular innovations in job design and workforce structure in this study, as the efficacy of different approaches will vary across schools and jurisdictions and should be subject to appropriate context-specific evaluation.

Instead, the Commission has focused on institutional factors that could facilitate workplace innovation. Moves towards greater school autonomy, if combined with strong leadership, alongside more flexible and responsive industrial relations arrangements, could assist. Education authorities have an important role in supporting workforce innovation by raising awareness of the scope to redesign job roles and adjust workforce composition, encouraging pilot studies and research, and sharing the results of workforce innovations here and overseas.

Building school leadership

Principals have primary responsibility for setting their school's culture. They and their leadership team provide the local foundation on which excellence in student

outcomes are based. These include pedagogical direction and support to school staff; efficient resource management; and positive relationships with students, parents, the local community and education authorities.

Given these responsibilities, it is crucial that there are robust processes in place to identify and foster leadership ability and to ensure that school leaders are involved in continuous and relevant professional development. Leaders must also be held accountable for their schools' results as part of a rigorous performance management process.

Centralised control of decision making can constrain the scope to develop and exercise leadership at the school level. Leaders in non-government schools, and independent schools in particular, have traditionally enjoyed greater autonomy than those in most government schools. However, jurisdictions are now following in the footsteps of Victoria, which introduced an autonomous model for government schools in the 1990s.

Giving further momentum to these developments, the Australian Government's Empowering Local Schools initiative will provide financial incentives for government and non-government schools in all jurisdictions to move further down the autonomy path. The changes will be tailored to individual school circumstances, phased in gradually, and subject to evaluation.

The Commission welcomes these developments, particularly the notion of selective implementation. The appropriate degree of autonomy will depend heavily on the characteristics and circumstances of individual schools, including the strength of leadership skills. To be successful, there should also be robust governance arrangements at the school level; high-level oversight from education departments and Catholic education offices; and support from central agencies on matters such as training and leadership development, teacher standards, and curriculum.

Reducing educational disadvantage

Reducing the adverse effects of educational disadvantage must be a high priority for schools workforce policy. Many factors beyond a student's innate skills and attributes can impede them from realising their educational potential. A large body of Australian and international evidence shows that such educational disadvantage is more likely to be experienced by students from low-SES backgrounds, those in rural and remote areas, and those with a disability or other special needs.

Many Indigenous students have more than one of the characteristics associated with educational disadvantage and therefore can experience multiple sources of

disadvantage. About 25 per cent of the Indigenous population live in remote or very remote locations (compared to less than 2 per cent for the non-Indigenous population); around half of all Indigenous people living in remote or very remote locations speak a language other than English at home; and 45 per cent of Australia's total Indigenous population are in the lowest income quintile.

Schools with higher proportions of disadvantaged students often report persistent difficulties in attracting and retaining teachers, leaders and support staff who have the skills, knowledge and capabilities to appropriately meet the learning needs of these students. Schools in remote localities often have a high proportion of early-career teachers and newly-appointed principals, as well as a high staff turnover, all of which can impede student learning. Access to professional development, and coverage of staff absences with appropriately qualified staff, pose further challenges. The low quantity and quality of housing in disadvantaged areas can also contribute to the difficulties in attracting teachers. Such problems are particularly severe in remote Indigenous schools.

Schools commonly report greater difficulties in engaging the parents and carers of disadvantaged students to support their children's education. Such involvement has been shown to be one of the most important outside-school factors affecting student outcomes. At the same time, it appears that teachers sometimes have difficulty recognising and responding to the range of factors applying to each student that can impede their learning. They can also have low expectations of what disadvantaged students can achieve. Awareness of individual student needs and setting ambitious learning goals are significant contributors to good student outcomes and are thus among the hallmarks of quality teaching.

Despite a long history of policy efforts, outcomes for Australia's disadvantaged students generally remain well below the rest of the student population. Breaking out of this long-term pattern of ineffective policies and programs will require a more concerted effort by policy makers to systematically gather and publish evidence on 'what works' and use it in formulating initiatives. Recent measures — such as the National Evaluation Strategy for the Smarter Schools NPAs — have added impetus for action. However, there remains an urgent need for a more robust and transparent approach by all governments to the ongoing evaluation of initiatives targeting educational disadvantage, alongside a coordinated national review of existing evidence.

While a lack of systematic evaluation makes it difficult to identify the most effective combination of measures to address educational disadvantage, it is clear that improving teacher quality overall is an important precondition. It is particularly important that all teachers are able to identify student underperformance earlier and

act on it appropriately. Yet it is also apparent that policies to enhance the overall effectiveness of the schools workforce need to be accompanied by more targeted initiatives. This will be facilitated by reforms advocated throughout this report, which will provide the means to:

- increase the emphasis on the learning needs of educationally disadvantaged students in pre-service teacher training, drawing on a range of evidence including an expanded Longitudinal Teacher Workforce Study and research on different models of practicum

- provide additional support for teachers working in disadvantaged communities, including enhanced induction, mentoring and professional development

- explore greater use of pay differentials to attract teachers to specific hard-to-staff schools

- introduce additional workforce innovations at the school level which are tailored to the needs of disadvantaged students, and enabled by strengthened school leadership and increased school autonomy.

There could also be a role for expanding the use of targeted initiatives that:

- engage the parents of disadvantaged students and their broader community

- increase the share of teachers from disadvantaged and under-represented backgrounds through 'grow-your-own' programs

- use communications technology where opportunities for face-to-face teaching and professional development are limited.

Strengthening the wider institutional framework

Some deficiencies in the wider institutional framework detract from good student outcomes.

Paramount among these is the lack of attention that has been given to program evaluation across most aspects of schools workforce policy. With the large number of reforms now underway or in prospect, robust evaluation assumes even greater significance. It is also evident that the evaluations that have been conducted are not as transparent and accessible as they could be. A related problem is that policymakers do not fully utilise available expertise in education-related research and evaluation when formulating and evaluating policies.

There have been some encouraging recent developments in this area, including as part of the new national-level reporting framework. However, to add further impetus, the Commission has proposed two specific evaluation initiatives to be

overseen by the Standing Council on School Education and Early Childhood. These are a review of the evidence on measures to help overcome educational disadvantage, and an evaluation of remuneration-based incentives and other initiatives to reduce workforce shortages.

The Australian, state and territory governments should also individually review, and strengthen as appropriate, how they use policy evaluations and research to inform the design and management of schools workforce initiatives. They should collectively monitor — through the Standing Council on School Education and Early Childhood — the results from these reviews and any subsequent changes, so that lessons are shared and there is an improved evidence base for future consideration of new policy approaches if that is warranted.

The Commission sees merit in a full review of AITSL in terms of its roles, functions, structure and processes once the current reform agenda has been sufficiently progressed. AITSL's capacity to support and foster rigorous research and evaluation across all jurisdictions is one aspect that might usefully be examined. Another aspect is the extent to which its membership and processes adequately include the perspectives of the schools workforce. Recognising their institutional linkages, the proposed review of AITSL should be conducted concurrently with the review of ACARA, which is scheduled to commence no later than December 2014.

Steps should also be taken to ensure that non-government schools, the non-teaching workforce, and parent and student bodies are more appropriately involved in high-level decision-making processes. Each of these groups have important perspectives and experiences to contribute. Schooling and schools workforce policies will be the poorer if those contributions are ignored or given insufficient weight.

Policy makers will need to be mindful of the benefits of harmonising reforms and initiatives across different areas of the education workforce, including the early childhood development and vocational education and training sectors. For instance, greater labour mobility across education sectors may provide an additional mechanism to help address surpluses and shortages. There are limitations as to how far such mobility can apply, given the different needs of each sector. But one particular opportunity, as the Commission recommended in its recent study of the early childhood development workforce, is to synchronise teacher registration requirements in the early childhood sector with those already in place for the schools workforce.

Finally, centralised industrial relations arrangements — which apply to the schools workforce to varying degrees across different jurisdictions and sectors — can be a source of inflexibility that hinders efforts to respond to changing imperatives and

impedes a range of beneficial reforms. Indeed, there is a significant systemic tension between current centralised regimes and the underlying thrust of a number of the specific workforce policy approaches that offer the prospect of material improvements in schooling outcomes for students. The move to greater school autonomy is a case in point.

In the future, awards and enterprise agreements need to accommodate greater school-level variation in workplace arrangements, and support governance and other changes to improve the management of poor workplace performance. But there is no uniform prescription for how such outcomes can be attained. Rather, long term gains in industrial relations can only be secured by the parties themselves through constructive negotiation.

Recommendations and findings

The Australian Government should not provide university fee repayment discounts for students who enrol in pre-service teacher education courses after 2012. Such discounts should still be provided to students and teachers who have already qualified for them.

The Standing Council on School Education and Early Childhood should direct the Australian Institute for Teaching and School Leadership to revise section 3.3 of its accreditation standards for initial teacher education programs so that the discipline-specific knowledge required to enter a postgraduate teaching course can be interpreted more flexibly. In particular, relevant skills learnt in highly related degrees and professions should be assessed as evidence of sufficient content knowledge.

The Australian, state and territory governments, as part of broader efforts to encourage greater and more explicit variation in teachers' pay on the basis of shortages, should encourage the trialling of measures that enable principals — under appropriate circumstances — to use explicit remuneration-based incentives for attracting suitably qualified teachers into hard-to-staff positions. The Australian, state and territory governments should use Phase Two of the Empowering Local Schools initiative as one means of achieving this.

FINDING 5.1

High quality practicum and induction experiences for pre-service and graduate teachers play key roles in developing an effective teaching workforce and there are opportunities to improve how they are provided. One promising avenue is the development of university–school partnerships. However, more research is needed, with regard to both this specific initiative and other approaches. The research should focus on better understanding what forms and combinations of practicum and induction, and what types of university–school relationships, are most cost-effective in improving the quality of beginning teachers.

RECOMMENDATION 5.1

The Australian Institute for Teaching and School Leadership should publish guidance (with examples) on the evidence that training providers are expected to use to demonstrate that their graduates meet the Graduate Teacher Standards. This guidance should adhere to the following principles:

- ***multiple sources of evidence are used***
- ***training providers are given some flexibility to choose which outcome measures they provide***
- ***there are processes for verifying the validity of evidence that is provided***
- ***the collection of evidence is cost-effective.***

To aid the development of this guidance, the Standing Council on School Education and Early Childhood should commission research that evaluates the reliability of different outcome measures which could be used to assess teachers' professional knowledge and performance against the Graduate Teacher Standards.

The Standing Council on School Education and Early Childhood should direct the Australian Institute for Teaching and School Leadership to revise its accreditation standards for initial teacher education programs (Program Standard 1.3) so that two-year graduate teacher training courses remain an option rather than a mandatory requirement.

If this requirement is maintained, governments should implement measures to limit the adverse impact on teacher shortages. This could involve greater use of employment-based pathways, including arrangements where individuals can begin teaching after one year of training on the condition that they continue to work towards their teaching qualification. To ensure that use of employment-based pathways are not impeded by extending the length of graduate courses, the new national accreditation system should appropriately recognise courses which substitute university-based training with additional practical experience. The forthcoming review of the new accreditation system should assess the benefits and costs of Program Standard 1.3 and modify it if appropriate.

The Australian Government should expand the Longitudinal Teacher Workforce Study to:

- *follow graduate teachers for at least five years*

- *track more than one cohort of graduate teachers to enable analysis of any future experimentation in pre-service training, induction and professional development*

- *include additional measures of teacher effectiveness (including the effectiveness of responding to disadvantaged students)*

- *gather detailed information on the induction and mentoring arrangements that graduate teachers undertake*

- *collect information on what factors influence where graduate teachers seek initial employment, and why early-career teachers leave their initial place of employment.*

The Government should ensure that the collected data are made readily available to researchers to stimulate an informed debate about how to improve the effectiveness of pre-service teacher training in Australia.

FINDING 6.1

Many teachers are not being provided with the feedback and support they need to become better teachers. Efforts to address this deficiency are more likely to be effective if:

- *principals, other school leaders and teachers have a major role in determining how their school undertakes performance appraisals and associated support*

- *appraisals are based on school-level indicators and criteria*

- *more than one method is used to gather evidence on performance — including an indicator of student outcomes — so that the various dimensions of teacher performance are adequately captured.*

RECOMMENDATION 6.1

The central agencies that oversee schools — particularly state and territory education departments and catholic education offices — should support school-based improvements in teacher performance appraisal by:

- **requiring the schools they oversee to develop and maintain an effective performance appraisal system for teachers**

- **providing schools with broad guidelines and templates, sufficient resources to maintain an effective appraisal system, performance appraisal training, and guidance on performance measures and data management**

- **monitoring the effectiveness of performance appraisal, rather than just compliance with specific processes.**

FINDING 6.2

There is a widespread perception among teachers that sustained unsatisfactory performance rarely leads to dismissal or other disciplinary action. This is consistent with published statistics showing that very few teachers in government schools have been subject to underperformance procedures.

State and territory governments should remove any unnecessary impediments that government schools face when seeking to address unsatisfactory teacher performance by:

- *delegating to government school principals the authority to take disciplinary action — including dismissal — when a teacher's performance fails to rise to the relevant standard after being given reasonable time and support to do so. The prerequisites for such delegation should be that the school has the necessary leadership, resources and an effective system of regular performance appraisal*

- *for schools that do not meet the prerequisites for delegating authority, reforming the centrally-determined procedures they are required to follow in cases of teacher underperformance so that there is more timely and effective intervention.*

FINDING 6.3

Efforts to improve teacher performance should not focus on the payment of performance bonuses. The long history of mixed results from overseas experiments with teacher bonuses suggests that an effective and widely-applicable system is unlikely to emerge in the foreseeable future.

RECOMMENDATION 6.3

The Australian Government should reformulate its proposed Reward Payments for Great Teachers initiative as a temporary program that aims to facilitate future consideration of a performance-based career structure for teachers. The initiative should:

- *only provide reward payments to high-performing teachers — this will, among other things, require the development of effective assessment methods to certify teachers at the Highly Accomplished and Lead levels of the National Professional Standards for Teachers*

- *not entrench an expectation that higher certification automatically entitles teachers to higher pay*

- *allow schools to tailor their regular teacher performance appraisals and professional development to local circumstances.*

The future career structure could have, as its foundation, the four career stages in the National Professional Standards for teachers. Teachers would be assessed and, if found competent, would be certified accordingly by the relevant registration authority. Separately, the staffing profiles of individual schools would include limited numbers of positions at the different career stages, with appropriate salaries. Teachers certified at the relevant (or higher) level could apply for vacancies. Selection would be merit based and appointments could be time limited and/or subject to periodic review.

Changes in job design and the composition of the schools workforce have the potential to improve student outcomes and promote more efficient use of staffing resources (both teaching and non-teaching). The success of such workforce innovations is contingent on schools being delegated the authority and provided with the resources and leadership capacity to make decisions that are appropriate for their local circumstances. The role for state and territory education departments — along with Catholic education offices and support organisations for independent schools, to varying degrees — is to facilitate such school-level workforce innovation.

Education authorities are best placed to provide support and guidance to school leaders and communities by:

- *raising awareness of the scope to redesign job roles and adjust workforce composition within the prevailing legislative, regulatory and institutional framework*

- *encouraging pilot studies and research into new and promising workforce innovations*

- *maintaining sufficient capacity to monitor, assess and disseminate the changing use of the schools workforce in different systems and jurisdictions, including overseas.*

Principals and other school leaders play a pivotal role within their school communities. Measures that have the capacity to augment and enhance school leadership include:

- *investment in soundly based training and professional development for school leaders*

- *effective protocols for evaluating school leaders' performance, drawing on external oversight by education departments (and Catholic education offices) and school boards and councils*

- *improving management capacity by strengthening the role of non-teaching administrative and clerical staff.*

FINDING 8.2

Increased school autonomy removes impediments that can prevent principals and other school leaders tailoring school operations to best meet the needs of the local communities they serve. It thus has the potential to improve student outcomes. The full realisation of these benefits is contingent on schools having the necessary:

- *leadership capacity to manage the responsibilities delegated to them*
- *governance arrangements, which ensure that school leaders are held accountable for student outcomes, including:*
  - *sufficiently representative and competent school boards or councils*
  - *effective oversight from education departments, and regional and diocesan education offices*
- *funding and resources, as well as support on matters such as training, professional standards and curriculum, from education departments, regional and diocesan education offices, and other sectoral organisations.*

FINDING 9.1

Reducing the adverse effects of individual, economic and social factors on student outcomes must be a high priority for schools workforce policy — especially for students from low socioeconomic backgrounds, students living in rural or remote areas, Indigenous students, and students with disabilities or other special needs. However, progress is being impeded by a lack of concerted effort to systematically gather, publish and use evidence on the cost-effectiveness of measures (and how they can be best combined) when developing policies to address educational disadvantage. While recent reforms have added impetus for action, there is an urgent need for a more robust and transparent approach by all governments to the ongoing evaluation of initiatives targeting educational disadvantage, alongside a coordinated national review of existing evidence (recommendations 10.2 and 10.3).

Policies that enhance the overall effectiveness of the schools workforce will assist in overcoming educational disadvantage. However, they will need to be accompanied by a combination of more targeted initiatives which provide the means to:

- *increase the emphasis on the learning needs of educationally disadvantaged students in pre-service teacher training, drawing on a range of evidence including an expanded Longitudinal Teacher Workforce Study and research on different models of practicum*

- *provide additional support for teachers working in disadvantaged communities, including enhanced induction, mentoring and professional development*

- *explore greater use of pay differentials to attract teachers to specific hard-to-staff schools*

- *introduce additional workforce innovations at the school level which are tailored to the needs of disadvantaged students, and enabled by strengthened school leadership and increased school autonomy.*

There could also be a role for expanding the use of targeted initiatives that:

- *engage the parents of disadvantaged students and their broader community*

- *increase the share of teachers from disadvantaged and under-represented backgrounds through 'grow-your-own' programs*

- *use communications technology more effectively where opportunities for face-to-face teaching and professional development are limited.*

RECOMMENDATION 10.1

The Standing Council on School Education and Early Childhood should initiate and oversee an independent performance review of the Australian Institute for Teaching and School Leadership (AITSL). This review would supplement the planned internal evaluations of AITSL's individual initiatives, including in relation to the national professional standards and the accreditation of initial teacher education courses. Among other things, this performance review should:

- *consider whether AITSL is appropriately representative of the various jurisdictions and other parties in the schools workforce*
- *advise on a long-term work agenda for AITSL, including its capacity to improve access to data and research on the schools workforce and foster a culture of policy evaluation across jurisdictions.*

The independent performance review of AITSL should be conducted concurrently with the equivalent review for the Australian Curriculum, Assessment and Reporting Authority as prescribed by the Australian Curriculum, Assessment and Reporting Authority Act 2008 (Cwlth).

RECOMMENDATION 10.2

The Australian, state and territory governments should individually review, and strengthen as appropriate, how they use policy evaluations and research to inform the design and management of schools workforce initiatives. This should include consideration of improvements to ensure that:

- *evaluation of schools workforce initiatives, particularly those targeted at educational disadvantage, are systematic, robust and ongoing*
- *evaluation results are transparent and accessible*
- *research and evaluation is central to the design and management of schools workforce initiatives.*

Related to these, jurisdictions should also reflect on the adequacy of the evaluation protocols established by the education-related National Partnerships, and the extent to which these are maintained once the funding lifecycles of the relevant agreements have expired.

Each government should publicly report the findings of its review and any resulting reforms. The governments should also collectively monitor — through the Standing Council on School Education and Early Childhood — the effectiveness of their reforms, so that lessons are shared and there is an improved evidence base for future consideration of new policy approaches.

The Standing Council on School Education and Early Childhood should, as a priority, initiate and oversee:

- *a coordinated national review of existing evidence on the effectiveness of programs and policies to help ameliorate educational disadvantage*

- *evaluations of the effectiveness of remuneration-based and other incentives to encourage graduates to enter teaching in order to address specific teacher shortages.*

RECOMMENDATION 11.1

The Standing Council on School Education and Early Childhood should ensure that non-government schools, the non-teaching workforce, students and parents are appropriately represented in high level policy-making processes in the schools area. To this end, the Standing Council should establish a working group to consult with the relevant stakeholders and advise on specific options for improving their representation in high level policy forums.

FINDING 11.1

Centralised industrial relations arrangements, which apply to the schools workforce to varying degrees across different jurisdictions and sectors, can be a source of inflexibility that hinders efforts to respond to changing imperatives and impedes a range of beneficial reforms. Awards and enterprise agreements need to be structured to:

- *accommodate school-level variation in workplace arrangements, including in relation to remuneration, conditions and job design*

- *support changes in governance, procedure and organisational culture to promote quality teaching and related schools workforce support, and to improve the management of poor workplace performance.*

1   About the study

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Key points

- Australia's future depends on the quality of the 'human capital' of its people. A well-performing schooling system is fundamental.

- Overall, Australia's schools deliver good educational outcomes at a reasonable cost.

- But there is scope for improvement, with evidence of declining literacy and numeracy attainment across the student population. Additionally, Australia does not perform as well as other countries in offsetting educational disadvantage, especially for Indigenous students.

- Improved student outcomes can lead to significant personal, economic and social benefits. The schools workforce has an important role to play in this regard.

- The Commission has been asked by the Australian Government on behalf of the Council of Australian Governments to contribute to the current reform process by advising on:

  – factors affecting the supply of, and demand for, school workers

  – whether the knowledge and skills of the workforce, and its deployment within and across schools and regions, are appropriate to meet the community's needs

  – whether current or proposed policy, governance and regulatory arrangements are conducive to maximising the efficiency and effectiveness of the schools workforce and, if not, what changes may be required.

- In doing so, it has taken into account the findings of the recently completed Review of Funding for Schooling, drawn on both quantitative and qualitative evidence, and consulted widely with stakeholders.

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1.1   Why look at schools workforce issues?

Australia's 'human capital' has become more important for its future prosperity in light of the shift towards a more knowledge-based economy. A well-performing schooling system, underpinned by an efficient and effective schools workforce is fundamental. Specifically, it is essential to foster the skills, innovativeness and adaptability needed to prosper in competitive global markets, and to encourage more people to enter and remain in the workforce. Just as importantly, a

well-performing schooling system can promote equality of opportunity, facilitate a cohesive and inclusive society, and provide personal enrichment for individuals.

Overall, Australia's schools deliver good outcomes, due in large measure to the efforts of the schools workforce.

- Global assessments of student performance (box 1.1) consistently show that the foundation skills of the 'average' Australian student are at the upper end of the country rankings.

- Moreover, such results have been achieved within expenditure levels that are around the Organisation for Economic Cooperation and Development (OECD) average.

However, other high-level indicators suggest that improvements are required.

- Despite an increase in real spending per student and falling class sizes, both international test results and Australian-specific work suggest that the literacy and numeracy of Australian students has declined in recent years. It also appears that Australia has fallen behind other high-performing countries.

- Australia does not perform as well as comparable countries in giving students equal opportunity to realise their educational potential, irrespective of their background or ability. The resulting educational disadvantage is particularly evident among Australian students who are Indigenous, from low socioeconomic backgrounds, have a disability or other special needs, or reside in a rural or remote area.

The key evidence on Australia's performance on educational disadvantage relative to other countries comes from data collected by the OECD. As detailed in chapter 2, the data show that socio-economic status (SES) explains more of the variation in Australian student performance than in some other educationally high-performing OECD countries. Within Australia, it is evident that students with disabilities and other special needs and/or living in rural and remote areas — whatever their SES background — can face significant difficulties in accessing quality school education. For Indigenous students — who often experience multiple layers of disadvantage — these difficulties can be particularly acute. Such disadvantage and its deleterious impacts on learning outcomes in turn add to the challenges that students face in managing the transition from school to work or further study. In this latter respect, some 15 per cent of 15 to 19 year olds in Australia at present are not fully engaged in education, training or employment (ABS 2011a).

Even where schools are delivering good outcomes for students, considerable performance improvement may still be possible. That is, good performance is not a justification for complacency.

Box 1.1　More on the performance of Australian students and schools

A commonly used indicator of the outcomes delivered by schools systems across the globe is the Program for International Student Assessment (PISA), which tests various skills of 15-year-old students at three-yearly intervals. In the latest test (2009), the performance of Australian students was higher than the OECD average in reading literacy (ranked 9th), science (10th), and mathematics (15th) (OECD 2010c). Australian students were also among the most capable users of information technology (in a smaller group of OECD countries) — ranking equal second in digital reading performance and fourth in computer navigation skills (OECD 2011d). Moreover, in the latest iteration (2007) of a separate international test that focuses on the mathematics and science skills of Year 4 and Year 8 students — the Trends in International Mathematics and Science Study (TIMSS) — the overall performance of Australian students was again well above the average (Thomson et al. 2009).

However, Australian students' average PISA scores for reading literacy and mathematics declined from the previous 'in-depth' assessments in 2000 and 2003, respectively. And though a clear trend in TIMSS outcomes is harder to discern (Thomson et al. 2009), using an Australian-specific dataset, Leigh and Ryan (2011) concluded that the literacy and numeracy standards of Australian students have been declining since the 1960s.

The latest PISA results also revealed that, while the variation in the mathematics scores of high- and low-performing Australian students was similar to the OECD average, for reading and science the variation was higher than average (Santiago et al. 2011). This suggests that Australian schools have been collectively less successful than those in some other high-performing countries in taking early action to address student learning difficulties.

From a cost-effectiveness perspective, the evidence on the overall performance of Australia's schools is again mixed. In 2008 — the latest year for which comparative international data are available — Australia spent the equivalent of 3.6 per cent of GDP on school education, which was marginally lower than the OECD average of 3.8 per cent. But real expenditure per student has been rising — and in 2008 was more than 40 per cent higher than in 1995 (OECD 2011b). Though this increase was less than the OECD average, higher spending does not appear to have led to better average student outcomes in key learning areas.

As study participants such as Deakin University — School of Education (sub. 24) noted, these sorts of indicators must be treated with considerable caution. For example, country-specific characteristics of the student population may influence test scores. More broadly, in focusing on measurable student outcomes, PISA and similar tests encapsulate only part of the learning experience.

Nonetheless, taken together with evidence on such things as trends in Year 12 completion rates, the indicators detailed above help to paint a picture of a schooling system that is serving many, but not all, students well.

The economic benefits from higher levels of student performance have been widely investigated both in Australia and overseas. For example, studies by the Productivity Commission indicate that completion of Year 12 and/or improvements in literacy and numeracy skills are strongly correlated with both the likelihood of subsequent labour market participation and the level of earnings (Forbes, Barker and Turner 2010; Laplagne, Glover and Shomos 2007; Shomos 2010).

While these studies of labour market outcomes do not take into account the costs of achieving higher student performance, equally they do not encapsulate a range of other, often difficult to measure, economic and social benefits. For instance:

- Greater educational attainment and the accompanying financial rewards can provide various non-monetised benefits to individuals, including an enhanced sense of self worth and the security that comes from financial independence.

- People with higher educational attainment also tend to have better health. As well as being a desirable outcome in its own right, improved health is likely to reinforce the direct impact of education on labour market participation.

- Greater educational attainment reduces the propensity to participate in criminal activity (Heckman and Masterov 2007).

- Improved educational outcomes can confer various broader social benefits, such as greater community cohesiveness and stability, and greater equality of opportunity.

Notably, at least some of these costs and additional benefits are indirectly captured in empirical studies looking at the relationship between educational attainment and economic growth.

- Day and Dowrick (2004) estimated that projected continuing increases in the average years of education of Australia's working age population up until 2041 would conservatively raise GDP by more than eight per cent over this period.

- Likewise, in a cross-country study, Hanushek and Woessman (2009) found that relatively modest improvements in school students' cognitive skills could, over the medium to longer term, significantly increase a country's rate of GDP growth.

- In a subsequent study, Hanushek and Woessman (2010, pp. 15–6) concluded that 'cognitive skills emerge as the one strong policy factor underlying growth differences across OECD countries'.

In sum, while the magnitude of the gains suggested by individual studies must be treated with caution, viewed in its totality, the empirical work leaves little doubt that the potential dividend from improving schooling outcomes is significant.

Past research suggests that higher levels of student achievement would bring sizeable economic and social benefits (box 1.2). While realisation of such benefits is likely to require changes to a range of policy settings, improved workforce efficiency and effectiveness has a key role to play. A more effective schools

workforce would achieve better outcomes, and a more efficient one would achieve a greater improvement from any given level of resources. The schools workforce is not only the largest cost driver within the schooling system, it carries the most direct responsibility for student learning outcomes. Reflecting this, an array of schools workforce reforms are now in train or in prospect — focusing in particular on the quality of teaching and how that might be enhanced.

The Commission has been asked by the Australian Government on behalf of the Council of Australian Governments to contribute to that reform process by advising on:

- factors affecting the supply of, and demand for, school workers

- whether the knowledge and skills of the workforce, and its deployment within and across schools and regions, are appropriate to meet the community's needs

- whether current or proposed policy, governance and regulatory arrangements are conducive to maximising the efficiency and effectiveness of the schools workforce and, if not, what changes may be required.

The full terms of reference for the study are reproduced at the front of the report.

This is the final in a series of three Productivity Commission studies on the education and training workforce. The previous studies examined the workforces for vocational education and training, and early childhood development.

1.2   Workforce coverage

As noted in the terms of reference, the schools workforce refers to teachers and those who support the practice of teaching. The latter include principals and other school managers, teaching assistants, school librarians, health and allied professionals and various administrative and other support staff. Also, a significant number of volunteers (mainly parents) assist in the running of schools and in the provision of some services.

The Commission focused mainly on the most significant groups in terms of numbers employed and who are most directly involved in delivering or supporting teaching — namely, teachers, principals and other school managers, and teaching assistants.

However, this is not to downplay the significant contribution made by parents to the education of their children, or that of the rest of the paid and volunteer workforce. Indeed, as this report makes clear, it is important that the reform process does not

treat the composition of the workforce, or the existing roles of particular types of school workers, as given. Experience in this sector and elsewhere suggests that there will inevitably be opportunities for workplace and job redesign that deliver better outcomes for students and hence higher returns for the community from its substantial investment in school education.

In relation to parents, the Commission understands that quality teaching which focuses on effective interaction with parents can enhance the important contribution that parents can make to their children's education. Although relevant for all children, this is particularly relevant to children experiencing educational disadvantage. And as discussed in chapter 11, parents could also have a greater involvement in schools workforce policy development.

1.3   School funding

In 2009, the total gross recurrent income of all Australian schools amounted to around $40 billion (Gonski et al. 2011). About 80 per cent of this expenditure was funded from the public purse, with more than three-quarters of total spending accounted for by wage and salary costs (OECD 2011b).

The general adequacy of current schools funding, and the way in which it is distributed across students and schools, was the subject of the recently completed Review of Funding for Schooling (Gonski et al. 2011). The Australian Government is currently considering the reform proposals in collaboration with state and territory governments, and in consultation with other stakeholders (box 1.3). Accordingly, in this study, the Commission did not explore such broader funding questions.

That said, the Commission recognised that school funding and the resources available to different schools and communities have important implications for the efficiency, effectiveness and equitable distribution of the schools workforce. For example, action to get more quality teachers into hard-to-staff schools will be dependent, to an extent, on the broader resources available to these schools. And for schools in remote areas, the availability of housing and other amenities will be a further consideration. Also, allowing schools greater autonomy has the potential to exacerbate inequalities unless all schools are adequately resourced.

Box 1.3   **The Review of Funding for Schooling**

In April, 2010, the Australian Government commissioned a review of school funding with the aim of identifying arrangements that will achieve a funding system that is 'transparent, fair, financially sustainable and effective in promoting excellent educational outcomes for all Australian students' (Gonski et al. 2011, p. xi). The review panel, chaired by David Gonski, handed its final report to the Government in December 2011.

The final report noted that, while Australia has a relatively high-performing schooling system when measured against international benchmarks, its performance has slipped over the past decade. Furthermore, Australia has a significant gap between its highest and lowest performing students, with many of the latter not meeting minimum standards of achievement. The panel found that the increased concentration of disadvantaged students in certain schools is having a significant impact on educational outcomes.

In light of this performance, the panel recommended changes that would include a significant increase in funding across all schooling sectors (estimated to be around $5 billion per year if the changes had been implemented in full in 2009). The largest part of this increase would flow to the government sector, due to the significant numbers and greater concentration of disadvantaged students attending government schools.

The panel recommended that recurrent funding for all students in all schooling sectors, whether it is provided by the Australian Government or state and territory governments, be based on a new schooling resource standard. This standard, which would be based on actual resources used by schools already achieving high educational outcomes for their students over a sustained period of time, would provide loadings for the additional costs of meeting certain educational needs. These loadings would take into account socioeconomic background, disability, English language proficiency, the particular needs of Indigenous students, school size, and school location.

According to the panel, further collaborative work involving all governments and sectors to settle the levels of the schooling resource standard (including the different loadings) will be required in the lead-up to the proposed implementation in 2014. Ongoing responsibility for indexing and reviewing the resource standard and loadings would then be assigned to an independent National Schools Resourcing Body.

Under the proposed system, all government schools would be fully publicly funded to the level of the schooling resource standard, plus any applicable loadings. In the non-government sector, public funding would generally be provided based on the anticipated level of a school's private contribution. The private contribution anticipated for a school would be initially based on the SES score of the school, reflecting the capacity of the school community to support the school. It was proposed that the development, trialling and implementation of a more precise measure of capacity to contribute should be initiated. Some non-government schools would be fully publicly funded where they serve students or communities with very high levels of need, for example, special schools, majority Indigenous schools, and remote 'sole provider' schools.

Box 1.3   (continued)

While the panel recommended an increase in funding for schooling, it made relatively few recommendations regarding how these funds should be spent to improve student outcomes. The panel observed that early evidence from unpublished early national partnership progress reports suggest that investment in integrated strategies that are responsive to local circumstances can be effective in improving outcomes for disadvantaged students. However, they also noted that the full impact of the national partnerships will not be evident for some time, and recent observed improvements may not endure beyond the end of the national partnerships.

The Australian Government's interim response

The Government released the review's final report in February 2012, along with its own interim response. The Government indicated that the proposed funding increase was beyond what it envisages, given its commitment to return the budget to surplus and the fiscal challenges faced by state and territory governments. It also noted that it expects indexation to continue to be a feature of the Commonwealth funding model, and that no school would be worse off.

Nevertheless, the Government stated that the panel's reform proposals deserved further consideration and discussion in the community. To this end, the Government indicated that it would:

- seek the commitment of state and territory governments to work through the reform proposals and options for their implementation

- create a Ministerial Schools Funding Reference Group to examine the key recommendations and proposals and provide feedback and advice

- invite education stakeholders — including principals, parents and unions — to participate in the process of developing and testing these elements of a new system.

Sources: Australian Government (2012); Gonski et al. (2011).

This does not automatically mean that higher total funding is required. A recent study by the Grattan Institute of high-performing school systems in East Asia noted that the world's best school systems are rarely the biggest spenders (Jensen et al. 2012). For example, South Korea spends much less per student than other education systems, but achieves far better student performance. The study also observed that Australia's real school expenditure grew by 44 per cent from 2000 to 2009, and yet it was only one of four countries to record a statistically significant decrease in students' reading scores (as measured by the OECD's Program for International Student Assessment).

The critical consideration therefore is whether current funding is delivering best value — that is, whether it is being distributed across schools and students

appropriately and being used in an efficient, effective and equitable way. Hence, while some meritorious workforce reforms will entail additional funding, others could involve a re-prioritisation of existing expenditure, or even offer the prospect of budgetary savings.

1.4   Consultation process for the study

In preparing this report, the Commission sought input from the full range of stakeholders in the schools workforce area. This involved various forms of consultation, including the following.

- Shortly after commencing the study, an issues paper was released that invited written submissions on the matters under review. The Commission received a total of 95 submissions over the life of the study from a wide range of interests.

- Meetings were held with a broad cross-section of parties. This included visits to schools in urban areas of most of the states and territories, and in several rural/remote areas of Queensland, Western Australia and the Northern Territory.

- A draft report was released so that interested parties had an opportunity to provide written comments on the Commission's preliminary findings and recommendations prior to finalisation of the report.

- Three roundtables were held with interested parties to give them an opportunity to provide initial verbal feedback on the draft report.

A full list of participants in these consultations is provided in appendix A. They included key government entities involved in oversighting, funding and/or regulating the delivery of schools services; various non-government school bodies; a range of professional organisations representing principals, teachers or those teaching in particular subject areas; unions; universities involved in training school workers; several academics with an interest in schools workforce policy; parent and student bodies; and groups or individuals representing students with special needs. The Commission is grateful to all those who contributed to the study.

1.5   Road map for the rest of the report

The remainder of this report is structured as follows:

- Chapter 2 outlines some salient features of Australian schools and the schools workforce and discusses current and emerging workforce challenges.

- Chapter 3 describes the objectives of current schools and schools workforce policies and summarises the suite of workforce reforms in place or in prospect to promote those objectives. It then details the policy assessment framework that the Commission has used in subsequent chapters to assess and build on those reforms.

- Chapter 4 examines the balance between the demand and supply of school workers, the remuneration and other factors that influence this balance, and some possible further means to help ameliorate longstanding workforce shortages and surpluses.

- Chapter 5 discusses how the effectiveness of pre-service training of school workers and their subsequent participation in professional development might be enhanced.

- Chapter 6 examines whether teacher performance is being facilitated by regular appraisal and feedback, procedures for dealing with unsatisfactory performance, and performance-based remuneration.

- Chapter 7 looks at workplace innovation with a particular emphasis on ensuring that such innovation is appropriately supported and encouraged, and that its outcomes are readily accessible to all of the relevant stakeholders.

- Chapter 8 considers means to enhance school leadership and the role that greater school autonomy might play in this regard.

- Chapter 9 sets out why enhancing outcomes for educationally disadvantaged students — and especially for Indigenous students — should be a priority. While the chapter outlines a number of policy directions that look promising, a key message is that a thorough evaluation of the relative cost-effectiveness of different approaches is required.

- Chapter 10 builds on this evaluation theme to bring together in a single proposal several policy evaluation requirements identified earlier in the report. It also identifies a need for governments to strengthen their use of policy evaluation and research generally in the formulation of schools workforce policies.

- Chapter 11 examines some broader institutional issues relevant to the future performance of the schools workforce, including the adequacy of policy coordination and of stakeholder representation in policy development processes, and the efficacy of the industrial relations regime.

2 Profile of the schools workforce

Key points

- Australia's nearly 10 000 schools operate within distinct but overlapping systems. They may be government or non-government; and primary, secondary, combined or special needs. Funding, governance and operational arrangements also vary across states and territories.
  - From a workforce perspective, differences in student needs and available resources, the location of schools and other factors are also significant.

- The states and territories have primary responsibility for school education within their respective jurisdictions, with jurisdiction-specific legislation setting out the regulatory arrangements applying to schools and some school workers.
  - In addition, a national-level policy framework has been recently developed. It is predicated on a number of agreed high-level objectives and has been supported by new reporting and evaluation processes and the creation of two new national entities.

- There are currently well over 320 000 full-time equivalent teachers, principals and other paid school workers, as well as a large voluntary workforce.
  - The schools workforce is ageing, is becoming more feminised and is increasingly employed on a contract basis.
  - Workforce composition does not vary greatly across most schools, and has changed relatively little over time, at least on a system-wide basis.
  - Pay scales for teachers are relatively flat and, compared with other professions, average real remuneration has been trending down.

- Many issues and challenges bear on the capacity of the workforce to contribute to high quality learning outcomes. These include:
  - an expected strong growth in student numbers
  - a more complex and demanding teaching environment
  - increased competition for teaching resources
  - an expected upsurge in age-related retirements
  - evidence that suggests a lowering of the average literacy and numeracy skills of those entering teacher training courses
  - ongoing imbalances in workforce demand and supply
  - limited workforce mobility, especially between urban and rural/remote areas
  - the educational disadvantage experienced by some students.

School education is a complex and multifaceted activity, with the configuration of schooling systems in individual countries reflecting a range of country-specific factors. School workforces and policies that aim to improve student outcomes likewise need to be tailored to reflect those circumstances. Policy making must be responsive to both current problems and future challenges. And it must have regard to reforms already in place or in prospect.

To provide context for the policy discussions in subsequent parts of the report, this chapter sets out some salient features of Australia's schooling systems and schools workforce, and documents the current issues and emerging challenges that will bear upon the future efficiency and effectiveness of the workforce.

2.1   Schooling in Australia

Structure of school education

Formal schooling in Australia generally consists of six to seven years of primary school education followed by five to six years of secondary schooling (figure 2.1).

Figure 2.1   **Structure of Primary and Secondary Schooling, 2012**

Level	NSW, Vic, Tas[a], ACT[a], NT	Qld[b], WA[b], SA
Pre Year 1	Kindergarten (NSW and ACT) Prepatory (Vic and Tas) Transition (NT)	Prepatory (Qld) Pre-primary (WA) Reception (SA)
Year 1 Year 2 Year 3 Year 4 Year 5 Year 6	Primary	Primary
Year 7 Year 8 Year 9 Year 10 Year 11 Year 12	Secondary	Secondary

a Students transition to a senior college for years 11 and 12 in Tasmania and the ACT. **b** From 2015 Year 7 will become the first year of high school in Queensland and Western Australia.

Source: Adapted from ABS (*Schools, Australia 2011*, Cat. no. 4221.0).

There are close to 10 000 schools in Australia. These are often referred to collectively as the schools 'system'. But in fact, there are several distinct, though overlapping, systems.

- About 70 per cent of schools are run by state and territory governments, with the remainder being Catholic 'systemic' schools and other non-government independent schools (box 2.1).

Box 2.1   **More on schools in Australia**

Schools can be categorised in various ways. But in the context of funding and higher level administrative and governance arrangements, the most important distinction is between government and non-government schools.

Government schools

The approximately 70 per cent of Australian schools that are run by state and territory governments are designed to give effect to the notion that education is a fundamental human right. Accordingly, tuition fees are low or non-existent in most of these schools — although parents can and do contribute to costs through both voluntary contributions and the provision of unpaid support to their school communities.

Reflecting their raison d'être, government schools service the greater portion of those students most likely to experience educational disadvantage as a result of socio-economic, cultural or geographic factors. For example, in 2010, some 85 per cent of Indigenous students and 78 per cent of students with disabilities attended government schools (SCRGSP 2012). At the same time, there are also some 'selective' government high schools that cater specifically for high achieving students.

Non-government schools

Though regulated by the states and territories, non-government schools are operated and governed independently, and are able to charge tuition fees. However, to receive public funding from the Australian and state and territory governments, they must be established on a not-for-profit basis.

Catholic schools

The majority of non-government schools are Catholic, most of which are 'systemic' — governed by central authorities that control the distribution of funding and set educational and operational standards in much the same way as the states and territories do for government schools. Catholic systemic schools typically charge lower fees than do independent non-government schools.

Independent schools

Independent schools serve a wide range of communities and offer educational services based on a number of different foundations — including religion, values, and educational philosophy. While most independent schools are operated and governed on an individual basis, some 17 per cent are centrally run by religion-based authorities (ISCA, sub. 18).

- Around two-thirds of schools are primary, 15 per cent secondary, 14 per cent combined and 4 per cent special needs. Within each of these school groupings, there is a mix of government and non-government schools.

- In both the government and Catholic systems, there is variation in funding, governance and operational arrangements across the states and territories.

Also relevant from a workforce perspective are differences between schools located in the major population centres and those in rural and remote areas, differences in the size of schools, and variations in the individual characteristics and needs of students in otherwise 'like' schools.

The institutional backdrop

In addition to directly administering government schools, each state and territory government has responsibility for overseeing school education more generally within its jurisdiction.

This oversight is guided by state and territory-specific legislation that outlines the regulatory framework applying to schools and some school workers.

- Legislation regulating schools generally sets out requirements on matters such as curriculum, infrastructure, governance and financial reporting. In most cases the relevant education department or its equivalent administers the regulation.[1]

- Separate legislation has established 'teacher regulatory authorities' to register and regulate teachers and school leaders. In addition to these core functions, the authorities are typically required to maintain a database of all registered teachers, and 'accredit' pre-service teacher education courses.

Traditionally, there has been little formal policy coordination across the states and territories. The role of the Australian Government has been largely limited to the provision of funding (detailed below).

However, following the agreement of the state and territory and Australian governments, a national-level policy framework overlaying the above arrangements has been recently implemented. This framework is predicated on a number of agreed high-level objectives, with additional Australian Government funding made available to help encourage reforms designed to promote these objectives. Various new reporting and evaluation processes have been developed as part of this, along

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[1] In 2007, Victoria structurally separated the provision of school education from the regulation of school providers within its education department. Western Australia has separate departments for operating and regulating schools (chapter 11).

with two national entities designed to contribute to particular aspects of schools policy — namely, the Australian Institute for Teaching and School Leadership and the Australian Curriculum, Assessment and Reporting Authority. These new arrangements are considered in greater detail in chapter 3, which examines the current schools workforce reforms.

A range of data and research activity supports policy making within the above institutional structures. Historically, much of this has been generated by the state and territory education authorities and non-government school operators, with a number of researchers, academic bodies and independent organisations also producing more widely applicable research. Recent additions to this have been various new data initiatives designed to support performance reporting as part of the national-level framework. More details on the research and policy evaluation environment are provided in chapter 10.

Funding arrangements

The state and territory governments provide the majority of public funding for Australian schools, with most of this directed to government schools. In the case of non-government schools, the Australian Government provides most public funding (table 2.1), with parents and other private parties also making a significant contribution.

Table 2.1   **Government recurrent expenditure on schools, 2009-10[a]**

	Expenditure	*Share of total*
	$m	%
Government schools		
Australian Government	3 552	11
State and Territory Governments	29 343	89
Total	**32 895**	**100**
Non-government schools[b]		
Australian Government	6 510	73
State and Territory Governments	2 383	27
Total	**8 893**	**100**
All schools		
Australian Government	10 062	24
State and Territory Governments	31 726	76
Total	**41 788**	**100**

a Includes some depreciation and user cost of capital expenses (based on accrual accounting), but excludes capital grants. In 2009, private income for government schools was $1.46b, and for non-government schools $6.59b (Gonski et al. 2011). Data in the table include funding for capital and recurrent expenditure, and so cannot be directly compared with the figures in the table. **b** Australian Government funding is broadly allocated according to the socio-economic status of these schools, with the state/territory government contribution based on either a jurisdiction-specific 'average government school recurrent cost' or historical precedent. *Source*: SCRGSP (2012).

As indicated in chapter 1, the Review of Funding for Schooling has recently examined these funding responsibilities and the ways in which public funding is allocated across schools and students.

2.2 The current schools workforce

The paid schools workforce totals well over 320 000 on a full-time equivalent basis — over 250 000 full-time equivalent teaching staff, and about 80 000 full-time equivalent teacher assistants, administrative and clerical workers (ABS 2011c). The Commission estimated that these workers represented around 3 per cent of the total paid full-time equivalent workforce in 2011.[2] In addition, school authorities employ or hire other professionals and para-professionals such as school nurses, speech pathologists, psychologists and youth workers.

In the government system, a higher proportion of teaching staff work in primary schools, whereas the reverse applies in Catholic and independent schools (table 2.2). As well as providing assistance to their own children's education, a large number of parents (and other volunteers) provide classroom and administrative support, and contribute to the governance of schools through participation on school boards and councils. In addition, a tutoring workforce — estimated to be about 4 000 in the 2006 ABS Census — provides teaching support to school-aged students outside of the classroom.

Table 2.2 **Number of teaching staff by sector and school category, 2011[a]**

	Primary	*Secondary*	*Total*
Government	91 821	73 451	165 272
Non-government	38 777	51 062	89 839
Catholic	*22 681*	*25 712*	*48 393*
Independent	*16 096*	*25 350*	*41 446*
Total	**130 598**	**124 513**	**255 111**

a Full-time equivalent. The ABS defines teaching staff to include teachers, principals, deputy principals and senior teachers mainly involved in administrative duties. The number of teaching assistants is reported under a separate measure that includes administrative and clerical staff (see text).

Source: ABS (*Schools, Australia, 2011*, Cat. no. 4221.0).

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2 The total number of paid full-time equivalent workers in the Australian economy was approximated using data on the number of full-time and part-time workers (ABS 2012a).

The structure and nature of this workforce has been changing in various ways.

- In line with the increase over time in the share of students enrolling in non-government schools, the proportion of the workforce employed in that sector has been growing.

- Like the labour force as a whole, the schools workforce is ageing. Moreover, the estimated average age of the schools workforce in 2010 (age 43) is much higher than for the rest of the workforce (age 38) (McKenzie et al. 2011; Productivity Commission estimates).[3] As discussed below, an expected increase in age-related exits from the workforce over the coming two decades is one of the challenges confronting policymakers.

- In keeping with the general trend across the wider economy, contract and casual employment of school workers has reportedly been increasing. Data from the 2010 Staff in Australia's Schools survey indicate that school leaders are more likely to be employed on fixed-term contracts than teachers in both primary and secondary schools (table 2.3). The Catholic Education Commission of Victoria (sub. 13) advised that teachers are more likely to be employed on a contract basis early in their career.

- Class sizes and student-teacher ratios have been progressively reduced (chapter 7).

Table 2.3   **Basis of employment for teachers and school leaders, 2010**

Basis of employment	Primary	Secondary
	%	%
Teachers		
Ongoing/permanent	77.1	85.7
Fixed-term contract	20.5	13.0
Casual/relief	2.3	1.3
Total	**100.0**	**100.0**
School leaders		
Ongoing/permanent	65.2	64.6
Acting/filling a vacancy	10.9	7.5
Fixed-term contract	23.3	27.9
Casual/relief	0.6	0.0
Total	**100.0**	**100.0**

a These figures are estimates of population values based on a survey of teachers and school leaders in 2010. Numbers may not sum to 100 per cent due to rounding.

Source: McKenzie et al. (2011).

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3   The average age of the Australian workforce was estimated using data from the ABS (2010c).

Figure 2.2   **Female–male teaching staff ratio, 1973–2011**
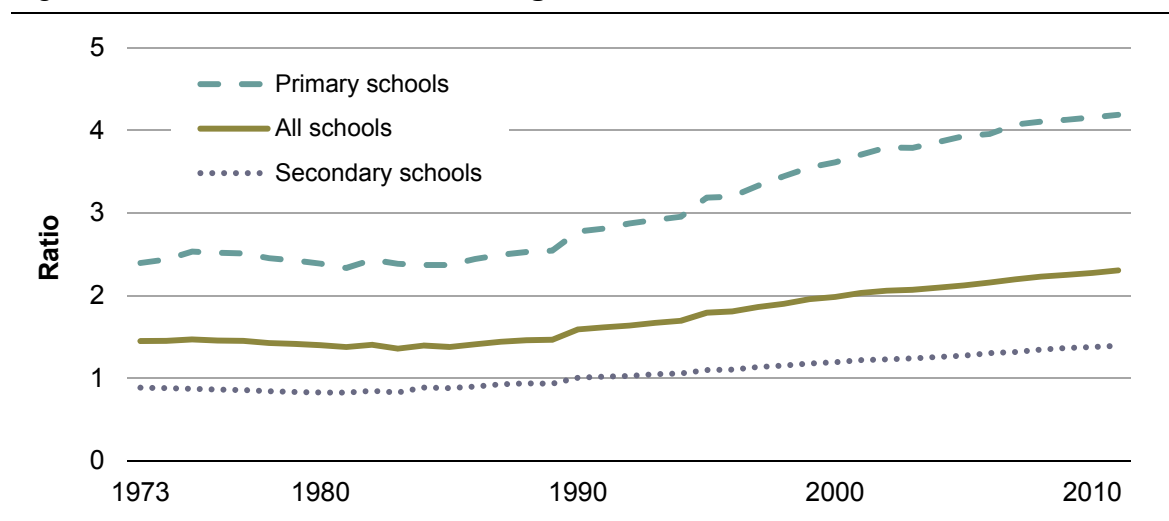
Source: ABS (*Schools, Australia*, Cat. no. 4221.0).

- Especially within primary schools, a growing proportion of teaching positions are being filled by women (figure 2.2). Currently, women fill about two-thirds of teaching positions, compared with less than half for the workforce as a whole. This is despite the expansion over time in the range of economy-wide career opportunities available to women.

- The cultural background of the workforce has also changed. However, teachers born overseas are still under-represented in the schools workforce (McKenzie et al. 2011). Similarly, while the number of Indigenous school workers has been increasing, they too remain significantly under-represented on a share of population basis. In 2010, less than one per cent of teachers were Aboriginal or Torres Strait Islander Australians, while Indigenous students comprised around five per cent of the total student population (ABS 2011c; McKenzie et al. 2011).

- There is evidence to suggest a lowering of the average literacy and numeracy skills of those entering teacher training courses.

- While most teachers continue to enter the profession via the undergraduate or graduate diploma route, more students are enrolling in master of teaching courses. Also, the newly implemented Teach for Australia initiative is designed to open up a new pathway for acquiring a recognised teaching qualification (chapter 5).

Other aspects of the schools workforce have displayed less change.

- The centralised allocation of staff across much of the government and Catholic schools systems, conditions in awards and enterprise agreements, and established custom and practice continue to limit the scope for many individual schools to tailor staffing arrangements to their particular circumstances. The

upshot is that workforce composition is relatively uniform across individual schools. And while there has been some shift over time in the responsibilities of different types of school workers (see, for example, CPSU/SPSF Group, sub. 6), further changes to workforce structure and deployment could lead to improvements in student performance (chapter 7).

- For both primary and secondary teachers, the total number of hours spent teaching students on an annual basis has remained constant over the past ten years, and continues to remain high relative to a number of other high-performing countries (Jensen et al. 2012; OECD 2011b).

- There continues to be relatively little explicit differentiation in teachers' pay according to performance (chapter 6), or in response to shortages in particular subject areas (chapter 4). In most jurisdictions, teachers reach the top of the pay scale within about 10 years of service, and must then take on some non-classroom responsibilities to secure additional remuneration.

Another notable feature of the remuneration environment is that, while on average real teacher salaries have been trending upward over the longer term, there is some evidence that recent increases in teachers' pay have not kept pace with those in many other professions. Average weekly ordinary time earnings in the broader education sector are now only about 7 per cent above the average for all surveyed industries, compared with 14 per cent in 1994 (ABS 2011b). Moreover, there is evidence that salaries at the top of teacher pay scales did not increase in real terms between 1995 and 2009 (OECD 2011b).

This suggests that school systems are finding it increasingly difficult to compete with other sectors of the economy. Indeed, such pressures have likely been building for some time, as improvements in labour productivity and/or output prices in some other industries have enabled higher wage growth there. This has tended to increase the real cost of employing a schools workforce of a given quality.

Other reasons for the relative decline in teacher remuneration could include the persistent surpluses of general primary teachers, the longstanding pressures on governments to exercise fiscal restraint and tradeoffs between wage increases and the implementation of lower average class sizes.

There are other workforce issues that will compound these challenges for school systems over the coming years.

2.3 Workforce issues and challenges

As participants' inputs to this study illustrate, there are many well-documented issues and challenges that bear on the capacity of the schools workforce to contribute to high quality outcomes for students. The demands being placed on the workforce are growing and changing, and there are concerns about the capacity of the workforce to effectively respond to these demands.

Growing and changing demand

Strong growth in student numbers

The Australian Government Department of Education, Employment and Workplace Relations has forecast that, due to population growth and an expected rise in Year 11 and 12 retention rates, the total number of Australian school students will increase by around 26 per cent (or about 900 000 students) from 2010 to 2022 (an average annual growth rate of just below 2 per cent).

These increases will not be uniform across the 'system'.

- The forecast growth in student numbers is much higher in some states — for example, 45 per cent in Queensland and 40 per cent in Western Australia, compared with New South Wales (16 per cent) and Tasmania (5 per cent) (table 2.4).

- The growth in primary school enrolments is expected to be nearly double the growth in secondary enrolments (32 per cent and 18 per cent respectively).

Table 2.4 **Projected increases in student enrolments, by jurisdiction**
2010–2022

Jurisdiction	Projected increase in student enrolments	
	'000	%
Australian Capital Territory	20	34
New South Wales	180	16
Northern Territory	50	36
Queensland	323	45
South Australia	46	18
Tasmania	4	5
Victoria	179	21
Western Australia	142	40

Source: DEEWR estimates.

- The drift of students to the non-government sector is expected to continue, with forecast growth in enrolments in non-government schools (34 per cent) outstripping the growth in government schools (22 per cent).

- Moreover, while student population growth will likely be high in some rural populations (such as in towns serving the mining industry and some Indigenous communities), most of the increase would be expected to occur in urban areas.

Collectively, the additional enrolments will add to pressures in some areas of current workforce shortage and, more generally, will reinforce the need for policy settings and institutional arrangements that facilitate flexible adjustments in workforce numbers and deployment to accommodate changing circumstances.

Increased demand for teachers from the early childhood sector

As discussed in the Commission's recent report on the early childhood development workforce (PC 2011a), the pedagogical component of early childhood teaching has been increasing and will continue to do so in the future. Reflecting this, the National Partnership Agreement on the National Quality Agenda for Early Childhood Education and Care requires that all preschools and long-day care centres employ a qualified early childhood teacher by 2014.

It may be that a significant part of the new demand for teachers in the early childhood sector will be met through an up-skilling of the existing workforce and by attracting some individuals who are currently outside of the teaching profession.

However, a number of teachers who graduate from pre-service courses are qualified to teach at both the primary and early childhood levels. Hence, some of this new demand will most likely be met by recruiting teachers who would previously have sought employment in the primary schools sector — thus potentially exacerbating the demand-side pressures arising from growing student enrolments.

A more complex and demanding teaching environment

Today's classrooms and schools place more demands and pressures on teachers, principals and other school workers, with such difficulties likely to increase in the future.

As a result of both broader societal changes and the evolution of education policy, the student population is more diverse. For example:

- a more varied influx of immigrants has led to an increase in the number of countries and first languages represented in the classroom

- students' family structures and their parents' working arrangements are becoming more varied

- less academically engaged or proficient students who would previously have entered the workforce at the completion of Year 10 or 11 are now being encouraged and supported to finish Year 12

- an increasing number of special needs students are being taught for at least some of the time in mainstream classrooms.

In addition, the demands on curriculum and pedagogy have expanded and become more complex. In regard to the latter, for example, teaching methods are less regimented than previously, with more emphasis on tailored, personal interaction with students. Also, more testing and reporting of student outcomes than in the past, as well as the greater difficulty in attracting and retaining school volunteers, has increased the administrative load on teachers, principals and other school workers. And while technological change is opening up new opportunities to enhance students' learning experiences and increases the avenues for undertaking professional development, it is also requiring many school workers to learn new skills.

Parental and community expectations on what schools can and should deliver also continue to grow. For example, schools are required to respond to an increasing range of social issues. Moreover, there is now more information available to parents on the performance of their children's schools, along with a greater emphasis on improved transparency of school outcomes and governance. While these developments are inherently desirable, they have added to the non-teaching demands on principals and teachers in particular.

Finally, there continue to be concerns about the incidence of inappropriate classroom behaviour. While the conception of what is 'inappropriate' will depend on the particular context — and despite conflicting views on the matter (for example, Uniting Care Children Young People and Families, sub. 8; and OECD 2010a) — it is certainly the case that the relationship of students with their teachers and other school workers in Australia is a less subservient one than in the past. Even though this can have many benefits for both parties, the change will also give rise to some additional challenges for school workers — especially when students push the boundaries of what is acceptable behaviour.

Some of the changes to the teaching environment outlined above are relevant to a range of workforce policies, including those directed at recruitment and retention and at helping to ensure that school workers have the right skills.

Supply-side concerns

Age-related retirements

The schools workforce is ageing. Over the next 5 to 10 years, a large number of school workers — especially in government schools — will reach the minimum retirement age. For example, in Victoria and Western Australia around 40 per cent of teachers working in government schools are currently aged 50 years or more, while in South Australia the share is even higher at 50 per cent (Department of Education and Children's Services — SA, sub. 35; Department of Education and Early Childhood Development — Victoria, sub. DR95; Department of Education — WA, sub. 45). Stakeholders in the non-government sector have similarly raised concerns about an ageing teacher workforce (National Catholic Education Commission, sub. 7; Queensland Catholic Education Commission, sub. 20).

The rate of exit from the workforce at minimum retirement age will partly depend on the state of the economy and the effect of perturbations in financial markets on superannuation balances (Department of Education — WA, sub. 45). The nature of the particular superannuation schemes applying in individual jurisdictions may similarly affect the incentives to leave at retirement age. Even so, a significant number of age-related retirements over the next decade seems inevitable.

In the short to medium term, the pool of general teachers on waiting lists will help to ameliorate the numerical effects of such retirements. And while an accelerated rate of generational change will result in a loss of valuable experience from the teaching profession, there may be some offsetting benefits — such as making it easier to introduce new technologies to the classroom and to modify rigidities in workplace practices.

However, over the longer term, retirees from the teaching profession will become harder to replace due to increased demand for teachers from the early childhood sector and the tightening of the labour market as a result of population ageing more generally. Indeed, ageing is expected to reduce labour force participation by more than four percentage points by 2050 (Treasury 2010) — a reduction that could potentially have a substantial impact on the capacity of schools to continue to deliver high-quality education services.

The Council of Australian Government's human capital reform agenda — including the schools workforce component (chapter 3) — is partly directed at offsetting the general effects of ageing on labour supply. For example, as discussed in chapter 1, there is a positive correlation between educational attainment and labour force participation. The prospective increase in the pension age and various recent changes to social welfare arrangements will likely also boost participation rates. In

addition, an upward drift in wages as labour market conditions tighten should encourage some people to re-enter the workforce or work for longer.

Nonetheless, most sectors of the economy are likely to find it more difficult and/or costly to attract and retain skilled workers. These pressures could be especially acute in sectors such as education where the scope to substitute capital for labour is more limited, and where a heavy reliance on public funding may constrain the extent to which wages and salaries can be increased to 'meet the market'. Moreover, as the WA Department of Education (sub. 45) noted, current and planned initiatives to improve workforce quality are likely to be an additional source of upward pressure on the cost of labour in the sector.

In this environment, it is likely to become increasingly difficult to rely on addressing shortages of school workers through recruitment and retention strategies (box 2.2). Greater reliance will need to be placed on getting maximum value from available workers, including the non-teaching workforce. Workplace policies and arrangements will need to promote efficiency and effectiveness, responsiveness to changing circumstances and needs, and an openness to different ways of doing things. At the same time, there is the overriding imperative to improve the quality of the workforce.

Declining 'entry quality' standards

While there is a recognised need to improve teacher quality, there is some evidence that, since at least the early 1980s, there has been a decline in the prior educational achievement of those entering the teaching profession. In particular, Leigh and Ryan (2008) showed that the average percentile rank (based on literacy and numeracy tests taken in Year 9) of those entering the profession between 1983 and 2003 fell from 70 to 62. This decline was particularly pronounced for females, and appeared to be linked to the previously noted wider career choices now available to women.

There are clearly limitations in assessing teacher quality on the basis of Year 9 literacy and numeracy tests for those who later enter the teaching profession (Job, McCollow and Currie 2010). Indeed, and as recognised by Leigh and Ryan (2008), this approach relies on the assumption that all students progress at the same rate academically, and that the average academic ability of the student cohorts analysed does not increase over time.

> **Box 2.2   Retention issues**
>
> A commonly expressed concern is that a significant number of teachers leave in the first few years after graduating and gaining employment.
>
> However, it is not clear whether the rate of exits is unduly high. For example, over the past five years about 10 per cent of teachers in NSW with less than five years of experience left the profession (Department of Education and Communities — NSW, sub. 14). While comparable figures are not available for the other states, some evidence indicates the separation rate for early career teachers could be even lower in Queensland (Department of Education and Training — Queensland, sub. 40).
>
> And though there are some indications that the proportion of early career teachers leaving the profession may have been higher in the past (CRTTE 2003; Ramsey 2000), it is not clear whether the rate is any higher in teaching than for other sectors. Moreover, some teacher separation data include teachers who transferred to another school rather than left the profession. In such cases any estimates of early career separation rates would be upwardly biased.
>
> From an employer perspective, there are some obvious costs associated with early exits. Hence, school operators have put in place measures that seek to ensure a well-structured transition into teaching for new starters, such as internships, induction programs and mentoring. It may also be the case that improvements to pre-service training could decrease attrition rates further.
>
> An arguably bigger issue for policymakers is the apparently very low rates of attrition after the initial years in the workforce (DEECD 2009e; Department of Education — Tasmania, sub. 33; Department of Education and Training — Queensland, sub. 40; NSW Auditor General 2011). With low rates of natural attrition, there is a risk of retaining a cohort of underperformers. This in turn serves to focus attention on the importance of good performance appraisal and feedback, including effective processes for managing underperformance (chapter 6).

Moreover, prior educational achievement is only one indicator of the quality of fully trained school workers. In the case of teachers, for example, quality will also depend on such things as their general aptitude for teaching; the nature of their pre service training; the standards they must satisfy to achieve full registration; the teaching environment in which they work; the quality of the support, mentoring and feedback they receive; their degree of experience; and their participation in ongoing professional development. Indeed, to at least some extent, shortcomings in one or more of these areas can be offset by strengths or specific policy initiatives in others.

Nevertheless, the available evidence and comments from participants do raise concerns about the quality of some entrants to pre-service teacher education and to the teaching workforce. Any decline in prior educational achievement is likely to make it harder to maintain — let alone improve — the longer-term quality of the

workforce and, in turn, increases the demands on other quality enhancement mechanisms.

Access to practicum

Notwithstanding the intention to increase employment-based pathways into teaching (chapter 4), the largest number of student teachers will continue to be enrolled in university-based courses. An important component of these courses is the practicum, which provides students with an opportunity to experience, and practice their skills in, a classroom environment. Currently, the minimum number of days of practicum required (set by the teacher regulatory authorities) varies across the states and territories. However, new national course accreditation requirements provide for a nationally uniform practicum load for both postgraduate and undergraduate teacher education programs (chapter 5).

This practicum process also provides an opportunity for schools to gauge the skills and aptitude of potential future employees, and for future employees to assess whether they are motivated and suited to work in particular schools.

But the accompanying supervisory, evaluation and reporting requirements can consume considerable teaching and administrative resources. Partly reflecting the growth in other demands on teachers and schools (see above), it appears practicum placements are becoming harder to secure (Australian Primary Principals Association, sub. 41; NAFEA, sub. 1). Moreover, the planned national course accreditation requirements will increase the minimum number of days of practicum in some jurisdictions, and hence likely make it more difficult to secure places for students there.

Difficulty in accessing practicum placements may over time put downward pressure on the number of teacher training places offered by the universities and thereby lead to some 'self-correction' of this problem. Nonetheless, as discussed in chapter 5, the question arises as to whether particular initiatives are required to help ensure that tomorrow's teachers get suitable and sufficient practical experience as part of their pre-service training, and that the resources employed in providing practicum are allocated efficiently.

Persistent imbalances in demand and supply

Especially within the teaching segment of the schools workforce, there are areas of ongoing surpluses and shortages. Some of these imbalances are general in nature. Others, especially some of the shortages, are more specific to particular types of

skills, schools or geographic regions, and hence relate as much to the distribution of the available workforce as to the overall number of workers. While not all of these imbalances require policy action, some — especially those of a long-standing nature — can have significant costs for both the schools system and the wider community, including through exacerbating educational disadvantage.

More specifically, on the surplus side of the ledger, there is a significant number of qualified — mainly primary — teachers on stand-by for ongoing positions in major urban areas, or for contract or casual relief work. Though the precise extent of this surplus varies across jurisdictions, in most states and territories it is considerable (chapter 4). Importantly, in some jurisdictions these surpluses have persisted for a number of years despite growing student enrolments and falling average class sizes.

Such large and persistent surpluses mean that a sizeable part of the community's investment in teacher training is providing no direct benefit to the schools workforce (though there are clearly more general benefits to the individuals and the community from their education). Further, the specific investment by schools in providing practicum for students who do not find employment is largely unproductive.

On the shortage side of the ledger, there are some significant subject-related teacher shortages at the secondary school level. As a consequence, teachers are often required to teach subjects in which they have no specialist knowledge or training (chapter 4). Special-needs teachers are likewise in short supply. Also, the Independent Schools Council of Australia (sub. 18) noted that while the quality of employed principals is high, finding suitable replacements for principals who leave is an increasing challenge.

Moreover, the geographic distribution of the schools workforce does not reflect the distribution of the student population. In particular, schools in rural and remote areas, including Indigenous communities, can find it very difficult to attract teachers and principals, particularly those who have a number of years of experience, or to retain them for any length of time. It is also apparently becoming increasingly difficult to staff low socioeconomic status (SES) schools in some urban areas.

That these difficulties exist despite the large surpluses of primary teachers in particular, illustrates the limited mobility that characterises the teaching workforce. When combined with ongoing restrictions on the more flexible use of the teaching and non-teaching workforces, these difficulties seriously limit the capacity of the schooling system to respond to imbalances.

Educational disadvantage

A particularly challenging issue for the schools workforce is how to assist students from disadvantaged backgrounds to achieve their educational potential. Indeed, ensuring that children can realise their educational potential is described in the Review of Funding for Schooling as the 'moral imperative' of schooling (Gonski et al. 2011, p. 105). As noted in broad terms in chapter 1, outcomes are more likely to be below average for students who are from low-SES and non-English speaking backgrounds, live in a rural or remote area, or identify as being Indigenous. There are also challenges involved in helping students with disabilities to achieve their educational potential.

The available evidence suggests that the disparity in educational outcomes between disadvantaged and other students is relatively wide in Australia (box 2.3).

Box 2.3   Australia's educational inequality by international standards

Based on reading literacy results from the 2009 Program for International Student Assessment (PISA), the share of variation in Australian student results that can be explained by their SES is on par with most other OECD countries. By this measure, Australia has improved upon its international standing in 2000, when this share exceeded the OECD average. However, Australia remains behind other high-performing countries, where SES level generally has less impact on student outcomes.

Several other aspects of the PISA data also suggest that Australia performs less favourably in terms of educational equality.

- Although Australian students at every SES level generally perform better than the OECD average for the same SES level, the performance gap between Australia's low-SES and high-SES students is wider.

- Differences in students' SES levels help to explain differences in student performance both 'within' and 'between' schools. This is apparent in all OECD countries, but the 'between-school' effect is especially evident in Australia.

- Related to the second point, individual student's performance is found to be more strongly linked to the average SES level of all students at their school, rather than their own SES level. Again, while this 'peer' effect is observed in most other OECD countries, it is particularly strong in Australia.

While acknowledging that inherent differences between countries (such as the geographic dispersion of the population) can affect education delivery, these comparisons suggest that Australian schools, in aggregate, perform somewhat less favourably than many other OECD countries according to some measures of inequality.

Source: Thomson et al. (2011).

Some indication of the proportion of Australian students who are potentially affected by educational disadvantage is reflected in the composition of the student population.

- Around 13 per cent of Australian students attend a school that has been classified as disadvantaged under the COAG National Partnership on Low Socioeconomic Status Communities.

- Approximately 2 per cent of all students in Australia attend a school in a remote or very remote location. This proportion stands at 45 per cent in the Northern Territory (SCRGSP 2012).

- Indigenous students comprise about 5 per cent of the Australian student population. While most are located in New South Wales or Queensland, the Northern Territory has the largest share with around 40 per cent of all students there identifying as Indigenous (ABS 2011c).

- Around 20 per cent of Australian students come from language backgrounds other than English (SCRGSP 2012).

- Students with reported disabilities constitute nearly 5 per cent of the student population (SCRGSP 2012). In addition, some students — while without a reported disability — have special learning needs. For example, in one survey of primary teachers, 16 per cent of the students taught by the surveyed teachers were identified as having a special learning need (Angus, Olney and Ainley 2007). This roughly accords with an estimate by the Students with Disabilities Working Group that between 15–20 per cent of students have either a disability or learning difficulty (SWDWG 2010).

Many students have more than one of these characteristics and therefore can experience multiple sources of disadvantage. For example, about 25 per cent of the Indigenous population live in remote or very remote locations (compared with less than 2 per cent for the non-Indigenous population), around half of all Indigenous people living in remote or very remote locations speak a language other than English at home, and 45 per cent of Australia's total Indigenous population are in the lowest income quintile (ABS 2006). Also, proportionally more students with disabilities or teacher-identified special needs are enrolled in low-SES schools (Angus, Olney and Ainley 2007).

The clear disparities that exist in educational outcomes between different student groups in Australia provide some indication of the extent of educational disadvantage (box 2.4 and Gonski et al. 2011).

As discussed in chapters 9 and 10, there is a need to better understand what targeted workforce-related measures are most effective for overcoming educational disadvantage. In addition, the broader reforms canvassed in this report, while

improving the overall quality of the workforce, will also help to address educational disadvantage.

Box 2.4   Indications of educational disadvantage in Australia

Clear disparities in educational outcomes between different student groups provide some indication of the extent of educational disadvantage. For example, only 33 per cent of the working age population with a reported disability have reached Year 12 or attained equivalent qualifications, compared with around 55 per cent of those without a disability. The educational performances of students with a reported disability are not recorded through PISA or National Assessment Program — Literacy and Numeracy (NAPLAN) processes.

Australian data from PISA 2009 show the following.

- Among students from **low-SES backgrounds**, around 25 per cent do not reach proficient levels of reading, mathematics or scientific literacy at age 15 (compared with 5 per cent from high-SES backgrounds). About 40 per cent do not reach Year 12 or attain equivalent vocational qualifications (compared with 20 per cent from high-SES backgrounds).

- Among students in **rural and remote areas**, between 30 to 35 per cent do not reach proficient levels of reading or mathematical literacy at age 15 (in comparison with 15 to 20 per cent in provincial and metropolitan areas). Between 50 to 65 per cent do not complete Year 12 or attain equivalent vocational qualifications (in comparison with less than 40 per cent in metropolitan and provincial areas).

- Among **Indigenous students**, around 40 per cent do not meet proficient levels of reading or mathematical literacy at age 15 (in contrast to 15 to 20 per cent of non-Indigenous students). Around 35 per cent are not proficient in scientific literacy (in contrast to 8 per cent of non-Indigenous students). Over half do not complete Year 12 or attain equivalent qualifications (compared with 20 per cent of non-Indigenous students).

- Among students from **non-English-speaking backgrounds**, approximately 20 per cent are not proficient in reading or scientific literacy at age 15 (in comparison with 12 per cent of students who speak English at home). Students from non-English-speaking backgrounds, however, tend to outperform other students in some subjects, such as mathematical literacy.

NAPLAN data for 2011 show similar patterns for Indigenous and rural and remote students. Importantly, these data also provide some indication of the impact that multiple sources of disadvantage can have on student outcomes. For example, while 78 per cent of Indigenous students living in metropolitan areas are at or above the national minimum standards in reading and numeracy, of the Indigenous students living in very remote areas, only 29 per cent reach the standard in reading, and only 34 per cent are at or above the standard for numeracy.

Sources: ABS (2009); SCRGSP (2010); Thomson et al. (2011).

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3   Policy considerations

Key points

- The core objectives of Australia's schools and schools workforce policies are that there should be universal access to high quality schooling, that all students meet or exceed basic educational standards, and that schooling promotes social inclusion and addresses educational disadvantage.

- An array of schools workforce reforms are in place or in prospect to further these objectives, with a particular focus on improving workforce quality and performance.
  - While the majority of these reforms are being implemented by state and territory governments and non-government school operators, many have been brought under national umbrellas.
  - There are also new national-level reporting and assessment frameworks and additional funding from the Australian Government to support the reform process.

- While the extensive reform agenda has some important broad strengths, it is too early to fully judge the impacts, given that most of the changes are recent or have yet to be implemented. In light of budget constraints, the Commission has focused on identifying cost-effective measures that would:
  - build on reforms that are in train or in prospect
  - address some problematic initiatives
  - deal with matters that have so far received insufficient policy attention.

- The Commission has assessed reform options according to whether teachers and other school workers could become more effective and therefore achieve better student outcomes, and whether the schools workforce could become more efficient and therefore achieve a greater improvement from any given level of resources. In assessing schools workforce policies, the Commission has also:
  - interpreted equity in educational outcomes to mean that all students should have equal opportunity to realise their educational potential, irrespective of their individual, economic or social circumstances
  - paid particular attention to the critical role played by quality teachers and their effective deployment across the schooling system
  - recognised the need to balance the benefits of nationally consistent approaches with those that arise from the scope for policy experimentation at the jurisdictional level.

As alluded to in the previous chapter, an array of schools workforce policy reforms have recently been implemented or will shortly be so. This chapter outlines the essence of those reforms and the objectives that underpin them. It then details the considerations that have been central to the Commission's assessments of those reforms in subsequent chapters. It addresses the question of how this study can best add value to what is now a very busy and active policy landscape.

3.1 Objectives of the schooling system

The objectives of Australia's schooling system — and hence the ultimate goals of the schools workforce and other schools-related programs and policies — are articulated in the Melbourne Declaration on Educational Goals for Young Australians (the Melbourne Declaration) and the National Education Agreement (NEA). Though expressed in slightly different ways, the central themes are that:

- all young Australians should have access to high quality schooling
- there are basic educational standards which ideally all students should achieve or exceed
- schooling should help to address educational disadvantage and promote social inclusion.

The Melbourne Declaration was agreed to by all Australian education ministers as part of a commitment to work collectively with all school sectors and the broader community to improve educational outcomes for young Australians (MCEETYA 2008). In addition to reaffirming broad objectives, the NEA (COAG 2008) specifies some targets relating to those objectives and details various funding and performance reporting requirements and responsibilities. More information is provided in box 3.1.

3.2 Current schools workforce reforms

A jurisdictionally tailored approach within new national umbrellas

As part of Australia's human capital reform agenda, various reforms are being implemented to improve Australia's schooling system and the outcomes it delivers for students. And more are on the horizon, including in response to the Review of Funding for Schooling (chapter 1).

Box 3.1   Melbourne Declaration and National Education Agreement

Melbourne Declaration on Educational Goals for Young Australians

Signed in December 2008, the declaration is underpinned by two goals.

- Australian schooling promotes equity and excellence.

- All young Australians become successful learners, confident and creative individuals, and active and informed citizens.

In pursuit of these goals, the declaration sets out an action agenda focusing on:

- development of stronger partnerships

- support for quality teaching and school leadership

- strengthened early childhood education

- enhanced middle years development

- support for senior years of schooling and youth transitions

- promotion of world class curriculum and assessment

- improved educational outcomes for disadvantaged young Australians

- strengthened accountability and transparency.

National Education Agreement

The NEA, which took effect from 2009, details the Australian Government's financial contribution to the delivery of schooling services by the states and territories over the subsequent five financial years. The agreement is intended to contribute to the following outcomes:

- all children are engaged in, and benefit from, schooling

- young people meet basic literacy and numeracy standards, and overall levels of literacy and numeracy achievement improve

- Australian students excel by international standards

- schools promote social inclusion and reduce the educational disadvantage of children, especially Indigenous children

- young people make a successful transition from school to work and further study.

More specifically, the NEA targets achievement of a 90 per cent attainment rate in Year 12 (or equivalent qualifications) by 2020, and closure of the gap in schooling outcomes between Indigenous and non-Indigenous students (discussed in chapter 9).

Consistent with the new Intergovernmental Agreement on Federal Financial Relations, the NEA gives the states and territories flexibility in the allocation of the Australian Government's funding contribution, and emphasises realisation of the outcomes of the agreement, rather than specifying the means by which this should occur. However, this flexibility is conditional on the implementation of a performance reporting framework to assist with monitoring student outcomes and assessing how well schools are addressing students' needs.

In recognition of the important role that an effective and efficient schools workforce can play in helping students to achieve their educational potential, initiatives to improve the quality and performance of the workforce are prominent in this reform effort.

Most workforce reforms are being implemented by state and territory governments and non-government school operators — reflecting their responsibilities for delivering schools services. Until recently, the Australian Government served chiefly as a funding provider (to both government and non-government schools).

However, the Australian Government has now become more directly involved in workforce and other policies influencing schooling outcomes. In particular, and underpinned by the Melbourne Declaration and the NEA, much of the current reform effort has been bought under national umbrellas by the Council of Australian Governments (COAG) and its Standing Council on School Education and Early Childhood (previously the Ministerial Council for Education, Early Childhood Development and Youth Affairs).

Accompanying the NEA are several education-related National Partnership Agreements (NPAs) that make additional Australian Government funding available to the states and territories to facilitate and/or reward reform initiatives agreed to be of national significance. Of particular relevance to the schools workforce are the Smarter Schools NPAs, which support initiatives aimed at improving teacher quality, raising student literacy and numeracy outcomes, and addressing educational disadvantage in low socioeconomic-status communities (box 3.2). As part of these particular NPAs, states and territories have agreed to share and collaborate on six reform areas:

- school performance improvement frameworks
- innovative strategies for small and remote schools
- parental engagement in schooling in low SES communities
- extended service models in schools
- literacy and numeracy diagnostic tools
- school leadership development strategies.

Two other national initiatives are also relevant to the schools workforce. The Empowering Local Schools initiative is designed to facilitate greater autonomy for government and non-government schools, allowing them to better respond to the needs of students and the school community. The Australian Government has committed around $480 million over seven years to 2017 to support this initiative.

> **Box 3.2   Smarter Schools National Partnership Agreements**
>
> In November 2008, the Council of Australian Governments (COAG) agreed on three Smarter Schools NPAs.
>
> - The Smarter Schools NPA for Low Socio-economic Status School Communities aims to address educational disadvantage resulting from low socio-economic status. The Australian Government is providing $1.5 billion over seven years (which will be matched by state and territory governments) to support education reform activities in approximately 1700 low socio-economic status schools around the country. Initiatives under this partnership include (but are not limited to) incentives to attract high-performing principals and teachers, adoption of best practice performance management and staffing arrangements and innovative and flexible school operational arrangements.
>
> - Through the Smarter Schools NPA for Literacy and Numeracy, the Australian Government is providing $540 million over four years to facilitate and reward the implementation of evidence based strategies that improve student literacy and numeracy skills. This NPA focuses on quality teaching of literacy and numeracy, stronger school leadership, and the effective use of student performance information to identify where students need support.
>
> - The Smarter Schools NPA for Improving Teacher Quality aims to support states and territories to improve the quality of the Australian teaching workforce. The Australian Government is providing $550 million over five years under this NPA. Broad areas for reform include:
>   – attracting the best graduates to teaching through additional pathways into teaching
>   – improving the quality of teacher training in partnership with universities
>   – developing National Professional Standards for Teachers
>   – national consistency in the registration of teachers to support improved mobility in the teaching workforce
>   – developing the skills and knowledge of teachers and school leaders through improved performance management and professional learning.
>
> There will be evaluations of the outcomes and impact of the Smarter Schools NPAs. The first phase of this evaluation will include an analytical overview of each jurisdiction's policy activity and evaluation efforts.

The More Support for Students with Disabilities initiative is designed to increase the support available to students with disabilities by building the capacity of schools and teachers to better meet student's individual needs. The Australian Government is providing $200 million over two years to support this initiative.

Several other NPAs (Digital Education Revolution, Nation Building and Jobs Plan, Youth Attainment and Transitions, and Trade Training Centres in Schools) and the

National Indigenous Reform Agreement are also relevant to future schooling outcomes.

As well, two new national-level institutions have been established.

- The Australian Institute for Teaching and School Leadership (AITSL) — which in 2010 replaced a previous body, Teaching Australia — was initially tasked by the Ministerial Council for Education, Early Childhood Development and Youth Affairs with developing a set of national professional standards for teachers and principals. AITSL is now progressing related functions, including building a national accreditation system for pre-service teacher education courses linked to the new national standards.

- The Australian Curriculum, Assessment and Reporting Authority (ACARA) — an entity established in 2009 following agreement by the Ministerial Council and COAG — is responsible for developing a national curriculum by 2013, a national assessment program aligned to the curriculum, and a national data collection and reporting program for student outcomes.

In addition to ACARA's data and reporting functions, several other steps have been taken to enhance national level performance assessment (discussed below). The Australian Government has also introduced, or announced, a number of specific schools workforce initiatives — including a proposed national performance bonus scheme for teachers (chapter 6).

Importantly, however, the new national level reform framework is not intended to remove the ability for the states and territories to tailor policy settings to their particular jurisdictional circumstances, or to experiment with different approaches. Reflecting this, the performance targets that the states and territories must meet to receive NPA incentive payments are jurisdiction-specific.

Main types of policy reform

Broadly, the policies in place or in prospect to improve schools workforce arrangements fall into one of three overlapping groups.

First, there are initiatives designed to promote an appropriate balance between the demand for, and supply of, school workers. This group includes policies intended to:

- boost recruitment in areas of shortage — through, for example, scholarships and employment incentives for students with pre-existing qualifications in certain subjects to undertake teaching courses, fast-tracking the pedagogical component of teacher training for some graduates or skilled professionals (via the Australian Government funded Teach for Australia and Teach Next programs), and

boosting the number of Indigenous school workers via specialised training programs and the development of job roles linked to the particular ways in which they can assist the learning of Indigenous students

- increase early career retention — including through accelerated salary progressions, improvements in non-working conditions, stronger classroom support and mentoring, and greater access to professional development

- encourage qualified teachers to fill hard-to-staff positions — through, for instance, allowances, salary adjustments, retraining incentives and incentives relating to future placements (although, as noted in chapter 4, not all of these incentives are openly publicised)

- improve engagement between universities and those responsible for employing school workers, in regard to areas of teacher under and oversupply.

Second, there has been a growing focus on improving the effectiveness and efficiency of the workforce, with a particular emphasis on enhancing the quality and performance of teachers and principals. As well as the agreement by governments to new national professional standards, measures include:

- minimum numeracy and literacy standards for those entering pre-service training

- new pre-service course offerings — such as the University of Melbourne's Master of Teaching course which adopts a 'clinical' training approach

- a lengthening of pre-service training for postgraduate qualifications from one to two years (recently agreed to by the jurisdictions)

- experimentation with different practicum arrangements

- some (often school-level) changes to job design — such as reducing the administrative load on teachers to allow them to concentrate more on face-to-face teaching, and (mainly minor) modifications to the respective roles of principals, deputy principals and senior teachers

- more flexible staffing arrangements to accommodate specialist teaching and to support groups of teachers to plan and deliver programs jointly

- improved performance-management systems and increased pay dispersion to reward quality teaching

- trials of performance pay regimes in Victoria, as well as the previously mentioned national scheme which is to pay bonuses to certain teachers from 2014

- initiatives to build leadership skills, especially for current or aspiring principals

- increased autonomy within some government school systems, with the intention of giving principals and senior teachers greater scope to determine the staffing and operating arrangements that best meet the needs of their students.

Also, the National Disability Strategy (COAG 2011) sets out a range of broad strategies for improving the quality of education provided to students with disabilities — including to better equip teachers with the necessary skills to teach these students (chapter 9). Similarly, the Aboriginal and Torres Strait Islander Education Action Plan sets out a number of actions which aim to accelerate improvements in the outcomes of Aboriginal and Torres Strait Islander children and young people in all locations (MCEECDYA 2011a, 2011b).

Third, and in support of the other reforms, there have been various initiatives to strengthen policy governance and transparency — including through improved data collection and better performance reporting and assessment. Although individual jurisdictions have been pursuing improvements in these areas, allied to the new national reform umbrellas, the extent of national-level performance reporting and oversight has increased considerably. For example:

- the COAG Reform Council has responsibility for assessing jurisdictional performance against the targets set in the education-related NPAs

- ACARA's functions include the facilitation of national student assessments and publication of data on school and system performance (including the My Schools website)

- beyond its standards and accreditation-related functions, AITSL is expected to collect and disseminate data relating to the performance of the schools workforce.

Consistent with the Melbourne Declaration and the NEA, a key objective of these national level governance initiatives is to help ensure that the policy framework is serving to promote equality of educational opportunity and to ameliorate educational disadvantage. In this regard, the Commission notes that the publication of more performance data has a particularly important role to play. As long as such data are soundly based and comprehensive, they will not only be of direct benefit to those responsible for policy making and service delivery, but will help to empower parents and students and thereby provide an additional source of better-informed pressure for improved performance.

There is, of course, considerable overlap between the first two of the above three reform groupings. For instance, as well as boosting the quality of the schools workforce, improvements to professional development and mentoring are likely to aid job matching and recruitment and retention.

Reflecting the flexibility within the new national-level reform umbrellas, the nature and extent of the particular initiatives in the first two broad reform groupings also varies considerably across jurisdictions and individual school systems. For instance, the precise incentives employed to address workforce shortages differ (chapter 4), as do the student–teacher ratios prescribed in awards and enterprise agreements. And Victoria has gone much further than other jurisdictions in providing autonomy to well-functioning government schools (although other jurisdictions have moved in that direction, especially Western Australia). Jurisdictional divergences on such matters as the demand-supply balance and the extent of remoteness and indigeneity, also contribute to policy variation.

3.3   The Commission's assessment framework

While the extensive reform agenda has some important broad strengths (box 3.3), it is too early to fully judge the impacts, given that most of the changes are recent or have yet to be implemented. It is also evident that budget constraints will currently limit the scope for significant new spending initiatives. The Commission therefore focused on identifying cost-effective measures that would:

- build on reforms that are in train or in prospect
- address some problematic initiatives
- deal with matters that have so far received insufficient policy attention.

The remainder of this chapter outlines the assessment framework that the Commission used in this study.

Workforce effectiveness and efficiency

The terms of reference for this study range widely across the demand for, and supply of, the schools workforce; its skills, knowledge and deployment; building Indigenous workforce capability; and matters of policy, governance and regulation. The Commission has assessed these issues within the broader context of the wellbeing of the community as a whole, as required by its enabling legislation. The Commission has therefore taken into account the interests of students, the schools workforce and society more generally.

Box 3.3   Strengths of the current reform suite

For the reasons outlined in the text, it would be premature to come to a firm judgement on the merits of many of the specific components of the current schools workforce reform suite. Nonetheless, in general terms, that suite seemingly has a number of strengths.

The reforms are collectively broad and encompass most of the workforce-related factors that the evidence indicates are important for good student outcomes. And as noted earlier, in focusing heavily on improving the quality and performance of the workforce, the thrust of the reforms is consistent with the reform emphasis in most other developed countries. In fact, the premium on identifying cost-effective means to improve workforce quality and performance is likely to increase in coming years as the expected general tightening in labour markets makes it more difficult to directly address workforce shortages through recruitment and retention policies.

The new reform framework also retains considerable scope for jurisdictions to tailor policies to meet their particular requirements. As well as providing continuity with what has gone before, such jurisdictional flexibility will facilitate policy experimentation and the generation of better evidence on what approaches work best. At the same time, the new national level reform umbrellas and reporting and assessment requirements should help to provide impetus, common direction and discipline to the reform process. In the words of the OECD (Santiago et al. 2011, p. 9):

> The Australian approach combines the development of goals, monitoring and reporting at the national level with local evaluation and assessment practices shaped by jurisdiction-level school improvement frameworks.

It is conceivable that the new national professional standards could constrain jurisdiction-level experimentation and policy tailoring. However, the endorsement of the standards by all of the jurisdictions suggests that any such constraints are likely to be small and/or outweighed by other benefits. In regard to the latter, one consideration is the platform that the new standards are intended to provide for several other reform directions, with the Catholic Education Commission of Victoria (sub. 13, p. 9) observing that the standards for teachers will serve as a reference point for teacher education, registration, professional learning and appraisal, and career structure and remuneration. Similarly, the Association of Heads of Independent Schools of Australia noted that:

> … a national standard of professional practice for principals [will be] valuable in creating an overarching framework for existing leadership models and a common language for dialogue on school leadership issues. Provision of a national clearinghouse of leadership research also supports the professional development of school leaders. (sub. 2, p. 4).

Given the close to unanimous support for the new national standards, the Commission has not subjected the broad approach to further scrutiny in this study. That said, as for other aspects of workforce policy, robust evaluation of the impacts of the new standards, and the surrounding institutional arrangements, will be important. Moreover, as detailed in subsequent chapters, there are some specific aspects of the new standards which the Commission considers to be problematic. These should be addressed along with other gaps and weaknesses in the current suite of reforms.

In seeking to improve community wellbeing, the Commission has been cognisant of both the costs and the benefits of particular schools workforce policies. In particular, the Commission considered whether the policies improved the effectiveness and efficiency of the workforce. More effective education outputs from teachers and other school workers would achieve better student outcomes, and a more efficient schools workforce would achieve a greater level of output from any given level of resource inputs. In essence, the productivity of the schools workforce is its ratio of inputs (teachers and other workers and how they are deployed) relative to outputs (the school education they produce).

In assessing effectiveness and efficiency, the Commission recognised the benefits accruing both to school students (private benefits) and the wider community (public benefits), as well as the costs to each. As discussed in chapter 1, research has shown that the private benefits from education include higher future incomes and rates of employment, while the public benefits can include increased innovation and diffusion of new ideas, greater social cohesion, and lower crime rates. In terms of the public costs, the Commission has been cognisant of the need to adopt a fiscally responsible approach to reform.

Given the considerable difficulties in quantifying these benefits for particular schools workforce policies, this study drew on a large body of previous empirical work on the effects of different policy approaches. This empirical work provides many important insights into approaches that could deliver more cost-effective student outcomes and, just as importantly, approaches that are likely to be ineffectual or costly relative to the benefits delivered.

The work is subject to a range of methodological and other caveats (box 3.4). Accordingly, the Commission also drew on a range of qualitative evidence, and was grateful for the extensive input from inquiry participants.

Equity in educational outcomes

One criterion relevant to an assessment of effectiveness is the extent to which policies achieve equity in educational outcomes, which was a goal set by governments in the Melbourne Declaration.

Box 3.4   Some issues in interpreting the empirical evidence

The factors influencing student outcomes, including the impacts of many of the workforce policies discussed in this report, have been subject to extensive empirical analysis. Indeed, a widely cited synthesis of this body of work (Hattie 2009) brings together more than 50 000 individual studies and provides nearly 150 000 estimates of the impacts of programs, policies or innovations on student achievement.

This large body of empirical work constitutes an important resource for policymakers. However, in drawing on it, the Commission has been cognisant of the array of accompanying methodological and other caveats, including that:

- Not all of the relevant 'outputs' and 'inputs' are measurable. There are extensive data on some indicators of student achievement — for example, literacy and numeracy performance — and also on several of the factors that may contribute to that achievement — such as class size, the qualifications of teachers and student SES. But as the Australian Education Union (sub. 28) observed, many of the learning and other benefits imparted by school education cannot be easily measured. Nor can key influences on student performance such as the general aptitude of teachers, the strength of leadership within a school, and the learning support provided by parents to their children.

- Even for those inputs and outputs that can notionally be measured, the basis for doing so is often contested. The best way to measure teacher performance (chapter 6) or educational disadvantage (chapter 9) are cases in point. And some have questioned whether the commonly used measures of student numeracy and literacy pay sufficient regard to the everyday contexts in which numeracy and literacy skills are employed and how those contexts have been changing over time.

- Caution is required in translating empirical outcomes across teacher or student populations. For example, as alluded to by Hattie (2009), successful in-school or classroom innovations are likely to come from more innovative teachers and principals. Hence, the benefits may not be as great in 'regular' classrooms and schools. Similarly, Lattimore (2007) cautioned that the impacts of additional years in school on labour market participation are likely to be smaller for disengaged students who currently leave early than for those who already complete Year 12.

- Even among high-performing education systems the considerable diversity in workforce arrangements reflects differences in such things as culture, custom and practice, and the nature of the broader education system and funding arrangements. Hence, while looking at overseas approaches can frequently be instructive, it cannot automatically be presumed that the findings of empirical evidence from one country (often the United States) will translate to another.

- There is typically little attention given to the costs attaching to the policy approaches concerned, and hence to relative cost-effectiveness.

Accordingly, even empirical evidence that is ostensibly robust must be closely scrutinised, set against other empirical and qualitative evidence, and assessed for consistency with the outcomes suggested by a conceptual analysis of the issue at hand.

In defining equity, it is important to distinguish between the aim of all students having equal opportunity to realise their educational potential irrespective of their individual, economic or social circumstances, and that of equality of student outcomes in terms of levels of achievement. In terms of the latter, the intrinsic abilities of students vary considerably. This means that even if high quality education were to be equally available to all students, there would still be variation in achievement levels.

The Commission has focused on promoting equality of educational opportunity. Its position is consistent with the constructs of equity adopted by the OECD and the recently completed Review of Funding for Schooling. Further, the OECD construct encapsulates the notion of inclusion — 'ensuring a basic minimum standard of education for all' (OECD 2008, p. 2). In countries such as Australia with well-developed schooling systems, success in promoting a high level of equality in educational opportunity should ensure that the large majority of students not only meet basic minimum standards, but indeed exceed them. Hence, the practical focus should be on assessing whether policies are achieving higher standards by offsetting educational disadvantage that can stem from a student's individual, economic or social circumstances. As the Review of Funding for Schooling observed, a commitment to equity in schooling means:

> … ensuring that differences in educational outcomes are not the result of differences in wealth, income, power or possessions … (Gonski et al. 2011, p. 105)

Comparing the outcomes of different student groups is of course very important in this context. For example, while the intrinsic abilities of Indigenous students will vary across the spectrum of achievement, as with any cohort of students, their significantly lower average level of educational achievement is testimony to the profound disadvantage that many of them experience (chapter 9).

More generally, as is widely recognised, schools and schools workforce policies need to be accompanied by broader policy actions to help tackle the sources of educational advantage. Thus, initiatives that target health, family and community-related impediments to the learning outcomes of disadvantaged students have important roles to play in promoting equality of educational opportunity.

Finally, and very importantly, giving prominence to the key role of schools and schools workforce policies in ameliorating educational disadvantage should support, rather than detract from, the objective of promoting high-quality learning outcomes for all students. A well-functioning schooling system should be able to identify and assist students at risk of failing to realise their potential, irrespective of their background or family circumstances or where they sit on the ability spectrum.

- Notable in this regard is that the recent declines in the literacy and numeracy performance of Australian students in the Program for International Student Assessment tests have not been concentrated in the lower performing end of the student population. Indeed, in the case of numeracy, the performance decline seems to have been mainly in the upper half of the ability spectrum (Ryan 2011).

- As elaborated on in chapter 9, workforce policy initiatives that offer the prospect of better outcomes across the whole of the student population will sometimes promise the biggest gains for students from disadvantaged backgrounds.

That said, the Commission remains very aware of the pressing need to directly improve the outcomes for certain groups, particularly Indigenous students.

Quality teaching

For very good reason, schools workforce reforms in Australia and around the world have a strong focus on improving the quality of teaching. Indeed, an often cited observation on what underlies the success of the best performing schools across the globe is that 'the quality of an education system cannot exceed the quality of its teachers' (McKinsey and Company 2007, p. 16).

Quality teaching entails both a professional dimension (relating to content and pedagogy) and a personal dimension (spanning a range of attributes and capabilities). As noted by Banks (2010, p. 9) it can, in various ways, have a significant impact on the learning outcomes of students.

> A good teacher will not only effectively impart required knowledge to students, but also enliven their interest in the subject matter and in learning itself, … help elevate the aspiration of their students, and help them shape their career goals and choices, based on a good understanding of their ability.

In contrast, poor teachers can be deleterious for students' progression, especially for those experiencing learning difficulties or coming from a background with minimal encouragement and support for learning at home. Moreover, these impacts — positive or negative — can compound over time. In the case of poor quality teaching, the effects of even a one-off experience can persist for many years (Sanders and Rivers 1996).

Yet while critical for learning outcomes, fully understanding what constitutes quality teaching remains an ongoing challenge. In part this is due to the great diversity in the ways that individual students learn. Mapping the professional and personal capability dimensions of teaching is also complex and context-specific. For example, the importance of teachers having deep subject knowledge is frequently

emphasised in teaching mathematics (Australian Association of Mathematics Teachers, sub. 7; Jan Thomas, sub. 3). And the conception of quality teaching extends to factors such as the quality of teacher–student and teacher–parent relationships, and the contribution made to the performance of fellow teachers and to leadership within a school.

Even so, there are some recurring themes in the research evidence and submissions to this study on what makes for quality teaching.

Synthesising the available research evidence, Masters (2007) concluded that highly effective teachers are those who:

- create classroom environments where all students are expected to learn successfully

- have a deep understanding of the subjects they teach

- identify where each of their students are up to in their learning, and then direct their teaching to the individual needs and readiness of their students

- provide continuous feedback to all students about their learning

- reflect on their own practice and strive for continuous improvement.

Other researchers have summed up the best teachers as those 'who challenge, who have high expectations, who encourage the study of their subject, and who value surface and deep aspects of their subject' (Hattie 2009, p. 116). Of particular note in the context of addressing educational disadvantage is the finding that quality teachers set appropriately challenging goals for students (Hattie and Clinton 2008; Smith et al. 2008).

Significantly, these sorts of teacher skills and behaviours were also prominent in the commentary on quality teaching by the Victorian Student Representative Council (sub. 24, p. 2). Among other things, the council said that from students' perspective, high value is placed on teachers who:

- are sensitive to the different learning approaches and needs of individual students

- relate to students as 'partners' in their learning process

- provide students with the freedom and responsibility to explore a range of learning options to cater to a range of learning styles

- have expectations of both students and themselves that spring from their passion to see students succeed in life, not just in school

- hear and respond to feedback from both students and other teachers.

The collegial dimension to teacher quality was also emphasised by AITSL (sub. 39, p. 8), which observed that quality teachers are able to 'provide models and leadership for less experienced and less capable colleagues and in so doing help raise the overall performance of the teaching workforce'.

In light of the above, in framing its analysis and recommendations, the Commission has been particularly mindful of the critical role of quality teaching and the importance of deploying quality teachers effectively across schools. A number of its recommendations are directed at improving the framework in which detailed policy measures — including those related to teacher quality — are determined and evaluated. And some others are directed at reforming the systems and processes in place to more directly enhance teaching (and leadership) quality.

The Commission has also recognised that the effective deployment of the non-teaching workforce can improve quality teaching, by enhancing the work of teachers and by allowing teachers to concentrate on their professional activities. It therefore examined ways in which schools could be assisted to innovate in how the workforce is utilised in their particular school.

Delegation of responsibilities to the appropriate level

In Australia, policy responsibility for schools and for the schools workforce has traditionally been held by state governments, with operational responsibility being exercised by government and non-government employing authorities. The Commonwealth primarily provided additional funding to achieve defined goals, sometimes developed jointly with other jurisdictions, other times on its own.

Increasingly, in some particular areas of school and schools workforce policy, there are now national approaches. They include the development of high-level goals for schooling in Australia, curriculum setting, disclosure requirements, and professional standards for teachers and school leaders. At the same time, there is a noticeable shift towards providing school leaders with greater autonomy to manage their own schools (chapter 8).

A generally accepted rule for designating responsibilities for providing public services, called the subsidiarity principle, is that the responsibility for a particular function should reside at the lowest practicable level, because the rationale is that decisions that are made on a lower level tend to be based upon a greater knowledge of the needs of those affected (CEPR 1993; PC 2005a). Additionally, designation of responsibility at a lower level can facilitate worthwhile policy experimentation.

That said, in certain circumstances there are also benefits from assigning responsibilities to a higher level. For instance, economies of scale can often be

exploited and transaction costs created by diversity in rules or regulations can be reduced. Furthermore, achieving certain public interest and equity objectives can require higher level oversight — and decision-making responsibility — at either state or Commonwealth level.

In undertaking this study, the Commission has considered the relative magnitudes of these issues when determining where particular decision making powers should reside. For instance, the Commission has concluded that much of the decision making power with regards to the design of performance appraisal processes would be best placed at the school level, given the importance of having processes that are relevant to a school's individual context (chapter 6). At the same time, the Commission has concluded that there is an important role for jurisdictional educational authorities to provide support in relation to overall policy development, leadership, professional development and the evaluation of policy research given public interest, issues of accountability and the economies of scale present in these areas.

The Commission has also recognised that there is widespread support for the new national professional standards for teachers, and considers that, as they are unlikely to restrict jurisdictional policy experimentation, this will provide a useful reference point for other reforms. Furthermore, it considers that labour mobility would be enhanced through national professional registration and a national curriculum would limit the disruption that students currently face when they move between jurisdictions.

Other specific assessment considerations

In making its assessments, the Commission has been mindful of several other factors.

- Because of the heterogeneity of the schooling system, government-initiated workforce policies will have differing levels of 'reach' across the system. Government policies affecting overall workforce demand or pre-service training are likely to have implications for all schools. But for matters such as remuneration and school autonomy, approaches and outcomes in non-government schools will be influenced by considerations and imperatives that are often beyond the direct control of governments.

- The effectiveness of particular reforms will often depend heavily on complementary initiatives. Thus, efforts to improve teaching quality will call for action on a range of fronts including in regard to pre-service training and professional development, performance management and remuneration

arrangements. Also the capacity to address workforce shortages and attract, develop and retain a high quality teaching workforce will clearly depend heavily on overall school resourcing and its distribution — the subject of the recently completed Review of Funding for Schooling.

4   Addressing imbalances in teacher supply and demand

> **Key points**
>
> - There are ongoing imbalances in the supply and demand of different groups of teachers.
>   - There have been persistent surpluses of general primary teachers in metropolitan areas.
>   - At the same time, shortages persist in certain secondary subject disciplines, and more generally in rural, remote and Indigenous schools. Some low socioeconomic status schools in urban areas are also difficult to staff. And there are reports that special-needs teachers are in short supply.
> - Many of these imbalances — some of which can compromise student outcomes — seem likely to persist for some time, although future magnitudes are difficult to predict and will be affected by a number of factors.
> - Various measures are currently used to address these imbalances, including the use of scholarships and other incentives for individuals to enter teacher training. However, there needs to be more Australia-specific evaluation on the effectiveness of the broad approaches used.
> - The Commission considers that there are some changes to policy settings that could improve the demand–supply balance.
>   - The Australian Government should phase out general university fee repayment discounts for pre-service teacher training, and adopt a more targeted approach to dealing with shortages.
>   - The Australian Institute for Teaching and School Leadership should revise its proposed accreditation standards for initial teacher education programs so that the discipline-specific knowledge required to enter a postgraduate teaching course can be interpreted more flexibly. In particular, skills learnt in highly-related degrees and professions should be considered as evidence of sufficient content knowledge.
>   - The Australian, state and territory governments should encourage the trialling of measures that enable principals to use remuneration-based incentives to fill hard-to-staff positions. Phase Two of the Empowering Local Schools initiative should be used as one means of achieving this.

As noted in chapter 2, there are long-standing demand and supply imbalances of some school workers. The factors causing these imbalances are multifaceted, and their impacts differ substantially across jurisdictions and (to a lesser extent) across school levels and sectors. Thus, in seeking to achieve a better balance in the demand and supply of school workers, multiple and sometimes tailored responses are required.

This chapter examines current and potential initiatives to address workforce imbalances. The focus is on teachers, reflecting both their central role in student learning outcomes and the fact that it is in teaching where the most significant imbalances currently exist. While some participants also highlighted problems with recruiting school leaders, these issues are considered separately in chapter 8. Matters relating to the non-teaching workforce are discussed in chapter 7.

4.1 Current and expected imbalances

Surpluses of general primary teachers

To varying extents, most jurisdictions have large numbers of qualified teachers on waiting lists for positions at (mainly) urban primary schools. For example, of the 33 000 individuals on waiting lists for permanent positions in NSW, about 19 000 are qualified primary teachers.[1] Similarly, about three-quarters of the estimated 16 000 individuals on waiting lists in Queensland were looking for employment in the primary sector (TEIT 2012). These surpluses have continued for a number of years — notwithstanding growing student enrolments and falling average class sizes.

Despite these surpluses, large numbers of students continue to graduate as general primary teachers. Of the approximately 16 000 domestic students completing initial teacher training courses each year, close to half are expected to graduate with a primary education degree.[2] This, combined with a recently low separation rate for teachers in most states and territories (Department of Education — Tasmania, sub. 33; Department of Education and Communities — NSW, sub. 14; Department of Education and Training — Queensland, sub. 40), has meant that surpluses of general primary teachers have either been maintained, or increased.

A persistent oversupply of workers can be indicative of either relatively generous remuneration or favourable working conditions in the context of the work involved.

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[1] Several participants suggested that some individuals may place themselves on waiting lists only for a back-up employment option. Thus, surpluses may not be as large as the numbers suggest.

[2] This estimate is based on the portion of total commencing education enrolments that are made up of primary-only degrees.

The large surpluses of primary teachers may also suggest that many individuals are more attracted to teaching younger children, rather than older age groups in secondary schools, where more subject-specific knowledge is required and classroom management can be more challenging.

The influence of such preferences on teacher supply is likely to be even greater under current teacher awards and agreements, where pay is largely the same across different parts of the profession for a given level of experience. In general, salaries are not adjusted to encourage individuals to seek employment in those parts of the teaching profession where there is greatest demand.

As well, it seems likely that some students would have enrolled in courses without a reasonable understanding of their employment prospects. In this regard, insufficient information may have magnified the current surpluses.

Subject-based shortages

At the same time as there have been surpluses of general primary teachers in metropolitan areas, there have been persistent shortages of suitably qualified teachers in secondary school subjects such as mathematics, science, technology and languages, including English, as well as a lack of teachers able to instruct special-needs students. Some participants highlighted other parts of the workforce with shortages, including teachers with particular skills that are considered important for educating disadvantaged students (chapter 9).

Some of the subject-based shortages are estimated to be substantial. For example, about three-quarters of mathematics department heads surveyed by Harris and Jensz (2006) experienced difficulty recruiting suitably qualified teachers. The latest Staff in Australia's Schools survey estimated that, at the start of the 2010 school year, there were 400 unfilled positions for mathematics teachers in secondary schools and that 8 per cent of the schools had such a vacancy (McKenzie et al. 2011). There were also notable shortages in English (350 positions, 8 per cent of secondary schools), science (180 positions, 7 per cent of schools) and information technology (160 positions, 2 per cent of schools). It should be noted, however, that the estimates from the Staff in Australia's Schools survey have wide confidence intervals, and so should be interpreted with care.[3]

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[3] For example, the 95 per cent confidence interval for the portion of schools with unfilled English teaching positions is between 2 per cent and 14 per cent. These estimates cannot be compared with the previous (2007) Staff in Australia's Schools survey because that study did not report population estimates due to a low response rate.

There is also some evidence that Australian students are more likely to be enrolled in schools with a lack of mathematics and science teachers than students in other OECD countries (OECD 2012b). In particular, in the 2009 Program for International Student Assessment, around 30 per cent of 15-year-old Australian students were enrolled in schools whose leaders reported that a lack of qualified mathematics teachers was hindering instruction. The figure for science teachers was around 24 per cent. Conversely, the OECD average for mathematics and science was about 18 per cent for each.

Persistent subject-based shortages have required some teachers to teach subjects in which they are not qualified. A large body of anecdotal evidence suggests there is a reliance on out-of-field teachers in particular secondary subjects (Australian Education Union, sub. 28; Catholic Education Commission of Victoria, sub. 13; Dr Linda Darby, sub. 32).

While it is difficult to determine how widespread the occurrence of such 'out-of-field' teaching is (Australian Association of Mathematics Teachers, sub. 10; Australian Education Union, sub. 28), a range of surveys indicate that somewhere between 15–25 per cent of teachers in some subjects are not fully qualified for that role (Dr Linda Darby, sub. 32). As outlined below, various education authorities are currently undertaking efforts to better measure the extent of out-of-field teaching.

In some subjects — most notably mathematics and science — the magnitude of the shortfalls has apparently increased over time (Cairns 2007; Centre for the Study of Higher Education 2006; Eacott and Holmes 2010; Stokes and Wright 2007). The recent Staff in Australia's Schools survey estimated that more than half of teachers in information technology and lower secondary mathematics courses did not have a three-year qualification in their particular subject. The equivalent figure for upper-secondary physics classes was just under 50 per cent (McKenzie et al. 2011).

Subject-related shortages typically occur in cases where the relevant subject-specific knowledge can attract higher remuneration outside of teaching. This arises primarily because pay schedules outlined in teacher awards and agreements do not reflect the distinction between pedagogical and subject-specific skills.

As suggested by the Grattan Institute, treating teaching as a single labour market, as typically occurs under existing arrangements, has contributed to some of the current shortages (and, indeed, surpluses) of teachers.

> Centralised agreements also fail to recognise that there are numerous labour markets for school teachers, with differences stemming from subject and year level taught. Treating these labour markets as homogenous creates both surpluses and shortages in particular areas. (sub. 30, p. 3)

A number of other participants made similar points (Australian Mathematical Sciences Institute, sub. 31; Department of Education and Early Childhood Development — Victoria, sub. DR95; Teach for Australia, sub. DR89), as did the following:

> As long as there is a perception in the community that teaching is not as rewarding a career as those in the medical, legal and business disciplines and that working conditions are not attractive either, it will not be possible to attract the 'best and brightest' to the profession in the numbers that are required. Especially in fields demanding skills in mathematics, science and in some of the more technical areas where wages and working conditions are more attractive in non-teaching roles. (Independent Education Union of Australia, sub. 12, p. 7)

> Unfortunately the teaching profession is often not viewed as a profession of choice due to its lack of prestige and low salary expectations. This is particularly the case in the areas of Maths and Science … where higher paying occupations are available elsewhere. (ACT Council of Parents and Citizens Associations, sub. 17, p. 11)

> The level and structure of remuneration is important to the retention of teaching staff. A number of teachers leave the profession to take up industry specific roles to seek greater remuneration. (Queensland Catholic Education Commission, sub. 20, p. 5)

Such disparities in remuneration will tend to be exacerbated when demand for the relevant subject-specific skills exceeds its supply across the broader economy. In many cases, education authorities' budgets are not able to match the resulting increased remuneration offered for the skills in other professions (chapter 2).

For subjects like mathematics and science, overall graduate numbers have been falling, as evidenced by the decline in the proportion of students taking these courses in Year 12.

> … data show that there has been a dramatic fall in the percentage of students studying science in Year 12 from a height of 94.1% in 1992 to a low of 51.42% in 2010. (Goodrum, Druhan and Abbs 2011, p. 10)

> The percentage of students completing the advanced and intermediate Year 12 mathematics courses has continued a slow decline. (Jan Thomas, sub. 3, p. 3)

Students' perceptions that mathematics is difficult to master and irrelevant in the workforce are commonly suggested as reasons for the decline in enrolments for that subject (McPhan et al. 2008). Students' experiences of particular subjects in primary school may be a significant influence on such perceptions. Means of improving the teaching of these subjects at primary level are discussed in section 4.4.

Geographic shortages

There have been ongoing difficulties filling teaching positions in a range of subjects and positions in rural and remote communities (including Indigenous communities). Despite the recruitment difficulties also experienced by some disadvantaged urban schools, principals in the major population centres generally face less problems hiring teachers. For example, it has been estimated that 39 per cent of metropolitan secondary school principals had a major or moderate difficulty filling staff vacancies in 2010, while the same measure for provincial and remote schools was 42 per cent and 66 per cent respectively (McKenzie et al. 2011).

The working conditions for teachers in rural, remote and low socioeconomic status (SES) schools are generally considered to be more challenging than for other schools. For example, in rural and remote areas, teachers have access to fewer educational and personal amenities and can experience greater social isolation and less satisfactory living arrangements. Access to support networks and professional development can also be more difficult.

For many individuals, the sort of difficulties outlined above means that, in order to work in low-SES, rural and remote schools, the attractiveness of such positions would need to be enhanced. In particular, the challenges outlined above would have to be offset by greater job satisfaction — such as from working under a more innovative leader and making a greater contribution to improving children's lives — and/or more attractive employment conditions, such as higher remuneration and a good standard of school infrastructure and housing arrangements.

In seeking to help overcome these shortages, most jurisdictions enable schools to employ individuals who are not registered to teach (but have still satisfied the usual background checks). Yet despite the availability of this option, there has been an apparent narrowing of the subjects offered in some rural and remote schools due to a lack of staff (ASPA 2006; McKenzie et al. 2008).

Predicted future imbalances

The state and territory education authorities, in most cases in partnership with their respective non-government counterparts, undertake ongoing workforce planning activities. Among other things, this can involve estimating the future balance between the demand for, and supply of, teachers.

The picture for surpluses of general primary teachers varies somewhat across the states and territories. For example, the NSW Department of Education and Communities (sub. 18) predicted that even were resignation and retirement rates to

double, supply would still be sufficient to meet the future demand for teachers in government primary schools until at least 2018. Conversely, in Victoria, forecasts suggest that surpluses of primary teachers will continue, but the gap between demand and supply is predicted to fall to just over 100 teachers by 2013 (DEECD 2009d). Similarly, the surpluses of primary teachers in Queensland and Western Australia are expected to reduce over coming years (Department of Education — Western Australia, sub. 45; Department of Education and Training — Queensland, sub. 40).

However, there is a concern that surpluses may be greater than forecast due to a new Australian Government demand-driven funding arrangement for higher education. Under this initiative, from 2012 universities will be able to determine the number of students that they admit to most undergraduate courses. Thus, the Australian Government will no longer directly regulate this aspect of a university's operations and the Commonwealth Grant Scheme funding for these places will not be limited. This issue is discussed further below when examining options to address workforce imbalances.

Projections made by school operators generally suggest that shortages of teachers in particular secondary subjects will continue in the foreseeable future. In some cases, mainly owing to the older age profile of many secondary teachers, the shortfalls are expected to increase (Dr Linda Darby, sub. 32).

The Commission observes that there are clearly numerous uncertainties that can bear on the accuracy of demand-supply forecasts (box 4.1). The Australian Education Union (AEU, sub. 28) among others (Australian Mathematical Sciences Institute, sub. 31; CPSU/SPSF Group, sub. 6; Jan Thomas, sub. 3) questioned the robustness of current planning and forecasting processes and by implication the numbers emerging from them.

It is always possible for workforce planners to refine current projections and undertake sensitivity analyses so as to get a better handle on any relevant uncertainties. There is also likely to be scope to improve the relevant datasets used for workforce planning. In this regard, the Commission notes the current development of two national databases of teachers by the National Teacher Workforce Dataset Working Group — the National Teaching Workforce Dataset and the Longitudinal Teacher Workforce Study. In addition, there are current efforts by most state and territory education authorities to substantially improve the information available on current and potential teachers for the purposes of workforce planning, including through developing a more accurate understanding of out-of-field teaching (Department of Education — Tasmania, sub. 33; Department

of Education and Children's Services — South Australia, sub. 35; state and territory Smarter Schools National Partnerships 2011 Progress Reports).

Box 4.1   Uncertainties in predicting the future workforce balance

On the demand side, while the number of teachers required will increase, the extent of this increase is subject to some uncertainty.

- As noted in chapter 2, there is predicted to be a net increase of 900 000 students in Australian schools from 2010 to 2022, with an associated increase in the demand for teachers. However, accurately forecasting the precise magnitude of any increase in enrolments relies on assumptions relating to such factors as grade progression ratios, birth rates and immigration levels.

- Any continuation in the downward trend in student-teacher ratios (STRs) would result in an additional demand for teachers. But the precise future trajectory of STRs is difficult to predict beyond the period for which existing teacher awards and agreements apply. As an illustration of how changes in STRs over the long term could affect supply, if the average STR decreased from the current level of 13.9 to 12 by 2022, the expected number of student enrolments at that time would require 50 000 more school workers than if the ratios remained unchanged. Conversely, if the average STR increased to about 17.5, no increase in school workers would be necessary to cater for currently forecast student enrolments.

- A requirement that by 2014 all preschools and long day care centres employ a qualified teacher will increase the demand for teachers with certain skills. However, the impact on the demand for individuals eligible to teach at the primary level will depend on how many of such teachers are also qualified to teach early childhood.

On the supply side, the common view is that there will be an increase in the number of age-based retirements from the profession over the coming decade (ISCA, sub. 18; NCEC, sub. 7). However, pressures arising from workforce ageing will be variable across the jurisdictions (NSW DEC, sub. 14; SA DECS, sub. 35). Moreover, recent events have shown that the timing of future retirements could be heavily influenced by the state of the wider economy (WA Department of Education, sub. 45).

Also, while the average number of tertiary education course completions has been relatively stable in the past 5 years, some planned government policies have the potential to increase completions.

- There is a widespread expectation that, without other changes, the lifting of the cap on the number of Commonwealth-supported places that can be offered by universities from 2012 will result in substantially more primary education graduates (NSW DEC, sub. 14; Queensland DET, sub. 40).

- The Australian Government has allocated extra funding for pre-service early childhood course places in response to the new qualification requirements in that sector. Insofar as some of the extra funding is for combined early childhood-primary degrees, this could increase the number of primary qualified teachers.

More broadly, overlaying any schools-specific pressures will be the impact of the tightening of the general workforce due to population ageing.

While such enhancements in data collection are potentially useful, they are unlikely to change the broad picture that will condition workforce policy-making in the next few years — namely, that some significant imbalances will persist in most jurisdictions and school systems in the short to medium-term at least. Thus, specific policy responses will be needed to address workforce imbalances.

4.2   Costs of imbalances

While the future extent of imbalances are subject to some uncertainties — and despite an oversupply of teachers having some obvious benefits for employers — both surpluses and shortages can impose considerable costs.

In the case of surpluses, costs can be imposed on the Australian Government (and hence the wider community), which subsidises the price of 'underutilised' pre-service training. School systems also bear a cost where there is pressure to provide practicum training to a greater number of prospective teachers than will make use of that experience. Furthermore, these costs assume greater significance in the context of ongoing shortages of other groups of teachers. That is, within the confines of teacher education, there is an apparently large opportunity cost of the funds being used to train teachers who may never work in the schools sector rather than being applied to overcome shortages elsewhere. Also, teaching graduates who do not find employment in the education sector will bear some costs if their incomes and work satisfaction are lower than would have otherwise been the case, notwithstanding the general benefits available to those who undertake tertiary studies.

On the other hand, shortages of teachers can pose other problems, notably that student learning outcomes can be compromised — either by schools reducing the range of subjects available or by resorting to out-of-field teaching.

Not all out-of-field teaching is necessarily negative to the teacher or student. Some out-of-field teachers are genuinely interested in the subject matter (Dr Linda Darby, sub. 32), and may have considerable relevant subject knowledge through other professional experience. And for those teachers without the required amount of subject knowledge, they may be able to build this through on-the-job experience and participation in professional development, making them appropriate candidates for some of the retraining schemes offered by school operators (see section 4.4).

Even so, teaching out of field is widely considered to have a negative influence on student learning in most cases, and especially for those from disadvantaged backgrounds. Additionally, there are stresses placed on some of the teachers who

are required to teach outside their own subject discipline, as well as on principals and some other school workers. And given that many teachers who teach out of field are apparently relatively inexperienced, the additional pressures placed on them may be a contributor to early-career resignations (McConney and Price 2009).

4.3   Measures to address surpluses

Reducing surpluses of general teachers has to date received much less policy attention than the amelioration of shortages (see below). In part, this is perhaps because the costs are not as evident, and the risk that such policies could 'overshoot the mark'. In this context, Deakin University (sub. 24) argued that targeting surpluses is particularly difficult due to the uncertainties associated with future government policy and the state of the wider economy.

Moreover, and as noted above, some jurisdictions are expecting the size of their teacher surpluses to attenuate over time. Additionally, there are likely to be some factors that further constrain future supply, including increased entry standards (whether in place or in prospect), the general difficulty associated with securing practicum places, and the expected additional tightening of the wider labour market due to population ageing.

Engagement with the universities

As is the case with most university courses, the main employers of graduates of teacher education programs have little control over the funding and regulation of teacher education courses. Rather, the Australian Government has these responsibilities.

As a result, efforts to reduce surpluses have involved engagement by state and territory education authorities, as well as some non-government school operators, with their relevant universities on matters such as the number of course places offered. The arrangements for such engagement vary across the jurisdictions, with some states (such as Victoria and South Australia) bringing together the universities and employers under the auspices of a working party, while others seemingly converse on a more ad hoc basis.

Feedback from study participants indicated that some universities are more willing to participate in these sorts of processes than others. Further, it is clear from the ongoing nature of some surpluses that, even where engagement does seem to occur on a constructive basis (such as in Victoria), the results have been mixed.

Universities and employers have different incentives regarding the total number of course placements. In particular, universities are in the business of meeting demands from students, not in providing a contract training service for employers. Though the demand from employers and hence the prospect of securing a teaching job would influence course demand, the nexus will not necessarily be tight or immediate. Some universities could also see courses such as education as low cost, high volume sources of revenue, and hence have an incentive to enrol a high number of students in these programs.

Restrict course places in surplus areas

Under the new demand-driven funding arrangements for higher education, the Australian Government can influence the number of course places offered in particular universities or regions. Specifically, the Government can specify that a course is a 'designated course of study', enabling it to allocate the number of Commonwealth supported enrolments for that course system-wide. Alternatively, the Government has the option of specifying the number of Commonwealth supported places through its three-year funding agreements with individual universities.

During the negotiations for the first round of agreements (2012–2014) the state and territory governments brought to the Australian Government's attention the issue of primary teacher surpluses. While opting at this stage not to limit general teacher education courses through designation, the Minister for School Education indicated in the second reading speech for the legislation an intention to closely monitor areas of oversupply.

> The government will be monitoring demand and supply for graduates in all disciplines in the early years of implementation of the new funding system. The bill ensures the government has the capacity to respond to any new skill shortages and, if necessary, to the oversupply of graduates in particular areas. (Garrett 2011b)

The Government did agree to declare undergraduate medical degrees as designated courses. The justification for this decision appears to be that any increase in medical students would put further strain on an apparently already overburdened clinical training system (box 4.2). Similar issues apply to the education system, in particular, the availability of high quality practicum, and the cost to schools of its provision.

Decisions on whether to designate a course of study are made by the Minister for Education based on advice and recommendations provided by DEEWR. In the case of education, the Commission considers that this process should be informed by advice from the states and territories, along with non-government school systems

and operators. However, given the nascent nature of the demand-driven funding arrangements, it would be premature to propose any changes to them until they have had a chance to play out.

Box 4.2   Clinical training in the medical profession

To meet accreditation standards, medical course providers must ensure that their students complete a minimum amount of clinical training.

Reflecting the diversity of the medical profession, the arrangements for such training vary widely. Broadly, most training occurs in public hospitals and practices, and is organised through arrangements between education and health service providers. As occurs with teaching practicum, the Australian Government separately funds the universities for the provision of clinical training. Traditionally, universities relied on the goodwill of, and partnerships with, public hospitals to provide such training. However, health providers are increasingly charging universities for providing this service.

It is widely recognised that in all jurisdictions there are an insufficient number of clinical training places to accommodate the number of medical students. As a result, the Government has declared medicine a designated course of study to 'ensure adequate clinical training places and internships' (Dow 2011, p. 10).

Restrict access to practicum in surplus areas

Some participants proposed that state and territory education authorities should control course places by limiting universities' access to practicum, which each student must complete as part of their pre-service teacher education (chapter 5). While this approach would not preclude students from completing their practicum requirements in the non-government sector, it would presumably limit the overall number of placements and raise the cost to universities of providing course places.

The Commission understands that state and territory education authorities have not previously sought to restrict course places in this manner. A potential reason for this inaction may be that the state and territory governments — as the main employer of the schools workforce — consider that the benefits of surpluses outweigh the costs. In particular, surpluses can provide a buffer against future decreases in supply. This would be particularly relevant if future supply is expected to be constrained by such factors as increased entry standards and any additional tightening of the wider labour market due to population ageing. Another reason for inaction could be that the costs of surpluses are spread over a number of parties, and that decisions to provide practicum placements are often taken at the school level.

Given that school leaders are in the best position to make judgements concerning their current resources and capabilities, decisions about practicum should continue to be made at the school level.

Also, there are concerns that if state and territory governments sought to restrict practicum in this way, such a blunt approach — if it had its intended effect — could potentially exacerbate current shortages of teachers in other parts of the workforce. Restricting practicum might also unfairly disadvantage those students who at the time of enrolling in their courses were unaware of any surpluses (section 4.1). In any case, with even greater moves to school autonomy, this lever will become increasingly ineffectual (Perpitch 2011; WA Auditor General 2011).

Chapter 5 considers the scope, and potential measures, for improving the effectiveness of practicum programs in Australia.

Raise course entry standards

As outlined in chapter 5, new national accreditation standards for pre-service teacher training will require that candidates have literacy and numeracy skills that are equivalent to the top 30 per cent of the population. The Commission considers that this measure is inherently desirable as a means of raising the quality of the teaching workforce.

Raised entry standards may also result in a reduction in the number of students who enrol in courses that have a surplus of teachers. Equally, there is a risk that such a broad approach could exacerbate current shortages of teachers.

The outcomes of this reform should be closely monitored for its impact on both teaching quality and graduate numbers across the profession (in the latter case, to assess whether such a broad approach is exacerbating teacher shortages or ameliorating surpluses). Both issues could be factored into future decisions on whether the entry standard should be altered.

Pricing of degrees

Another strategy for managing surpluses could be to increase the costs of particular education degrees. The Australian Government determines the maximum amount that universities can charge students within broadly defined 'contribution bands' (table 4.1). At the same time, the Government also offers fee-repayment discounts to students undertaking particular degrees. Recent graduates of teacher education courses can receive a discount of up to around $1 600 from their annual university

fee-repayment liabilities if they are employed in the teaching profession, irrespective of where, or what subject, they teach.[4] This initiative emerged from the Review of Australian Higher Education (Bradley Review, Bradley et al. 2008), which concluded that stimulating demand via ex post discounts would be preferable to keeping education on the list of national priorities. This was because the lower price cap associated with national priority degrees was apparently resulting in universities scaling down their course offerings.

Table 4.1   **2012 student contribution bands and ranges**

Contribution band	Subjects[a]	Contribution range[b]
National priorities	Mathematics, statistics and science[c]	$0 — $4 520
Band 1	Humanities, education, nursing	$0 — $5 648
Band 2	Computing, engineering, agriculture	$0 — $8 050
Band 3	Law, medicine, economics	$0 — $9 425

a Except for the national priorities, only some courses are included for illustrative purposes. **b** Per equivalent full-time student load. **c** The Australian Government has indicated that mathematics, statistics and science courses will be moved to Band 2 in 2013.

Source: DEEWR (2012b).

Graduates of mathematics and science degrees receive a separate, similarly-sized discount if they are employed in certain professions, including teaching. As well, recently graduated early childhood education teachers receive a discount from their fee-repayment liabilities, with an extra loading for those employed in remote areas.

Removing the fee discounts for graduates of teacher education courses is unlikely to have a large impact on supply. Recent reviews have found that demand for university courses is not highly responsive to contribution amounts under the current fee arrangements (Bradley et al. 2008; Lomax-Smith, Watson and Webster 2011). Further, in an environment of ongoing surpluses in some parts of the workforce, the provision of the same discount to nearly all teachers does not appear to be the best use of scarce education funding. Rather, measures that are targeted at parts of the workforce with a shortage of teachers are likely to provide more cost-effective outcomes.

Hence, the Australian Government should phase out fee repayment discounts for graduates of most teacher education programs. Over the longer term, the Commission estimates that this would save in the order of $50 million per year.[5]

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4   This discount is available for students graduating after June 2009, and can only be claimed for the first 260 weeks worked in the teaching profession.

5   This estimate is based on an attrition rate of 25 per cent for teachers in their first five years in the profession, and so is somewhat conservative.

Subsidies for mathematics and science graduates (thus including those who become employed as teachers), as well as those for early childhood teachers, should remain in place until there is a better understanding of their impacts. Also, the discounts should continue for students and teachers who have already qualified for them, given their decisions to enrol in teacher training may have been influenced .

RECOMMENDATION 4.1

The Australian Government should not provide university fee repayment discounts for students who enrol in pre-service teacher education courses after 2012. Such discounts should still be provided to students and teachers who have already qualified for them.

4.4 Ameliorating shortages

Government and non-government school operators have introduced various initiatives to address teacher shortages. Some of these also have the aim of improving the quality of the workforce (such as attempts to attract highly-performing graduates to the profession).

Most of these measures have been used in one form or another for some time. This should have provided policymakers with an opportunity to assess their effectiveness. However, as far as the Commission is aware, there is a paucity of publicly available Australia-specific program evaluations. Thus, while many of these measures could be sound, their cost-effectiveness in either an absolute or relative sense is much less certain and greater evaluation is required (chapter 10). While a number of initiatives have been implemented in other countries, it is also unclear how effective these measures have been (box 4.3 illustrates this for the United Kingdom), or whether they could be effective in an Australian context.

Also unclear — and important to understand — is the impact of some of these initiatives on teaching quality (chapter 5).

What is clear is that the initiatives to date — while most likely 'pulling in the right direction' — have been insufficient to overcome persistent shortages. Where there are economy-wide shortages in a particular discipline such as mathematics or science, approaches that have a wider workforce focus may be required (Australian Mathematical Sciences Institute, sub. DR83).

The remainder of this section outlines and assesses the main policy settings used to ameliorate shortages of teachers. In the pursuit of a greater return for the investment

in the teaching workforce, changes to, or extensions of, some of these settings are proposed.

Box 4.3   Efforts to overcome shortages of teachers in the UK

Education systems in the United Kingdom (UK) have also experienced persistent shortages of teachers in particular secondary subjects, most notably mathematics. Concerned with the ongoing nature of these imbalances, the UK Government commissioned a number of reviews into the issue in the early 2000s (Roberts 2002; Smith 2004).

The Government adopted most of the recommendations from the Smith review, which focused on how to increase enrolments in upper secondary and higher education mathematics courses. Some of these measures included:

- appointing a Chief Advisor for Mathematics to the UK Government

- a communications strategy aimed at raising the profile of the profession and educating people on its usefulness

- increasing bursaries (scholarships) for completing training in mathematics from £6000 to £7000

- increasing 'golden hellos' (paid at the end of a teachers' induction year) from £4000 to £5000

- the creation of 'subject knowledge enhancement courses' for prospective trainee teachers of mathematics without a formal qualification in the field.

Following the implementation of these and other reforms, enrolments in mathematics courses increased in the UK. It is important to note, however, that just prior to the adoption of the reforms there was a substantial downward spike in enrolments due to a widely criticised change to the school mathematics curriculum. Thus, much of the increase in enrolments that followed implementation of the Smith recommendations was likely due to a reversal of this policy (Hoyles 2010).

But even taking this into account, the suite of implemented reforms is commonly credited with boosting the number of students enrolling in secondary mathematics courses. Unfortunately, however, there have been no studies that have identified the independent impact of each reform area (Hoyles 2010). Further complicating any efforts of this nature would be the number of policies that were implemented shortly before the Smith review, including the deregulation of recruitment and retention allowances for teachers and the introduction of career change programs (DfES 2004).

That said, it is potentially the case that a number of the reforms complemented one another, with no single measure being principally responsible for boosting enrolments.

Incentives to commence and complete teacher training

Education authorities target various groups of individuals with incentives to commence and complete teacher training courses that would qualify them to work in parts of the workforce where shortages exist.

Retraining incentives for current teachers

Teachers who are currently employed are sometimes offered retraining packages to become qualified in shortage subjects. For example, under the NSW Teacher Retraining programs, funding is made available for current teachers to reskill into disciplines such as mathematics, science, technology, special-needs and languages other than English. Participants receive full payment of their university course fees and an allowance, while continuing to receive their usual salary. As with most programs of this nature, at the completion of the training course recipients are required to teach in a hard-to-staff school for a minimum period of time.

The effectiveness of these sorts of measures would likely depend on the existence of complementary initiatives, such as differentiated remuneration in shortage subjects (see below). As noted in section 4.2, the Commission also considers that some out-of-field teachers would likely be suitable candidates for receiving such training. Indeed, and as advocated by the OECD (2012b), improvements to the content knowledge of out-of-field teachers could help to ameliorate the impact of shortages until other measures have had time to take effect (chapter 5).

However, the Commission is unaware of any publicly available evaluations of these programs. Thus, it is unclear how cost-effective such measures are, and hence whether greater efforts should be made to attract suitable teachers into retraining initiatives. Accordingly, the Commission has recommended that the Standing Council on School Education and Early Childhood initiate and oversee an evaluation of these initiatives, with the results made publicly available (chapter 10). Some important considerations in any analysis of these programs would include the associated benefits of a more evenly distributed teacher workforce, and the length of time that individuals who receive such training remain in the profession afterwards.

Scholarships for students enrolled in discipline programs

Scholarships to commence and complete a postgraduate qualification in teacher education are commonly made available to students enrolled in particular discipline programs. These initiatives seek to facilitate the traditional entry path into secondary teaching for individuals studying in shortage subjects. For example, the WA Department of Education's final-year teaching scholarships provide recipients

with a guarantee of full-time employment and either $30 000 (for mathematics, science and technology graduates) or $20 000 (for languages and special-needs graduates) in return for working at least two years in a rural or remote government school.

In general, scholarships are seemingly effective in compensating individuals for the upfront costs associated with becoming qualified as a teacher. Considering that annual student fees for education courses were capped at $5 648 in 2012, the payments identified above are substantial. And while these benefits are small in comparison to the salary differentials that exist for particular subjects between teaching and other professions over a working career, such programs are only intended to help facilitate entry to the profession.

However, like the retraining initiatives above, it is unclear how cost-effective scholarships have been in boosting supply in those parts of the workforce with shortages of teachers. Hence, the Commission considers that these sorts of measures should also be the subject of transparent evaluations (chapter 10).

Alternative pathways into teacher training

The most common way that individuals become qualified as secondary teachers is through completing either an undergraduate discipline-specific degree followed by a postgraduate teaching course, or an integrated or combined qualification covering both discipline and professional pedagogical studies (chapter 5).

In seeking to ameliorate shortages, some education authorities offer alternative pathways to becoming a qualified teacher. For example, individuals with particular skills who are working in other professions can be offered incentives to become qualified.

- The Victorian Government's Career Change Program (currently funded as part of the Smarter Schools National Partnership) offers a third-year teacher salary, travel and training allowances, study leave and various retention benefits to certain professionals who participate. The training allowance varies according to how difficult it is to staff the school in which the individual is appointed, and can range from $8 000 to $14 000.

- The Australian Government's recently announced initiative Teach Next will be aimed at qualifying skilled professionals to become teachers through a combination of fast-tracked training courses and school-based learning. The first intake of the program — which will occur in Western Australia and the ACT, and where participants will begin teaching in Term 3 of 2012 — will target shortages in mathematics, science, languages, special needs, and design and

technology. The intention is for participants to initially undergo an intensive six-week training course. Over the following two years, individuals will undertake school-based training as part of a postgraduate teacher education qualification, of which the Australian Government will subsidise part of the cost.

While some participants highlighted the importance of professional-entry programs for the work and industry experience they bring to teaching (Australian Association of Mathematics Teachers, sub. 10; DEEWR, sub. 42), and for raising the competitiveness of entering the profession by increasing the number of high-quality applicants (Department of Education and Early Childhood Development — Victoria, sub. DR95), initiatives of this nature are not typically designed to attract large numbers of individuals. For example, although there were 137 trainees in the former NSW Accelerated Teacher Training Program in 2002-03, only 42 people participated in 2005-06. And there have been even fewer participants in the Victorian Career Change Program, with a total of 57 individuals receiving training through the program between 2005 and 2007 (PhillipsKPA 2007).

The low level of participation in these programs should not necessarily be viewed as evidence of failure. Indeed, the usual requirement as part of these initiatives — that participants teach in a hard-to-staff school for some period of time — means that the impact of these initiatives on helping to staff those schools is likely to be greater than the raw numbers of participants would suggest.

Another alternative entry path is the Teach for Australia initiative funded by the Australian Government, which began in 2009. This program, currently operating in Victoria, the ACT and the Northern Territory, seeks to attract recent university graduates with strong academic records. Initially, participants must complete an intensive, six-week course on basic teaching skills. Following this, individuals commit to teaching in an area of educational need for two years while studying toward a postgraduate diploma in teaching, which is fully paid for by the Australian Government.

There is a perception that Teach for Australia is expensive on a per-teacher basis (AEU 2009a; Jan Thomas, sub. 3). The Commission notes that the Australian Council for Educational Research is due to report on the costs of the program in early 2012. However, given that the success of Teach for Australia will partly depend on how long its graduates remain in the profession, a full understanding of its cost-effectiveness is unlikely to emerge for at least several more years.

There are concerns that current and proposed standards for entry into postgraduate teacher education courses will make it harder for these kinds of measures to ameliorate subject-specific shortages. For example, teacher regulatory authorities,

which are responsible for accrediting pre-service teacher education courses (chapter 5), generally issue guidelines requiring applicants to postgraduate teaching courses to have completed either a major or sub-major sequence of study (comprising six or four university subjects, respectively) in a specific discipline.

Moreover, the Australian Institute for Teaching and School Leadership's (AITSL) national accreditation standards for teacher education degrees, while commendably raising standards, could — in most jurisdictions — limit the number of high-quality individuals eligible to enrol in postgraduate teacher education courses even further (chapter 5). Specifically in this regard, the new guidelines would require individuals wishing to enter a postgraduate teacher education program to have achieved a discipline-specific qualification. For secondary teaching, this qualification must include at least one major study in a teaching discipline, defined as equivalent to:

> … a total of three-quarters of a year of successful full-time higher education study, usually comprising sequential discipline study taken over three years. In most programs, this equates to six units, with no more than two at first-year level and no fewer than two units at third-year level. (AITSL 2011c, p. 13)

While universities have some flexibility in interpreting the guidelines for entry into postgraduate courses, many take them exactly as written. This is either because the particular university does not have the required resources for assessing alternative qualifications or experience against the standards, or because of the risk that the relevant teacher regulatory authority will not accept the university's interpretation of the guidelines when graduates apply for registration.

Teach for Australia (sub. 27) questioned whether the guidelines issued by AITSL would be flexible enough to allow individuals from outside the traditional discipline programs to enrol in a graduate teacher education course. Using mathematics as an illustration, Teach for Australia argued that important mathematical concepts typically also need to be mastered in more specialised degrees, and that the skills learnt from these courses should also be recognised.

> Where applicants have a major sequence of subjects in Mathematics, currently they are eligible to enrol in the Post Grad Diploma of Teaching with Mathematics as one of their learning areas. However, where an applicant does not have the requisite number of pure Mathematics units but has had to master mathematical concepts to successfully complete other units (such as an Engineering graduate completing Thermodynamics), they are not eligible to teach Mathematics. (sub. 27, p. 2)

It is possible for alternative pathway programs to operate successfully in jurisdictions that have entry requirements into postgraduate teacher education courses along the lines set out above. For example, special arrangements between the education authorities, universities and teaching profession in Victoria have

enabled the Victorian Career Change Program to function effectively — albeit on a relatively small scale.

However, outcomes such as these are highly dependent on successful collaboration between various parties, and thus cannot be guaranteed. Indeed, Teach for Australia is unable to operate in some jurisdictions in part due to these kinds of requirements.

But the impact of these standards go much further than simply restricting the number of participants in programs like Teach for Australia and Teach Next. Such uncertainty makes it less likely that new and potentially improved initiatives of this nature will emerge. And perhaps more importantly, they make it much harder for anyone without a discipline-specific qualification to enter a postgraduate teacher education course. Study participants suggested that sufficient teacher subject knowledge can be gained outside traditional discipline-specific degrees (for example, Australian Association of Mathematics Teachers, sub. 10; DEEWR, sub. 42; Department of Education and Early Childhood Development — Victoria, sub. DR95).

While the Commission strongly supports well-founded initiatives that will improve the quality of the teaching profession, it considers that any standards preventing those with high-level mathematics, science or other subject skills — when not achieved through a discipline-specific qualification — from enrolling in postgraduate teacher education courses as problematic in the context of current shortages. This is especially the case given that some out-of-field teachers are likely to have less subject knowledge than individuals ineligible to apply for postgraduate study. Moreover, flexibility in entry standards for postgraduate courses is becoming increasingly important as more individuals enter teaching from other professions (McKenzie et al. 2011).

The Commission therefore considers that the Standing Council on School Education and Early Childhood should direct AITSL to revisit its accreditation standards to take account of relevant subject knowledge gained outside traditional discipline programs. Specifically, the criteria for determining whether an individual has sufficient content knowledge to teach a particular subject should be broadened to include skills learnt both in more specific degrees and through professional experience.

As part of this, AITSL should publish supporting guidelines outlining the qualifications and experience that would satisfy entry into these programs. For any other applicants who still fall outside the guidelines, independently administered subject knowledge tests could be applied. Importantly, such an entry mechanism should also ensure that unsuitable candidates are not admitted into teacher education

courses. This approach would provide for greater transparency and consistency, given that universities are currently free to interpret the guidelines for entry into postgraduate teacher education courses in their own manner. It would also provide individuals enrolling in postgraduate teacher education courses with more certainty that their subject knowledge will be recognised when eventually applying for registration as a teacher.

These alternative entry arrangements should complement any broader entry standards — such as minimum literacy and numeracy requirements — that are aimed at improving the quality of entrants into teacher education courses.

While the changes would involve extra administrative costs, they are likely to be minor, both in relation to other measures used to attract individuals into teacher education courses, and in the context of the potential benefits from increasing the supply of teachers in shortage subjects.

RECOMMENDATION 4.2

The Standing Council on School Education and Early Childhood should direct the Australian Institute for Teaching and School Leadership to revise section 3.3 of its accreditation standards for initial teacher education programs so that the discipline-specific knowledge required to enter a postgraduate teaching course can be interpreted more flexibly. In particular, relevant skills learnt in highly related degrees and professions should be assessed as evidence of sufficient content knowledge.

Subject specialisation in primary schools

As noted in section 4.1, enrolments in advanced mathematics and science courses at upper secondary levels are falling on a proportional basis in Australia. This has implications both for the capability of the future Australian workforce generally, and for the availability of high-quality teachers in these disciplines.

In response, some school systems have recently introduced initiatives aimed at increasing student engagement, participation and achievement at the primary school level in certain subjects — in particular, mathematics and science.[6]

• Between 2012–2017 the Victorian Government is providing funding for about 200 specialists to work with classroom teachers to improve the way mathematics and science are taught in government primary schools.

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[6] Adoption of the national curriculum and accreditation standards would also influence the way these subjects are taught in primary schools.

- The South Australian Primary Mathematics and Science Strategy aims to have every government primary school teacher undertake professional learning in science and mathematics between 2010–2013.

Similar programs have recently been adopted overseas. For example, the UK Government began a ten-year program in 2009 to train 13 000 specialist primary mathematics teachers to provide mentoring, coaching and leadership to classroom teachers on the subject.

Such measures aim to address the concern that many primary school teachers have insufficient skills in mathematics and science, and the potential 'pipeline' effect this can have on future enrolments in advanced units of these subjects in upper secondary school and university (AMSI, sub. 31; Brown 2009; CRTTE 2003; Deakin University, sub. 24; Dinham 2007; Jan Thomas, sub. 3).

The Commission supports cost-effective measures that will help ensure primary school teachers have sufficient subject knowledge. While the approaches recently adopted by the Victorian and South Australian governments show some promise, they should, after being in place for an appropriate amount of time, be evaluated with the results openly disseminated.

Use of technology

Technology offers the potential for schools to provide alternative modes of delivery in areas of the curriculum where teachers are unavailable.

In Victoria, a new learning system called Ultranet allows online learning via recorded audio and video instructional material, as well as video conference lessons. These resources have been used to help students access subjects which are not offered at their school. And as outlined in chapter 9, initiatives are emerging that combine online learning with periodic face-to-face contact to address shortages of teachers in remote localities. Hence, alternative modes of delivery through the use of technology could be especially important for overcoming some aspects of educational disadvantage.

Adjusting course fees in shortage subjects

The Australian Government determines the maximum amount that universities can charge students for different courses within broadly defined contribution bands (see table 1 in section 4.3). This provides a potential lever for managing shortages. Indeed, the Government sought to stimulate demand in both education, and

mathematics and science courses, by classifying them as 'national priorities' in 2005 and 2009 respectively.

As noted in section 4.3, recent reviews have concluded that student demand for university places in Australia is not highly responsive to changes in course costs (Bradley et al. 2008; Lomax-Smith, Watson and Webster 2011). In response to the Bradley Review, the Australian Government removed education from the list of national priorities in 2010. And there are plans to reinstate mathematics and science courses to Band 2 in 2013, thus no longer classifying them as national priorities. As noted by the Minister for Tertiary Education, Skills, Jobs and Workplace Relations:

> The reduction in student contributions for mathematics, statistics and science units since 2009 has not been effective in substantially increasing the number of students undertaking maths and science at university. Students are predominantly motivated not by price but by their interests, abilities and career preferences when selecting courses. (Evans 2011)

The apparent price insensitivity of course demand may be due to current arrangements for setting fees at Australian universities, which limit the scope to differentiate fees between different degrees, and enable students to defer fees through income-contingent loans. Specifically, universities almost always charge students the maximum prescribed amount, meaning that all courses within a particular category will usually cost the same.[7] This implies that degrees in the education category — covering primary, early childhood and (combined) secondary-teaching degrees, which are all relatively close substitutes — have the same cost to students. A further issue is that the difference in maximum contributions between bands is relatively small, given that fees can be deferred well into the future, which suggests that cost is likely to be a minor consideration in choosing one area of study over another.

It therefore appears that, unless fee arrangements provide greater differentiation between different types of teacher training, and the variance in maximum student contributions is substantially increased, adjustments to course fees are unlikely to be a productive avenue for addressing specific areas of teacher shortage. Rather, efforts should focus on measures that target those parts of the workforce that experience such shortages.

Increased pay to attract teachers to shortage areas

In addition to the standard pay that teachers receive (box 4.4), there is typically some extra remuneration made available to encourage individuals to work in parts

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[7] Scholarships and ex post repayment discounts could change the cost relativities.

of the workforce that are in shortage. The following discussion considers incentives paid for teachers in specific locations and subjects.

Box 4.4   **Teacher remuneration in Australia**

Most teachers in Australia are paid according to jurisdiction-based collective agreements or awards (chapter 11), which each set out an incremental pay scale for the teachers covered. In the independent sector, most agreements are made at the school level, with some pay and conditions also negotiated on an individual basis. That said, the Commission has been advised that pay levels in the Catholic and independent sectors usually mirror the rates specified in the most recent agreement applying to government teachers.

Remuneration levels for beginning teachers are relatively high, with median starting salaries for graduates in the education sector about $5 000 (or around 10 per cent) more than the median for all surveyed professions (Graduate Careers Australia 2011).

However, teachers in Australia reach the top of their pay scale relatively quickly — usually within around 10 years. Teacher pay structures are also generally 'flat' — that is, the difference between salaries for beginning and experienced teachers is comparatively small. In particular, the ratio of salaries paid at the top of pay scales to starting salaries is about 1.4 in Australia, compared to the OECD average of just over 1.6 (OECD 2011b). (It should also be noted in this context that starting salaries in Australia are higher than the OECD average.) Movement through the salary scales is essentially based on length of service (chapter 6), although some agreements and awards also provide limited opportunities for additional pay if a performance standard is met.

Remuneration arrangements usually include a schedule of location-based allowances for teachers working in areas outside the major city centres, with Western Australia also explicitly offering extra pay for teachers in some low SES urban government schools. But explicit subject-based differentiation in pay is much more limited.

ABS (2010a; 2011b) data indicate that average real salaries for both teachers and the education and training sector as a whole have increased over the past 15 years. At the same time, the data also support the contention by some participants (APPA, sub. 41; Deakin University, sub. 24) that teacher pay has not been growing as fast as salaries in other professions. Data published by the OECD (2011b) show that experienced teachers' salaries in Australia did not change in real terms between 1995 and 2009.

Location-based remuneration differentials

In addition to the range of non-financial incentives available to encourage individuals to work in rural and remote schools (box 4.5), explicit location-based allowances are outlined in most of the teacher awards and/or agreements. The manner in which location-based payments are determined varies, and can depend on

experience, school location, the number of dependants and whether travel allowances are included (box 4.6 provides an example for South Australian government schools). While allowances for rural and remote schools are common, only the WA Government's teacher agreement explicitly outlines extra payments for teachers working in disadvantaged urban schools.

There are also various bonus payments available to teachers working in rural and remote schools. For example, the Victorian Graduate Retention Incentives Program, which is currently funded under the Improving Teacher Quality National Partnership, provides periodic bonus payments to eligible teachers in rural and remote areas. Teachers receive $4000 after 18 months service, another $4000 after a further 12 months employment and a final payment of $7000 payable on completion of another 18 months service.

Box 4.5   Non-pay incentives in rural and remote schools

Examples of programs that offer non-pay incentives for individuals to work in rural or remote areas include the NT Remote Study Leave Program, which offers paid study leave to teachers in remote areas, and the WA Remote Teaching Service Program, which provides free accommodation.

Another incentive commonly used to encourage individuals to work in remote areas is a guarantee that they will be able to transfer to a metropolitan school after some period of time. While this approach would have low upfront costs, it compromises the ability for school authorities to make appointments in urban schools on the basis of merit. That said, if the shift toward school autonomy — under which school principals make their own hiring decisions — continues, such guarantees would become increasingly hard to keep (Perpitch 2011; WA Auditor General 2011). The transfer guarantee could also exacerbate the already high level of teacher turnover in remote areas.

School operators have also sought to compensate teachers for a lack of amenities in many remote areas. For example, in addition to an annual stipend, the Queensland Remote Area Incentive Scheme provides individuals working in hard-to-staff schools with travel allowances and extended leave.

The ongoing nature of shortages in rural and remote areas indicates that these sorts of measures do not provide a complete solution. Indeed, given that many of the disadvantages of working and living in a remote community — such as a lack of amenities — are unlikely to be overcome to a sufficient degree for many teachers, appropriate financial incentives and professional recognition may be especially important.

Box 4.6   SA annual remote incentive payments

The South Australian Education Staff (Government Preschools and Schools) Enterprise Bargaining Award 2010 outlines an annual cash incentive payment to be paid to teachers working in remote schools. As the 2011 payment schedule below shows, these payments are higher: (a) the longer a teacher has been working at the particular school; and (b) the more remote the school is.

Total annual cash incentive payments, 2011[a]

Years	Zone 2		Zone 3		Zone 4		Zone 5	
	$	% salary	$	% salary	$	% salary	$	% salary
1	901	1.6	2 059	3.7	3 989	7.2	6 947	12.5
2	1 160	2.0	2 315	4.0	4 374	7.5	7 205	12.3
3	1 480	2.4	2 573	4.2	4 632	7.5	7 462	12.2
4	1 801	2.8	2 895	4.5	4 889	7.6	7 721	12.0
5	2 059	3.1	3 218	4.8	5 146	7.7	7 977	11.9

a The annual cash incentive payment as a percentage of salary for a given year is calculated as the particular cash incentive divided by the standard salary a teacher would receive for the corresponding number of years of service.

Sources: South Australian Education Staff (Government Preschools and Schools) Arbitrated Enterprise Bargaining Award 2010; Productivity Commission estimates.

Sector or subject-based remuneration differentials

While explicit pay differentials based on subject taught are rare, in some jurisdictions extra payments can be offered to teachers in any part of the workforce in short supply. For example, in Victoria, principals in the public sector are able to offer up to $7000 per year to any teacher, including those teaching subjects where there are shortages, as an attraction or retention incentive. And in South Australia, remuneration on top of that available in the relevant award is sometimes paid in areas of skill shortage (Department of Education and Children's Services — South Australia, sub. 35). Moreover, the Commission understands that some schools have created new leadership positions in order to offer teachers in particular subjects extra pay.

The Victorian Education Department indicated that use of financial incentives has been lower than expected, and intends to review the program in the near future. One potential reason for the low take-up could be that principals are concerned that some teachers would regard such payments as being unfair. In this regard, the AEU (sub. DR82) argued that variations in remuneration by subject could adversely impact on the cohesiveness and collegiality of the profession.

Similar reasons were cited for the initially low take-up of comparable incentives in the UK. Over time, however, the use of such measures has increased there — particularly in specialist secondary subjects (Hoyles 2010) — as they have done for higher education in Australia (Horsley, Martin and Woodburne 2005). A similar story has unfolded in Sweden, where an initially opposed system allowing principals to provide teachers with extra pay to overcome shortages now enjoys an approval rate of over 70 per cent among unionised teachers (OECD 2012b).

In recognition of the substantially higher remuneration that some teachers of particular subjects can earn in other professions (section 4.1), various participants endorsed the general principle of paying teachers in shortage areas relatively more as an attraction and retention incentive (ACT Council of Parents and Citizens Associations, sub. DR73; Australian Mathematical Sciences Institute, sub. 31; Department of Education — Western Australia, sub. DR90; Department of Education and Children's Services — South Australia, sub. 35; Department of Education and Early Childhood Development — Victoria, sub. DR95; Teach for Australia, sub. DR89; University of Tasmania — Faculty of Education, sub. DR86). Notably, such differentiation already characterises a number of OECD countries, including Finland and Korea (OECD 2012b).

In arguing against such differentiation, the AEU (sub. 28) highlighted results from the 2007 Staff in Australia's Schools survey which showed that teachers rated a number of factors, such as personal fulfilment and a desire to work with children, as being more important than salaries for motivating them to join the profession.

However, as also recognised by the AEU, surveys of practising teachers do not address the motivations of individuals who decide *not* to become teachers. Indeed, a 2006 synthesis of attitudinal research found that remuneration, conditions and workload are important factors for those who decide not to pursue teaching (DEST 2006). Also, a number of international studies have found that variations in relative or absolute pay, once other factors are held constant, are an important determinant of the recruitment and retention of teachers (Manski 1987; Murnane and Olsen 1990; Murnane et al. 1991; Gritz and Theobald 1996; Hanushek, Kain and Rivkin 1999; Dolton and van der Klaauw 1999; Dolton, Tremayne and Chung 2003; Milanowski 2003; Wolter and Denzler 2004; Bradley et al. 2006; OECD 2012b).

The AEU also argued that the value of a teacher does not depend on what subject they teach. But teachers have both pedagogical and subject-specific skills. Accordingly, in the Commission's view, subject-based pay differentials are no less valid for helping to deliver good student outcomes than location-based allowances — which are already widely used and have strong support.

A further concern raised by Deakin University (sub. 24) was that varying pay by subject would be unsuccessful in addressing shortages due to the current low overall numbers of graduates in disciplines such as mathematics and science.

The Commission acknowledges that if the overall supply of particular graduates is tight, the influence of these measures will be limited. As noted above, in these circumstances broader initiatives aimed at increasing student uptake of these disciplines will be required. That said, preventing differentiation in pay is still, in effect, handicapping the profession in competing with other industries for graduates of particular disciplines.

In the draft report the Commission sought further input from participants on implementation issues associated with designing arrangements to increase the remuneration of teachers in hard-to-staff positions. Some of the issues raised in subsequent submissions included whether extra payments should be:

- one-off bonuses or made more permanent (Department of Education — Western Australia, sub. DR90; Department of Education and Communities — New South Wales, sub. DR84)

- linked to individual positions, or qualifications more broadly (Department of Education — Western Australia, sub. DR90).

The key tradeoff implicit in both of these issues is between having sufficient flexibility to ensure incentives are targeted only at areas of shortage (both within the profession and over time), and the stronger signal that permanent, or more broadly based, remuneration incentives could provide.

Flexibility in the provision of financial incentives is important because, while many subject-based shortages have persisted for some time, remuneration differentials may not be necessary over the longer term. In this regard, the WA Department of Education (sub. DR90) suggested that trying to remove extra payments that are permanently embedded in teacher agreements would be problematic. Also, it is important to note that high-SES schools on average find it much easier to attract teachers that are in overall shortage than schools predominantly serving low-SES communities.

At the same time, applying extra payments more permanently or over a broader part of the teaching workforce would be expected to provide stronger incentives for individuals to become qualified to teach in the targeted subjects. However, it is likely that — for a given level of funding — this approach would provide for smaller payments per teacher, given that more teachers would qualify for such incentives. This would presumably diminish some of the differences in the strength of incentives between permanent and more flexible measures. Moreover, as noted

by the Independent Education Union (sub. DR92), permanent incentives would make it harder to target particular parts of the workforce.

These observations suggest that incentive payments should retain flexibility in relation to subjects and duration. Accordingly, the Commission considers that they should be directed at particular hard-to-staff positions as they arise (where the teacher is appropriately qualified), rather than subjects per se.

Decisions over whether extra payments are necessary for attracting or retaining a teacher in a particular position are best made by those directly responsible for hiring teachers. In the case of schools operating under an autonomy model, this will be the relevant principal or delegated school leader.

The Commission notes that Phase Two of the Empowering Local Schools initiative is intended to provide most schools with varying degrees of autonomy in 2015 (subject to an evaluation of Phase One in 2014) (chapter 8). This provides an opportunity to introduce measures that enable principals to use financial incentives to fill hard-to-staff positions. Importantly, the National Partnership model would enable each jurisdiction to introduce schemes that are appropriate for their particular circumstances. Any introduced measures could be informed by the planned review of the financial incentives currently available in Victoria (see above).

The NSW Government has already indicated it will consider providing principals with greater authority to use financial incentives to fill hard-to-staff positions as part of the Empowering Local Schools initiative. This is seemingly in response to feedback from interested parties as part of consultations on what authority schools should have.

> Contributors were strongly supportive of schools having increased flexibility to offer incentives to attract and retain staff. Specific incentives suggested by contributors included financial incentives, scholarships, assistance with higher education fees, rent or housing, and other incentive packages. (DEC — NSW 2012, p. 13)

Hence, in those jurisdictions not already doing so, measures that enable principals — under appropriate circumstances — to use explicit remuneration-based incentives to fill hard-to-staff positions should be trialled as part of Phase Two of the Empowering Local Schools initiative. Given that this partnership is due to expire in 2017, and the evidence suggesting that it takes time for remuneration-based incentives to be widely adopted (see above), any introduced measures will require ongoing support if they are to be successful. The Australian, state and territory governments all have roles to play in this regard, including in giving such measures practical expression in school funding arrangements. Importantly, this initiative should not preclude the state and territory governments from experimenting with other arrangements for using remuneration-based incentives.

As suggested above, enabling principals to use remuneration-based incentives should only occur under appropriate circumstances. The effective use of incentive payments at the school level would rely on the same factors that are intrinsic to helping ensure school autonomy has good outcomes, such as appropriate leadership skills and governance arrangements (chapter 8). The success of financial incentives would also depend on appropriate supporting initiatives, such as those designed to encourage current teachers — including those teaching out of field — to retrain into shortage subjects (see above).

While decisions concerning extra payments will inherently involve degrees of uncertainty and objectivity, the Commission does not see this as being a reason to eschew experimentation with approaches for paying some teachers more. Rather, the current efforts by some jurisdictions indicate that it can be done.

Remuneration incentives, of themselves, would not be a panacea for dealing with shortages of teachers. Instead, and like other policy levers, they should be viewed as one part of a package of complementary initiatives aimed at overcoming shortages. Formalising and extending some of the current, more implicit efforts to offer particular teachers extra pay would also help to identify, and evaluate, the particular circumstances in which such incentives would be most useful.

RECOMMENDATION 4.3

The Australian, state and territory governments, as part of broader efforts to encourage greater and more explicit variation in teachers' pay on the basis of shortages, should encourage the trialling of measures that enable principals — under appropriate circumstances — to use explicit remuneration-based incentives for attracting suitably qualified teachers into hard-to-staff positions. The Australian, state and territory governments should use Phase Two of the Empowering Local Schools initiative as one means of achieving this.

5 Training and professional development

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Key points

- High quality teacher education is a foundation stone of a well-performing teaching workforce. Professional development is similarly a core feature of a quality schools workforce more generally.

- However, available evidence on the effectiveness of different kinds of teacher pre-service training in improving student outcomes is mixed. It is therefore a high priority to build the evidence base on what approaches work best through trialling and evaluation of different modes of delivery, and better tracking of the impacts of training on the subsequent performance of teachers.
  - There are a number of seemingly promising avenues for improvement, including greater use of university–school partnerships.
  - The Longitudinal Teacher Workforce Study (commissioned under the National Partnership on Improving Teacher Quality) should be expanded to follow recently appointed teachers for at least five years; track more than one cohort of graduate teachers to capture future experimentation in pre-service training, induction and professional development; and include measures of teacher effectiveness.

- The states and territories have agreed to a new national system for accrediting pre-service teacher education courses, based on standards developed by the Australian Institute for Teaching and School Leadership.
  - The greater focus on outcomes under the new system is welcome but its effectiveness will depend on how it is implemented. The review processes under the new system must rigorously assess whether graduate standards are being met. Clearer guidance is required on what evidence is sufficient to meet the outcome requirements.
  - Minimum literacy and numeracy requirements for entry to accredited courses have the potential to increase the quality of the teacher workforce.
  - But, the planned increase in the minimum length of graduate courses from one year to two years under the standards should not be mandated at this stage as the potential net benefits are uncertain. If this requirement is maintained, states and territories should implement measures to limit the adverse impact on teacher shortages. This could involve a greater use of alternate pathways, including employment-based arrangements where individuals begin teaching after a year of training and complete their teaching qualification on the job.

- Professional development could be made more effective by strengthening its link to performance-appraisal processes. Initiatives to link teacher remuneration to performance (chapter 6), and improve the quality of school leadership (chapter 8) may also improve the effectiveness of professional development.

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School workers acquire and develop the skills and knowledge relevant to their roles through a mixture of structured training and practical experience. Both of these forms of learning occur during pre-service training (through instruction and practicum) and employment (through on-the-job practical experience, mentoring by other teachers, and professional development). The quality of Australia's schools workforce is therefore heavily dependent on the effectiveness of teacher education, mentoring and professional development.

This chapter examines both pre-service training and professional development (including induction and mentoring), and evaluates whether there are any impediments to their effectiveness and how they might be improved. While this chapter primarily focuses on the teaching workforce, some of the issues raised are relevant to the schools workforce more broadly. The training of school leaders is discussed in chapter 8.

5.1   Pre-service teacher education

The current landscape

Prior to the 1960s, pre-service teacher training was conducted in state-controlled teacher colleges. Primary school teacher training involved a two-year course, while secondary school teacher training generally consisted of a one-year diploma of education after the completion of a three-year university bachelor degree (Barcan 1995).

Since then, initial teacher training has changed in a number of ways. The two most visible changes have been the move to conduct teacher training at universities instead of teacher colleges and the increase in the length of primary undergraduate training courses to four years.[1]

Another noticeable change is that both primary teachers and secondary teachers are now trained through undergraduate and postgraduate courses. Indeed, the change in the training of secondary teachers has been so pronounced that there is an even split between the number of secondary teachers trained through undergraduate and postgraduate courses.

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[1] Between 1967 and 1974, the training of teachers was transferred to Colleges of Advanced Education, which were then amalgamated into universities in the 1990s (Barcan 1995).

Figure 5.1 **Pre-service teacher training completions by course type, 2010[a]**
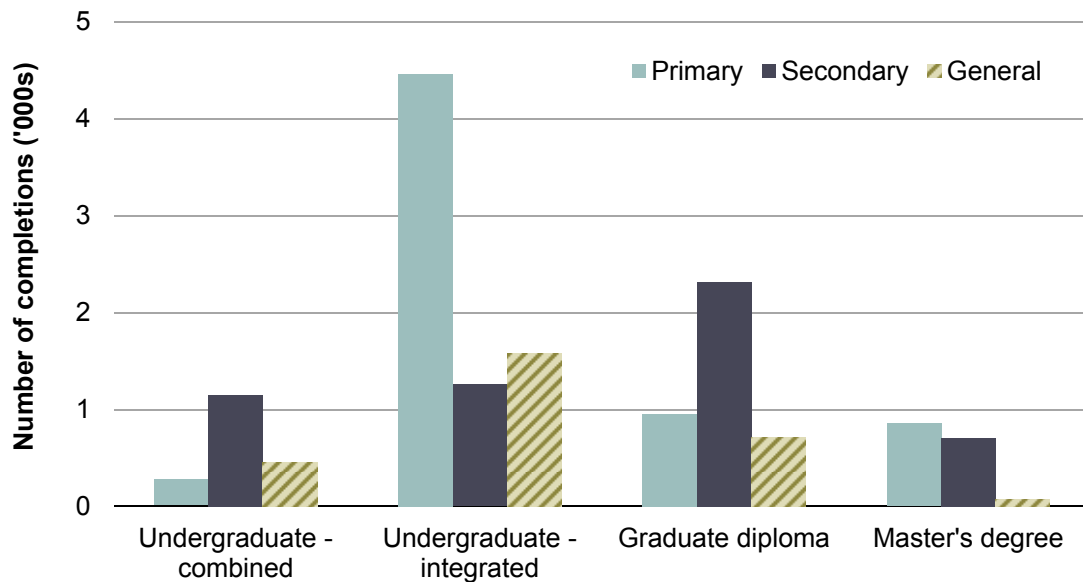
a The 'General' teaching classification refers to initial teacher training courses that cannot be classified as either 'Primary' or 'Secondary' courses. Some training courses are classified in this manner because they do not fit easily into either category (for instance, some courses allow for both specialisations, while others have a specific 'Middle school' specialisation). However, other training courses are classified as 'General' teaching courses because insufficient information regarding the nature of the course was provided by the training provider to the Department of Industry, Innovation, Science, Research and Tertiary Education.

Source: DIISRTE (2011).

The nature of undergraduate and postgraduate training has also changed considerably. There are now two types of undergraduate (combined or integrated) and postgraduate (graduate diploma or master's degree) teacher training courses, available to both primary and secondary pre-service teachers.[2] Of the four main course types, the integrated undergraduate degree is the most popular among pre-service primary school teachers, while for pre-service secondary teachers there is a more even spread in completions across the course types (figure 5.1).

Generally, only individuals who have completed a pre-service training program can be employed as a teacher. However, there are 'permission-to-teach' provisions in all jurisdictions, which allow teachers to be employed while they are still completing their teaching qualification. In most jurisdictions — New South Wales, Queensland,

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2 In a combined undergraduate course, pre-service teachers are taught subject matter knowledge as part of a separate bachelor's degree, whereas in an integrated course both subject matter knowledge and teaching practice are taught within the one teaching degree. The primary difference between a master's qualification and a graduate diploma is that a master's qualification is longer (typically two years in length rather than one) and includes more training relating to teaching practice.

South Australia, Western Australia and Tasmania — this is only allowed if the school can demonstrate that no registered teacher is available to fill the position. A similar requirement applies in Victoria, the Northern Territory and the ACT, but some employment-based pathway programs have been granted an exemption so that their students can be placed in schools without having to demonstrate the unavailability of a registered teacher for every placement. These include the Teach for Australia program, the Victorian Government's Career Change program and the foreshadowed Teach Next program (detailed in chapter 4).

While state and territory governments now have a smaller direct role in teacher training than when they operated teacher colleges, in recent years their involvement has increased through the establishment of School Centres for Teacher Education Excellence. These centres have been created under the National Partnership Agreement on Improving Teacher Quality, and are designed to provide pre-service teachers with high quality practical teaching experience, mentoring and training in addition to that provided by pre-service training courses (DEEWR, sub. 42).

How effective is pre-service training?

Australia currently invests heavily in the training of future teachers. Through the Commonwealth Grant Scheme, the Australian Government alone will spend approximately $10 000 on the pre-service training of each student who commences a one-year postgraduate and almost $40 000 in the case of students completing a four-year undergraduate teaching qualification in 2012 (DEEWR 2011a). The total annual expenditure by the Australian Government is in the order of $450 million (DIISRTE 2011). In addition, there are also costs to pre-service teachers and schools.[3] Given the size of this investment, it is important to ensure that these resources are being used effectively, and in a way that promotes good student outcomes.

However, both survey and empirical evidence raise doubts about whether this is the case. As a number of participants noted (AITSL, sub. 39; MGSE, sub. 38), surveys of beginning teachers conducted by the Australian Education Union and the Australian Council for Education Research (Staff in Australia's Schools survey) have found that many teachers do not consider that their pre-service training adequately prepared them for teaching (box 5.1).

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[3] The costs that schools incur by facilitating practicum placements is at least partially offset by payments that they receive from training providers. A portion of the funding that the Australian Government provides to training providers under the Commonwealth Grant Scheme is designed to cover these payments. (DEEWR 2010a)

Australian surveys of graduate teachers suggest that many initial teacher education programs are not effectively preparing individuals for teaching. For instance, the AEU's New Educators Survey in 2008 found that only 41 per cent of new teachers indicated that their pre-service training had left them well prepared for the reality of teaching (AEU 2009b). Similarly, the most recent Staff in Australia's Schools survey (McKenzie et al. 2011) found that in 2010:

- a majority of both primary and secondary early-career teachers found their pre-service training helpful or very helpful in preparing them in relation to only eight out of 15 specified teaching skills

- a majority of principals considered that recent teacher graduates were only well prepared or very well prepared in four (primary) or five (secondary) areas out of ten specified areas.

These and other similar surveys (SCEVT 2007), highlight several areas in which teachers consider that current pre-service training courses are lacking. These include perceptions that:

- the link between 'theory' and 'practice' is weak

- some of the theoretical components of courses are not relevant.

More specifically, the surveys point to scope for improvement in regard to:

- managing a classroom

- conducting assessment and reporting

- communicating with parents.

That said, such survey results need to be interpreted carefully. One obvious limitation is that such surveys rely on teacher and principal perceptions, rather than student outcomes. The level of satisfaction that would constitute 'success' is always problematic in surveys of this nature. Also, the importance, or lack of some aspects, of training may not become apparent to teachers until they have been in the workforce for several years.

More specifically, many teachers feel that pre-service training places too little focus on imparting practical skills. Some criticisms of this nature are that pre-service training does not adequately prepare teachers to manage classrooms, perform assessment and reporting tasks or to communicate with parents (SCEVT 2007) Similarly, the Diocese of Toowoomba (sub. 11) argued that there is a mismatch between the content of current courses and the requirements of employers.

Pre-service training cannot be expected to provide teachers with all the knowledge and skills that they could ever need. As in every profession, there will be some

knowledge or skills (especially those which are employer-specific) that will be most appropriately obtained and refined through on-the-job practical experience (Feimen-Nemser 2001).

But the questions raised by these surveys are reinforced by various international studies. As noted in the Commission's report on the vocational education and training workforce (PC 2011b), international empirical evidence regarding the general effectiveness of pre-service training in improving student outcomes is mixed. Extensive research of US pre-service training for teachers has found little difference in student outcomes between teachers with different types of certification — some of which involve quite minimal training prior to placement in the classroom (box 5.2).

On the other hand, a number of researchers (Darling-Hammond 2010; Sahlberg 2011, OECD 2011d) have claimed that the educational successes of countries such as Finland and Singapore are at least partially due to the quality of the training teachers receive (box 5.3). Similarly, empirical research conducted by Goldhaber and Liddle (2012) found that, while many teacher training courses in the US state of Washington were ineffective, courses run by certain institutions did significantly improve teacher effectiveness and student outcomes. Indeed, in this respect, it should be noted that the research referred to in box 5.2 does not compare student outcomes from different forms of approved college education courses that lead to traditional certification.

What then distinguishes highly effective training? Unfortunately, there is limited international empirical research that has sought to answer this question. The most notable study was conducted by Boyd et al. (2009). They found that teachers tend to be more effective in the early years of their employment if their training had focused more on the work of the classroom and had provided opportunities to study what they will be teaching. They concluded that good student outcomes were most likely to occur when teachers completed courses that:

- provided more oversight of student teaching
- required a capstone project (typically a portfolio of work done in classrooms with students)
- provided the opportunity to engage in actual teaching practices
- reviewed the curriculum that teachers are eventually required to teach.

The authors also noted that these results were exploratory and that more research in this area is needed.

Box 5.2   **Empirical evidence on the effectiveness of US pre-service training**

Most empirical evidence on the effectiveness of pre-service training examines the experiences of US teachers. Effectiveness is typically assessed by comparing student outcomes for teachers who have obtained different types of certification, which in turn have different pre-service training requirements. The three forms of teacher certification are:

• traditional certification — available to teachers who have completed an approved college education program

• alternative certification — designed to provide an employment-based pathway into teaching for professionals who have work experience and subject-area knowledge, but who do not have any teaching qualifications. These teachers are permitted to teach while concurrently completing a teaching qualification

• emergency certification — generally only issued in response to location or subject-based teacher shortages. Emergency certified teachers are usually required to hold a bachelor's degree and may also need to pass a short form of testing. It is only granted on a temporary basis, and often requires the teacher to concurrently complete a teaching qualification.

Research that compares student outcomes for teachers with traditional and emergency certification suggests that on average students of traditionally certified teachers perform only slightly better (Qu and Becker 2003; Boyd et al. 2008).

Research that compares the effectiveness of teachers with alternative and traditional certification generally find similar student outcomes. Aside from a study by Darling-Hammond et al. (2005), which found that traditional teacher certification did improve student outcomes, studies either find no significant difference between these two categories of teachers (Qu and Becker 2003; Clofelter, Ladd and Vigdor 2007; Kane, Rockloff and Staiger 2008; Constantine et al. 2009) or that traditionally certified teachers perform only marginally better (Boyd et al. 2006).

Teach for America is an example of alternative certification, and has been analysed extensively. Consistent with the bulk of the previous research, this work finds that there is little difference in student outcomes between Teach for America associates and traditionally trained teachers. For example, Glazerman, Mayer and Decker (2006), Henry et al. (2010) and Xu, Hannaway and Taylor (2009) all found that Teach for America trainees were only slightly more effective than traditionally certified teachers, especially in mathematics and science.

However, the above evidence must be qualified by the observation that there is likely to be significant variation between and within US states in the quality and characteristics of training provided under traditional and alternative certification. Furthermore, this research base often only analyses the performance of first or second-year teachers, and therefore does not assess how effectively training programs enhance the ability of teachers to learn through practical experience.

Box 5.3   **Teacher training in Finland and Singapore**

Finland

Finland's education system has attracted significant attention over the past decade as a consequence of its very strong PISA results (OECD 2011d). Many researchers suggest that changes in teacher training which occurred in the 1970s have played an important role in this performance (Darling-Hammond 2010; Sahlberg 2011, OECD 2011d). These changes involved moving teacher training from teacher's colleges to universities, and requiring teachers to gain a master's degree as a condition of employment.

However, it is difficult to determine the magnitude of the effect of these changes as there are a number of other factors that are likely to have had an effect on Finland's education performance. For instance, broader reforms to the school system (which required that compulsory education took place in municipally run nine-year comprehensive schools rather than six-year schools), occurred in conjunction with the 1970s reforms to teacher training. Furthermore, as noted by the OECD (2011d), it is likely that the high level of professional autonomy afforded to Finnish teachers, social and cultural factors (Finland has a relatively homogeneous population), and the focus on early intervention for students with special needs, are all likely to have contributed to Finland's exceptional PISA performance.

Singapore

All teachers receive training in the Singapore curriculum at the National Institute of Education (NIE) at Nanyang Technological University. Individuals can undertake either a four-year undergraduate degree, a two-year associate degree (for certain specialisations), or a one-year postgraduate diploma, to be qualified as a teacher.

Researchers have claimed that only having one dedicated teacher training institution has been beneficial in a number of respects (OECD 2011d). For instance, a close working relationship between NIE and Singaporean schools is claimed to facilitate training courses that effectively meet the training needs of schools. Additionally, school mentoring processes are claimed to be more successful in building on the training teachers have already undertaken. Some researchers have contended that the content knowledge training that pre-service teachers receive in Singapore is more relevant as it is taught only for the purposes of training teachers, not by a separate department which needs to cater to students with a range of career aspirations.

However, as is the case with Finland, it is difficult to determine the extent to which the system for training teachers is responsible for Singapore's educational successes. Other factors that are relevant in this regard, include:

- the quality of the students that apply to enter teacher training. Singapore selects teaching students from the top one-third of the secondary school graduating class (which is also a feature of Finland's training system) (McKinsey and Company 2007)

- the remuneration available to teachers. Compared to other countries, the base pay of teachers is higher in Singapore. Additionally, high-performing teachers can earn significant amounts in performance bonuses (McKinsey and Company 2007)

- the strong focus on mathematics and science in schools (OECD 2011d).

As noted by Darling-Hammond (2010), these findings are similar to a case study of exemplary pre-service training programs conducted by Darling-Hammond (2006). This study, among other things, concluded that effective teacher education programs 'teach candidates to turn analysis into action by applying what they are learning in curriculum plans, teaching applications and other performance assessments' (Darling-Hammond 2010, p. 40).

One of the few studies to have empirically analysed the relationship between different aspects of pre-service training and teacher performance in an Australian context (Ingvarson, Beavis and Kleinhenz 2004) came to a similar conclusion. The authors concluded that courses generally produced more effective teachers when they provided greater opportunities to learn subject knowledge and the practicalities of assessment.

It is unsurprising that the programs which better provide teachers with practical teaching skills are found to be more effective. Most of this research generally only analyses the effectiveness of teachers in their first two years of employment — a point at which teachers have had little time to gain practical experience on the job. Thus, it is not clear whether teachers trained under these programs remain more effective than other teachers beyond the first two years of teaching.

In addition to the previously mentioned research by Ingvarson, Beavis and Kleinhenz (2004), the only other Australian evidence the Commission has seen relating to the effectiveness of different aspects of pre-service teacher training comes from assessments of specific training programs.

One such assessment was undertaken by the Australia Council for Educational Research (ACER) (Scott et al. 2010) to examine the newly developed Melbourne Graduate School of Education's Master of Teaching (MTeach), which claims to employ a different approach to teacher training (box 5.4). ACER found that 90 per cent of MTeach graduates considered that they were well prepared for teaching, compared to about 40 per cent of graduates from other courses. This early evidence is promising and seems to support the notion that teacher training could be made more effective. However, given the program's short history, the longer-term comparative outcomes remain to be established.

Box 5.4   **Melbourne Graduate School of Education's MTeach**

The Melbourne Graduate School of Education began a Master of Teaching (MTeach) course in 2008. It is a pre-service teacher training qualification with three streams — early childhood, primary, and secondary.

The program for the early childhood and primary streams is for two years. Three-quarters of the secondary stream is completed intensively in one year, after which students receive a postgraduate diploma in teaching. To receive a Master of Teaching, students must complete the remaining quarter of the secondary stream, which can be done on a part-time basis while working as a teacher.

According to the Melbourne Graduate School of Education (sub. 38, p. 1), this program represents a 'significantly different approach to the standard models of teacher preparation'. Its underpinning philosophy is that teaching is a clinical practice, where the best outcomes will occur if teachers can meet the individual needs of learners. To do this, teachers need to be able to use data to plan and implement teaching interventions.

To implement this approach, the Melbourne Graduate School of Education has attempted to increase the link between practical experience provided by practicum and what is taught on campus. Students spend three days a week on the core compulsory subjects, and two days a week undertaking teaching practice and attending professional seminars in partnership schools with the support of Teaching Fellows. These experts are teachers who are partially paid by the university, and are employed to ensure that the theory that students learn in university is linked to practical experience in classrooms.

The employment of these experts is the primary reason that the cost of this form of teacher training is notably higher than other courses. The MTeach course requires funding of approximately $21 000 per student per annum. Currently, teaching courses are eligible to receive about $9500 in funding from the Australian Government and are able to charge students up to approximately $5500. Between 2009 and 2011, the Melbourne Graduate School of Education received extra funding from the Australian Government (through the Department of Education, Employment and Workplace Relations' Diversity and Structural Adjustment Fund) to cover the remaining $6000 in costs.

The extent to which the training approaches associated with employment-based teaching pathways are more cost-effective than mainstream approaches is also unclear. Research is needed to assess how quickly such teachers can learn through more on-the-job approaches to teacher training, and thus the extent to which school students taught by these teachers may be disadvantaged (Deakin University — School of Education, sub. 24). As mentioned in chapter 4, an initial evaluation of Australia's most prominent fast-tracking program, Teach for Australia, was conducted by ACER (Scott, Weldon and Dinham 2011). However, it was primarily concerned with improving the implementation of the program after its first year of operation, rather than considering its cost-effectiveness as a method for training

teachers. It will be possible to draw stronger conclusions regarding the appropriateness of alternative pathways after ACER completes two final assessments which will draw on more case history. These are due to be released in early 2012 and early 2013.

Given the limited nature of the available evidence, and the size of the investment in pre-service training, building the evidence base in this area by trialling and properly evaluating different ways of delivering pre-service training should be a high priority. A proposal to systematically collect data to enable such evaluation is presented in section 5.5.

5.2 Practicum and induction

Pre-service teachers have the opportunity to gain professional experience during the practicum component of their pre-service training course, where they teach in schools under the supervision of a mentor teacher. Specifically, this arrangement gives pre-service teachers the opportunity to implement the practices taught contemporaneously in training courses, and to improve their skills through the provision of constructive feedback and advice, in an environment where student learning outcomes are not compromised.

Structured support is also often provided to graduate teachers as part of school induction processes, which are designed to smooth the transition into full-time teaching. Generally, this support includes being provided with:

- an experienced teacher as a mentor

- professional development relevant to their specific needs

- a reduced teaching load to allow them time to reflect on their practice, meet with their mentor, observe other classes and to undertake professional development (SCEVT 2007).

This support is generally less intensive than what is provided on practicum placements and varies considerably between schools. In general, graduate teachers tend to meet with their mentor on fewer occasions to discuss progress, and mentor teachers will only occasionally observe the graduate in a classroom situation.

Governments invest in a variety of practicum and induction processes. For instance:

- under jurisdictional accreditation systems, courses are required to provide a minimum number of days of practicum placement[4]

- under the Commonwealth Grant Scheme, the Australian Government provides universities that train teachers with extra funding (currently $773 per teacher annually) to reflect the costs associated with undertaking practicum (DEEWR 2010a)[5]

- state and territory education departments generally require beginning teachers in government schools to have some form of induction, and provide resources to support this (SCEVT 2007).

Similarly, Catholic systems and Independent schools associations advised that they place a strong emphasis on the induction of new teachers (Catholic Education Commission of Victoria, sub. 13; ISCA, sub. 18).

The benefits of supported practical experiences

A number of study participants emphasised the importance of both practicum and mentoring. The Independent Education Union of Australia (IEUA, sub. 12, p. 6) argued that 'time for suitably qualified and skilled supervising teachers to spend with student teachers to mentor them is essential'. The Australian Association of Mathematics Teachers (sub. 10), the IEUA (sub. 12) and Jan Thomas (sub. 3) all stressed the importance of quality mentoring of beginning teachers.

On practicum, as noted previously, there is some evidence to suggest that courses which better provide teachers with practical teaching skills produce more effective teachers. Yet, the evidence base in this area is still quite small. Indeed, in 2003, a review of the evidence surrounding teacher preparation concluded that, at that time, there was inconclusive evidence that high quality field experience prior to certification contributed to a teacher's effectiveness (Allen 2003).

With respect to induction processes, a review of relevant empirical research by Ingersoll and Strong (2011) found that beginning teachers typically have higher

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[4] In most jurisdictions, undergraduate courses must incorporate a minimum of 80 practicum days, while graduate entry courses usually require between 45 and 60 practicum days depending on their length. Under the new national accreditation system, courses are required to provide 80 and 60 days practicum for undergraduate and graduate courses respectively.

[5] From 2010, funds for the Improving the Practical Component of Teacher Education program were transferred into the higher education Commonwealth Grant Scheme funding (DEEWR 2011c).

levels of satisfaction, commitment and perform better in certain aspects of teaching (such as keeping students on task and successfully managing a classroom) if they have undertaken induction processes. A notable exception was a study by Glazerman and Seifullah (2010), which employed a randomised controlled-trial methodology and found no differences between teachers in the treatment and control groups. As noted by Ingersoll and Strong (2011), this study compared the effect of comprehensive induction with the generally less intensive induction already occurring in schools.

Furthermore, a recent report by the Grattan Institute (Jensen et al. 2012) claimed that the induction and mentoring processes in Singapore — which include frequent classroom observation and a strong focus on improving student learning — has played an important role in their strong Program for International Student Assessment performance.

The relationship between induction programs and teacher effectiveness is less clear in an Australian context. While Ingvarson et al. (2004) did find a small positive relationship between mentoring and beginning teacher preparedness, the presence of an induction program was on average associated with teachers feeling less prepared, though this effect was relatively weak.

Improving practicum and induction

There appears to be scope to improve the effectiveness of both practicum and induction programs in Australia. For example, while beginning teachers consistently rate practicum as the most useful part of their pre-service training (SCEVT 2007), many are also concerned that their training more generally does not adequately provide them with practical teaching skills. As noted earlier, surveys of beginning teachers point to scope for improvement in regard to training people how to manage a classroom, conduct assessment and reporting and communicate with parents. This suggests that either a greater amount, or a more effective deployment, of practicum is required.

Evidence regarding the prevalence of induction programs is somewhat mixed. The OECD Teaching and Learning International Survey (TALIS) of lower-secondary principals found that, in 2008, 99 per cent of relevant Australian schools had a formal induction program, while around 94 per cent had a mentoring program for new teachers (OECD 2009a). However, the 'Top of the Class' report concluded that there was a wide variation in the level and quality of support that is given to beginning teachers in Australia (SCEVT 2007). Similarly, while it represented an improvement on previous survey results, the 2010 Staff in Australia's Schools

survey found that only 73 per cent of primary and 84 per cent of secondary beginning teachers were provided with an orientation program designed for new teachers. The same survey also found that about 80 per cent of primary and secondary beginning teachers were provided with a designated mentor (McKenzie et al. 2011).

Some teachers will adapt more quickly to teaching and may therefore find induction less useful. But given the concerns that pre-service training is not adequately providing teachers with sufficient practical skills, the evidence presented here would imply that induction processes could be enhanced.

Participants and researchers alike have presented a number of proposals for improving the effectiveness of both practicum and the induction of beginning teachers. These include altering the structure of practicum, implementing measures to improve the quality of mentors and invoking a greater use of university–school partnerships.

Some participants noted that any new national teacher registration system that includes rigorous and evidence-based processes for assessing teacher competency is likely to improve the effectiveness of practicum and induction programs. This is because pre-service and beginning teachers would have an added incentive to ensure that they are given appropriate support.

The structure and extent of practicum

Currently, the structure of practicum placements varies considerably between courses. For instance, most universities utilise a combination of block placements, where students are sent into schools for a number of weeks at a time, and placements where students are sent one day a week on a continuing basis. While block placements are often favoured because they provide students with continuity and the opportunity to engage more fully with the broader school environment, continuing placements provide students with the opportunity to implement teaching theory closer to when it is learned (SCEVT 2007). Courses also differ in the timing of the first practicum, with some courses starting practicum in the first year, while in others it starts much later.

Study participants proposed a number of approaches to improve the structure of practicum placements. These included:

- extending the length of practicum experience of pre-service teachers to better enable them to develop the required practical skills (Catholic Education Commission of Victoria, sub. 13)

- providing practicum experiences to pre-service teachers earlier in their training, to enable them 'to make an informed choice in relation to their study choice', thereby reducing the likelihood that those unsuited to teaching will remain in the profession (Catholic Education Office — Diocese of Toowoomba, sub. 11, p. 12)

- greater use of internships, where pre-service teachers have an extended and less supervised practicum placement at the end of their pre-service training (Australian Primary Principals Association, sub. 41).

There is some international evidence to support these proposals. In particular, Darling-Hammond (2010) noted that effective programs tend to require:

- an extensive amount of student teaching

- practicum placements that occur throughout the whole program, rather than just in the latter section of training courses.

There is also evidence to suggest that students who receive increased amounts of practicum have lower attrition rates early in their teaching career (Fleener 1998).

The evidence for Australia is less clear. Ingvarson, Beavis and Kleinhenz (2004) found that there was not a significant association between the length or structure of practicum and the perceptions of beginning teachers about their preparedness to teach. However, the study authors noted that this could be due to there being only small differences between the courses analysed in the study. In any case, further experimentation and subsequent research is required in this area. Furthermore, it is likely that some of the benefits of extended practicum could also be obtained by improving the quality of the induction and mentoring processes that early career teachers receive.

A potential constraint to extending practicum is that many universities are already struggling to source placements for all of their student teachers (Deakin University — School of Education, sub. 24; National Association of Field Experience Administrators, sub. 1). Moreover, study participants claimed that the new demand-driven funding model for higher education is likely to exacerbate this problem (for example, NSW Government, sub. DR84). The potential consequences for efforts to improve practicum reinforce the Commission's conclusion in chapter 4 that the impact of the demand-driven funding model needs to be monitored. Additionally, universities may need to increase the compensation provided to schools if they intend to trial new approaches which involve increasing the amount of practicum that is delivered. The Victorian Department of Education and Early Childhood Development (sub. DR95) suggested that additional resources should be made

available to enable the implementation of more clinically-oriented teacher education.

Ensuring induction mentors are of high quality

The presence of an appropriate mentor is generally considered to be crucial in the implementation of an effective induction scheme (OECD 2005). A number of study participants noted that it is important to ensure that mentors of pre-service and graduate teachers are of a high quality (for example, Queensland Catholic Education Commission, sub. 20).

They contended that this could be achieved by better involving high-quality teachers in mentoring, and/or by providing training for mentors. One suggestion was to include the mentoring of beginning teachers and/or practicum placements as a part of the job description of the Highly Accomplished and Lead Teacher categories of the new National Professional Standards for Teachers (Catholic Education Commission of Victoria, sub. 13; IEUA, sub. 12). In New South Wales, the mentoring of beginning teachers is already one of the roles expected of 'professionally accomplished' teachers (NSW Institute of Teachers 2005).[6]

Some study participants also pointed to the importance of either rewarding teachers, financially and/or providing extra release time, for mentoring pre-service and graduate teachers (IEUA sub. 12). They argued that this would increase the quality of those willing to undertake those roles. In reality, this is already occurring to some extent. For instance, the NSW Department of Education and Communities (DET (NSW) 2007), through the Beginning Teacher Resource Allocation, provides extra resources to schools with graduate teachers, which can be used by those schools to compensate mentors of beginning teachers or provide them with release time. Furthermore, some teacher-training course providers, such as Victoria University and University of Tasmania, have paid supervising teachers above the award rate (though this award was recently abolished) (National Association of Field Experience Administrators, sub. 1).[7]

Another proposal was to provide mentor teachers with more training (ISCA, sub. 18). The need for such training is already recognised in some jurisdictions. For instance, all mentor teachers in Victorian government schools receive training through the Teacher Mentor Support Program (DEECD 2011d). The WA

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[6] In Queensland, all teachers are required to mentor pre-service and beginning teachers under the Professional Standards for Queensland Teachers (QCT 2006).

[7] In September 2011, the Australian Higher Education Practice Teaching Supervision Award was abolished by Fair Work Australia (Fair Work Australia 2011).

Department of Education and NSW Department of Education and Communities have specialist coaches for public schools with a large number of graduate teachers (NSW Department of Education and Communities, sub. 14; Western Australian Department of Education, sub. 45). The NSW Department of Education and Communities commented that its program had led to improved retention rates among first-year teachers.

University–school partnerships

One notable trend over recent years — both internationally (OECD 2005) and locally (SCEVT 2007) — has been an increase in the number of formal university–school partnerships. These are designed to improve the effectiveness of practicum placements by strengthening the links between universities and the schools which provide practicum. While the nature of these partnerships varies considerably, they often involve universities providing training and other support to supervising teachers, and a group of students undertaking practicum at the school at the one time (enabling universities to more easily monitor the practicum experience of students) (SCEVT 2007). Strong partnerships may also facilitate the involvement of schools and teachers in the development of the curriculum of pre-service training courses (Kruger et al. 2009). In at least one case (University of Canberra) the partnership extends beyond the university's education faculty (box 5.5).

Box 5.5   University of Canberra schools

In March 2011, the University of Canberra launched partnerships with University of Canberra Senior Secondary College Lake Ginninderra, and University of Canberra High School Kaleen.

Aside from improving the practicum experiences of pre-service teachers, and increasing teachers' access to professional development and research, this relationship is also intended to:

- make the entrance to university and other tertiary training easier for students
- have university researchers and students from other faculties working together with school teachers and students.

Source: University of Canberra (2011).

There is significant support for university–school partnerships to play a larger role in the training of teachers. A review of university–school partnerships commissioned by Teaching Australia argued that while not all of the failings of pre-service training are practicum related, those that are 'can be seen as being solved by enhanced partnership relations between university teacher education faculties and schools' (Kruger et al. 2009, p. 45).

The 'Top of the Class' report suggested that governments should make investing in university–school partnerships a priority (SCEVT 2007). This view is supported by international research. For instance, a review of the empirical evidence relevant to practices and policies in pre-service teacher education in the United States concluded that collaborative arrangements between university programs and local school districts have a positive impact on students through improved teacher effectiveness (Cochran-Smith and Zeichner 2005). Similarly, a review of professional-development schools (the US term for university–school partnerships) found that there was a relationship between such schools and increased student performance (Teitel 2004). This international evidence is to some degree supported in an Australian context by the early positive results of the Melbourne Graduate School of Education's Master of Teaching program, which has a strong focus on university–school partnerships.

While there is evidence that university-school partnerships can improve student outcomes, they can also be costly. For instance, the Melbourne Graduate School of Education's Master of Teaching, which has relatively strong partnerships with individual schools, is approximately 30 per cent more expensive than other teacher training courses (box 5.4). Most research regarding the benefits of university-school partnerships has not recognised these additional costs.

The need for more research

While the various approaches to improve practicum and mentoring previously mentioned appear to be promising, more research is needed to establish which are most effective. As Boyd et al. (2009, p. 435) noted, analysis of the relationships between different aspects of pre-service training (including how practicum is provided) and teacher effectiveness 'is still in its infancy'. Ingersoll and Strong (2011, p. 227) observed that more research is needed to 'clarify and sort out which elements, supports and kinds of assistance [for beginning teachers] are best and why'. A proposal to systematically collect data to facilitate such research is presented in section 5.5.

Such research and evaluation also needs to examine the relative costs of different approaches. This should help clarify which combination of practicum and induction is most cost-effective in improving the quality of beginning teachers.

High quality practicum and induction experiences for pre-service and graduate teachers play key roles in developing an effective teaching workforce and there are opportunities to improve how they are provided. One promising avenue is the development of university–school partnerships. However, more research is needed, with regard to both this specific initiative and other approaches. The research should focus on better understanding what forms and combinations of practicum and induction, and what types of university–school relationships, are most cost-effective in improving the quality of beginning teachers.

5.3   Screening for teacher quality

As discussed in chapter 3, there is a widespread consensus that the quality of teachers is a significant determinant of student learning. To ensure that all teachers meet certain quality standards, there are currently various quality-control measures in place. These measures are currently being enhanced as part of the national teaching-quality reform program, with individual jurisdictions also separately introducing some changes in this area.

The current system

In order to obtain a permanent teaching position, individuals currently have to pass through a number of quality-control assessments.

- First, students must gain entry into, and then successfully graduate from, a teacher training course. Gaining entry into courses involves obtaining a sufficiently high Australian Tertiary Admission Rank (ATAR) score, and possessing any prerequisites specified by training providers. Then to graduate from a teacher training course, students must successfully pass the necessary theoretical and practical assessments conducted by the training provider.

- The teacher training course has to be accredited by the jurisdictional teaching authority. Broadly speaking, these accreditation systems are primarily designed to ensure that all students who obtain teaching qualifications meet the standards required of graduate teachers (Ingvarson et al. 2006).

- Employers screen potential teachers before appointing them to a permanent position. As in other career pursuits, this process can involve written job applications, interviews, referee consultations and documentation of university results. Schools may also have a firsthand experience of the capabilities of applicants, if they have undertaken practicum at the school or been employed on a short-term contract.

- Even after a permanent position has been awarded, schools still have the opportunity to not renew the contract of a new teacher who is subsequently deemed unsuitable during their probation period.

Study participants expressed concerns about the effectiveness of this system in ensuring the quality of graduate teachers, particularly with respect to the accreditation of courses and the processes by which graduates are employed (discussed further below). Realistically, no set of screening instruments will ensure that every graduate teacher given a permanent position is of high quality, either initially or over the course of their career. Therefore, the issue is whether the quality screens do a sufficiently good job in either the current form or as proposed under the current reform agenda. In respect of the latter, a greater emphasis is being placed on national approaches to teacher quality control, particularly in the area of accreditation.

Minimum entry-level requirements

The new system for accrediting teacher training courses, which is discussed in the next section, contains a requirement that all entrants to pre-service teaching courses should have literacy and numeracy skills broadly equivalent of those of the top 30 per cent of the population (box 5.6). These mandated requirements will be separate from any additional entry requirements which individual universities impose.

To the extent that these requirements 'raise the bar for entry', they have the potential to improve the quality of the teaching workforce and are therefore welcomed by the Commission. Of course, there are more dimensions to teaching quality than just literacy and numeracy skills. As noted in chapter 3, the capacity to set 'appropriately challenging' goals for students, a passion for teaching and learning, and the ability to create a positive classroom environment that fosters learning, are among the various traits of a high quality teacher. That said, the flexibility inherent in the new national arrangements seems to give pre-service training providers the opportunity to take other dimensions into account where relevant and necessary.

At this stage it is difficult to make assertions regarding the impact of these
restrictions as it is not yet clear how the requirements will be practically assessed
(box 5.6). In particular, it is unclear whether these requirements will be set in
relation to the literacy and numeracy skill of the whole population, or a subset
thereof. In the Commission's view, setting these requirements relative to the literacy
and numeracy skills of Year 12 students would seem preferable as it would
probably have a greater effect on increasing quality, given that older sections of
Australia's population tend to have significantly lower literacy and numeracy skills
compared to the majority of the adult population (ABS 2007).

Available evidence suggests that a significant number of current pre-service
teachers would not meet the new entry requirement at the time of enrolment if it
was defined relative to the relevant Year 12 cohort. Data from ATAR rank scores,
which admittedly encompass more than just literacy and numeracy skills, show that
approximately 30 per cent of pre-service teachers who enrolled from 2005–2010
and were recent school leavers, were not in the top 30 per cent of their cohort
(Department of Industry, Innovation, Science, Research and Tertiary
Education 2011).

Nevertheless, the minimum literacy and numeracy requirements are likely to have
only a limited impact on teacher quality in the short term in areas where surpluses
exist. This is because most teachers that would be screened out by tougher entry
requirements are likely to be the same people who find it most difficult to gain

positions as teachers. Accordingly, the quality of the employed workforce will not increase markedly until the surpluses dissipate.

The impact of strengthened entry requirements on teacher quality will also be limited if a greater number of high quality candidates do not embark on a teaching career. For this to occur, complementary measures, such as higher pay, that increase the attractiveness of teaching as a profession may be needed (Ingersoll 2007). Chapter 6 of this report considers the merits of increasing teacher remuneration through a performance-based career structure. Other measures considered in this report that are likely to attract better teachers are improved appraisal and feedback (chapter 6), and quality induction, mentoring and professional development (sections 5.2 and 5.4).

If more high-quality candidates do not enter the teaching profession, it is conceivable that the new entry requirements could exacerbate existing shortages and create new ones. Indeed, it is likely that universities located in regional areas will be more affected by the new entry requirements than other universities, which could have implications for the number of teachers willing to work in regional and rural areas. However, the Commission considers this risk to be slight, if the flexibility clauses included in the entry requirements are appropriately implemented (this includes the proper assessment of the literacy and numeracy skills of graduates as part of the outcome-based assessment processes under the new national accreditation system — discussed below). Measures that are specifically designed to reduce shortages will also be helpful in this regard (detailed in chapter 4).

The scheduled periodic reviews of the new accreditation system will be important in ensuring that the new entry requirements do increase the quality of the teaching workforce but do not exacerbate shortages or have any other unforeseen effects. If no such effects arise, then these reviews should also be used to assess whether a further strengthening of the requirements is warranted and feasible, recognising that measures designed to reduce shortages may also need to be bolstered.

Accreditation of teacher education

Accreditation of teacher education is an important component of the current screening system, and is designed to ensure that graduates from specific teacher education programs are professionally qualified and competent (Ingvarson et al. 2006).

Jurisdictional teacher accreditation systems in Australia, and internationally, have traditionally determined accreditation based on the inputs of training programs (such as course structures, content and the quality of students at enrolment) rather

than the outcomes that they produce (that is, the quality of the graduates). While most jurisdictional accreditation systems do require courses to produce teachers who meet that jurisdiction's graduate level teacher standards (which broadly detail the knowledge and competencies that are required of teachers), course providers are not usually required to demonstrate that graduates actually do meet these standards.

Placing too much weight on specific input-based measures is likely to lead to a number of potential problems. First, it runs the risk of consolidating conventional wisdom about the best approaches to preparing teachers, thereby leading to greater uniformity of programs and reducing scope for innovation (OECD 2005). This concern is heightened by the lack of Australia-specific, and limited international, evidence regarding what aspects of pre-service training are most effective.

Second, most input-based requirements do not account for the quality of the training actually provided, limiting their use as a proxy for the quality of graduates produced. While an examination of teaching quality surveys and site visits can be useful in this regard, a proper assessment of the quality of every aspect of a training course is likely to be very difficult to achieve. This is somewhat supported by research (Ingvarson et al. 2005; Ingvarson, Beavis and Klienhenz 2007) that demonstrated the significant variation in graduate teachers' views on how well their accredited courses prepared them for their first year of teaching. It is for this reason that Ingvarson et al. (2006, p. 31) concluded in their review of teacher education accreditation that input-based measures are 'all of dubious validity as indicators of how well a course is preparing teachers to teach'.

In contrast, accreditation systems which focus more on the outcomes that courses produce, rather than their inputs, are unlikely to be affected by these problems (OECD 2005). By focusing on outcomes, the quality of training received by graduates is implicitly accounted for. Additionally, by placing fewer restrictions on the inputs of courses, such systems provide teacher education institutions with greater scope to innovate with regard to teacher preparation.

However, this does not mean that input-based measures have no place in an accreditation system. Outcome-based measures will not be available when newly developed courses seek initial accreditation, leaving input-based measures as the only viable means for determining course accreditation. Furthermore, the development and subsequent collection of outcome-based measures is likely to involve significant costs, whereas most input measures are relatively easy to collect. Thus on cost-effective grounds, there is a role for some of the more useful input measures to be used in the accreditation process.

The process for accrediting teacher training courses in Australia is becoming more outcome focused. As part of the teaching quality agenda, the states and territories have agreed to a new national system for accrediting pre-service teacher education courses, based on standards developed by the Australian Institute for Teaching and School Leadership (AITSL) (box 5.7). Like most current jurisdictional systems, this new system will require courses to have specific structural features and include certain types of content in order to be accredited (and reaccredited). The system is also designed to accredit programs on the basis of whether their graduates possess the skills, knowledge and attributes that are expected of graduate teachers under the new National Professional Standards for Teachers (also developed by AITSL). However, in contrast to most jurisdictional accreditation systems, training providers will also need to demonstrate, through the provision of outcome-based measures, that their graduates actually meet the graduate standards in order to be reaccredited (which generally occurs every five years).

Box 5.7   National accreditation of pre-service teacher training

In April 2011, the Ministerial Council for Education, Early Childhood Development and Youth Affairs approved a new national accreditation system for pre-service teacher training courses. It was developed by AITSL in consultation with a wide range of stakeholders, including government organisations, pre-service training providers and education unions. When implemented, the new system will replace the current individual state and territory accreditation systems.

The accreditation of training courses will continue to be undertaken by the relevant state and territory authorities, but use agreed national accreditation processes.

AITSL is required to undertake a periodic review of the national standards and accreditation processes at least every four years to ensure that relevant research and the outcomes of international benchmarking studies are incorporated.

The timetable for transitioning to the new system is still to be negotiated. However, the first nationally accredited programs are unlikely to commence before the 2013 academic year. Even then, programs will not need to be separately accredited under the new system until their current jurisdictional accreditation ends.

Source: AITSL (2011b, 2011c).

As detailed by Ingvarson (2012), such a demonstration could involve the use of the following types of outcome measures:

- classroom observations
- tests of professional knowledge
- portfolio assessments
- surveys of graduate preparedness
- achievement tests of students taught by graduate teachers.

For reasons previously detailed, the Commission supports the general principle of a more outcomes-focused accreditation system. The question therefore is whether the outcome-based approach included in the new national accreditation system will be effective in practice. In this regard, some study participants were concerned that the processes would not be rigorous, leading to doubt as to whether graduate teacher quality would ultimately improve.

While it may seem reasonable to suppose that the shift to a more outcomes-focused accreditation system will lead to improved student outcomes (assuming that any demonstrable inadequacies are addressed), the size of these gains are unknown. Wilson and Youngs (2005) and Ingvarson (2012) noted that almost no research has been undertaken that analyses the effects of different types of accreditation on student outcomes. Thus, it is vital that the new accreditation system is thoroughly reviewed to assess whether it provides a robust system of quality control for pre-service training. In this regard, AITSL is required to review the national accreditation processes at least every four years. It will be important for any changes resulting from those reviews to also draw on relevant future research regarding the effectiveness of different accreditation systems (box 5.7).

The absence of guidance regarding evidence

One notable concern expressed by study participants is that the national standards for graduate teachers are too generic and the requirements for evidence too vague for accreditation panels to objectively and consistently assess whether courses are producing high quality graduates. It was similarly argued that some training providers may find it difficult to determine what evidence will be sufficient to demonstrate to the accreditation authority that their graduates meet the required standards. The concerns have some merit as, aside from stating that course providers must demonstrate that their graduates meet the required standards to be reaccredited, the information currently available offers no guidance on how such outcomes will be assessed under the new national accreditation system.

The Commission understands that AITSL plans to develop additional guidance regarding this outcome assessment process. The development of this guidance, which will involve consultation with training providers, has the potential to ensure sufficient consistency between the decisions of different accrediting authorities, and to provide training providers with suitable direction in the collection of performance indicators. The Commission considers that it would be appropriate for this guidance to adhere to the following principles:

- multiple sources of evidence should be used, given that individual measures are unlikely to be relevant in all circumstances (Ingvarson et al. 2006)

- training providers are given some flexibility to choose which outcome measures they provide (including measures not specified in the guidance). Enabling providers to select and develop measures that they consider to emphasise the particular objectives of their courses should limit the risk of undervaluing training programs which actually meet the needs of schools and the community. However, it is important that training providers demonstrate that the evidence that they provide is valid and reliable

- the costs of collecting evidence are not unnecessarily burdensome. Thus it is likely to be appropriate for outcome measures which are costly to collect to be based on a random sample rather than a census.

While providing evidence under the new national accreditation system will be relatively straightforward for training providers that have already developed standards-based outcome measures, such as Deakin University (box 5.8), many training providers will need to develop their own outcome measures. The process of developing and trialling appropriate measures has the potential to be quite resource intensive. Therefore, there is a case for AITSL, as part of the aforementioned guidance, to provide examples of different outcome measures that training providers can use (possibly after tailoring them to their circumstances) to demonstrate the competency of their graduates.

However, it is also important that the development of these example measures is cost-effective. For instance, significant resources could be employed to develop a suite of professional knowledge tests which cover different teaching specialisations, similar to the US 'Praxis II' assessments (box 5.9), The development and ongoing revision of such a detailed set of measures would require extensive research and should only be undertaken if there are material net benefits.

Box 5.10   **Accreditation panel membership**

Under the new national accreditation system, jurisdictional teacher accreditation authorities will select local individuals to comprise the accreditation panel for the submitted program. AITSL will then nominate to the accreditation panel at least one person from a different state or territory. All panel members need to have undertaken a national training program before being appointed to an accreditation panel.

Accreditation panels will generally comprise between four and six members, ensuring at least the following areas of experience and expertise are represented:

• currently registered teachers

• teacher educators

• employers of teachers

• other community or specialist personnel as relevant.

Source: AITSL (2011c).

The implementation of AITSL's guidance, and the new accreditation system more generally, will be a key determinant of the new system's success. As this implementation will be the responsibility of individual accreditation panels, it is important that these panels are properly resourced and populated with competent, experienced and properly trained individuals (box 5.10).

It is also important that this guidance, and its implementation, is thoroughly reviewed as a part of the broader process for reviewing the effectiveness of the new accreditation system. One objective of this review should be to assess whether there is relevant research regarding the validity of different outcome measures that should be incorporated into the provided guidance and its example measures.

RECOMMENDATION 5.1

The Australian Institute for Teaching and School Leadership should publish guidance (with examples) on the evidence that training providers are expected to use to demonstrate that their graduates meet the Graduate Teacher Standards. This guidance should adhere to the following principles:

• *multiple sources of evidence are used*

• *training providers are given some flexibility to choose which outcome measures they provide*

• *there are processes for verifying the validity of evidence that is provided*

• *the collection of evidence is cost-effective.*

To aid the development of this guidance, the Standing Council on School Education and Early Childhood should commission research that evaluates the reliability of different outcome measures which could be used to assess teachers' professional knowledge and performance against the Graduate Teacher Standards.

Increasing the length of graduate entry courses

The new accreditation arrangements require graduate-entry teacher training courses to be at least two years in length (box 5.11). This change was adopted in response to concerns that one-year courses are not long enough to adequately prepare pre-service teachers for teaching (AITSL 2011b). A number of participants reiterated these concerns (AITSL, sub. DR81; IEUA, sub. DR92; NSW Department of Education and Communities, sub. DR84; Queensland College of Teachers, sub. DR79; University of Tasmania — Faculty of Education, sub. DR86). The Queensland College of Teachers (sub. DR79) noted that a recent review of teacher education in Queensland recommended increasing the minimum length of courses to two years (Caldwell and Sutton 2010).

Box 5.11   Course lengths under the national accreditation standards

Program standard 1.3 of the Accreditation of Initial Teacher Education Programs in Australia — Standards and Procedures states that education qualifications can be structured in any of the following ways:

- a three-year undergraduate degree providing the required discipline knowledge, plus a two-year graduate entry professional qualification

- an integrated qualification of at least four years comprising discipline studies and professional studies

- combined degrees of at least four years covering discipline and professional studies

- other combinations of qualifications identified by the provider and approved by the teacher regulatory authority in consultation with AITSL to be equivalent to the above, and that enable alternative or flexible pathways into the teaching profession.

Source: AITSL (2011c).

Requiring pre-service teachers to undertake a two-year graduate qualification is likely to increase the skills and knowledge of graduates as they can be taught a greater amount of course material and undertake more practicum than in a one-year course. That said, the magnitude of these gains is still unclear. There will be little benefit from increasing the length of courses when the training provided is poor — a relevant consideration given the scepticism with which some participants view the claim that the new accreditation system will improve the quality of pre-service training courses.

While increasing the length of more effective courses may lead to larger gains, it is not clear from available evidence how significant they would be or whether they would persist beyond the initial years of teaching once teachers have had the chance to learn through on-the-job experience. Furthermore, it is possible that a strengthening of the mentoring, induction and professional development that early teachers receive would be a more effective means of improving teacher quality (box 5.12).

Currently, all jurisdictional accreditation systems allow for one-year graduate entry training courses. And while there has been a noticeable increase in the number of universities providing two-year (or intensive one and a half year) master's degrees over recent years, a significant number of teachers are still trained through the one-year route. Approximately 70 per cent of teachers who completed a postgraduate pre-service teaching course in 2010 (the most recent data available) undertook a one-year course (DIISRTE 2011).

The number of teachers entering the profession through alternative pathways — which typically involve teachers receiving much less university-based training than a two-year master's course — could also be significantly curtailed under the new accreditation standards. While the new standards allow for alternative pathways to teaching, they will only be allowed in cases where the relevant registration body, in consultation with AITSL, deems them to be equivalent to a two-year postgraduate training program (box 5.11). The extent to which on-the-job practical experience and professional development would be considered equivalent to university-based training is unknown. If it is not considered, then teachers entering through alternative pathways will need to undertake significantly more university-based training than currently (Teach for Australia, sub. DR89).

> **Box 5.12   Evidence of the benefits of longer pre-service training**
>
> The empirical evidence regarding the benefits of longer training on teacher performance and student outcomes is mixed. In particular, it has been difficult for researchers to distinguish between the effects of course quality, graduate attributes and course length.
>
> As discussed in section 5.1, empirical evidence suggests that there is a relatively small difference in student outcomes between traditionally trained teachers and teachers who enter through alternative pathways with very limited teacher training. This suggests that additional training may have limited benefits relative to approaches that strengthen the support available for early career teachers. However, it could also be that these courses are of low quality, and that increasing the length of courses that are of a higher quality could have significant benefits.
>
> In an Australian context, Louden et al. (2010) found that master's degree students in their final year of study had a greater knowledge of literacy and mathematics teaching than other final-year teaching students, including one-year graduate diploma students. However, given the very small sample of master's degree students in this study, it is again unclear whether it was the specific characteristics of these programs or the length of the training that were responsible for the improved results.
>
> Finland's experience is often cited in support of additional training for teachers (AITSL, sub. DR 81 attachment 1), given its strong performance since requiring all teachers to obtain a master's teaching qualification. Unfortunately, it is difficult to determine the extent to which extra training is responsible for this strong performance, as a number of other schooling reforms took place at the same time (box 5.3). Furthermore, Singapore has managed to receive equally impressive PISA scores, while only requiring a one-year graduate teaching qualification for secondary teachers who already have an undergraduate qualification and a two-year associate degree teaching qualification to teach in primary schools for those with no university qualification (Tan et al. 2007).
>
> Even if an extra year of study is shown to produce more effective graduates, it is currently unclear whether this advantage persists over time as other graduates with shorter training improve their effectiveness through on-the-job practical experience and professional development. If improved outcomes do not persist, it should temper the enthusiasm to expend significant resources increasing the length of pre-service training. It is also important to recognise that students learning from teachers who received less pre-service training would be disadvantaged at least in the short term.

Many participants suggested that two years is the minimum amount of time necessary for pre-service teachers to meet the new Graduate Level Standards (AITSL, sub. DR81; NSW Department of Education and Communities, sub. DR84). Setting aside the uncertainty regarding the effects of an additional year of training, it is also important to consider the different skills and competencies that individuals possess when they begin their pre-service teacher training. For instance, it is conceivable that a training program which was less than two years in length but

only admitted high achieving students, could produce graduates who meet the required standards.

While the long-term impacts on teaching capacity and student outcomes are currently uncertain, what is clear is that increasing the minimum length of graduate-entry courses will have a sizeable cost. For every student who undertakes a two-year graduate entry course rather than a one-year course, the government will need to spend approximately an extra $10 000, while students will incur an extra cost of around $6000.[8] Moreover, by requiring an extra year of study, pre-service teachers will need to forgo up to an additional year's wages — which could be in the order of $50 000 — to enter teaching through a graduate-entry route.[9] And even if the productivity of graduate teachers does increase, in most jurisdictions they are unlikely to receive any extra financial reward to compensate for the additional cost they incur, at least while the remuneration of teachers remains based primarily on length of service.

As noted by the OECD (2005), for some current students these added costs — and lack of benefits — could be sufficient to dissuade them from pursuing a career in teaching. This would be of particular concern in areas like mathematics and science, where there are already shortages and where graduate salaries are already considerably higher outside the teaching profession (AMSI, sub. 31; IEUA, sub. 12).[10] The Australian Mathematics and Science Institute (sub. 31, p. 15) claimed that extending the minimum required length of graduate-entry teacher training to least two years would have a 'detrimental impact on supply'. Similarly, the Western Australian Department of Education noted that this change 'will impact on the State's supply of teachers in the short to medium term' (sub. DR90, p. 7).

Additionally, in light of these costs, some students who wish to enter teaching may decide to enrol in a four-year undergraduate teaching degree rather than undertake a discipline-based undergraduate degree and a graduate teacher training course, as

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[8] If each of the approximately 4000 students that completed a graduate diploma in education in 2010 undertook an additional year of study, and the Australian Government contributed the same amount as at present ($9512 per student in 2012), then the total annual cost to the Australian Government would be approximately $38 million. A student could be required to contribute up to $5648 (under current arrangements) for an extra year of study, or approximately $23 million for all students combined (DEEWR 2011a, 2012b).

[9] The amount of income forgone is likely to be larger if the extra time taken to reach the top of the pay scale is considered.

[10] A significant number of maths and science teachers are trained through graduate entry courses. CRTTE (2003, p. 19) noted that 'between 80 and 90 per cent of those qualifying to teach senior secondary chemistry and physics, and around 75 per cent of those qualifying to teach advanced mathematics, do so through a graduate teacher education course following completion of an undergraduate degree'.

they can be qualified as a teacher in one less year. This may have an effect on the quality of those entering the teaching workforce as it is generally more difficult for pre-service teacher training courses to assess the quality of applicants at the completion of secondary school than it is after the completion of an undergraduate degree.

The size of these costs will partially depend on how the equivalence of other combinations of qualifications is determined under the new arrangements. For instance, if more intensive programs are allowed (for example, a master's qualification completed in one-and-a-half years), the opportunity cost, and subsequent supply reduction, will be lessened.

While a degree of flexibility would make the new arrangements less distortionary than otherwise, the Commission still considers that extending the minimum required length of graduate-entry teacher training to at least two years should not be mandated, due to the lack of evidence regarding the benefits and potential drawbacks. Such a stance is supported by reviews conducted by the OECD (2005) and the Victorian Parliamentary Education and Training Committee (VPETC 2005), which given the costs and the uncertain benefits, considered that it would be better to spend resources on professional development than by extending pre-service training.

Additionally, the Commission considers that if the new accreditation system's outcome-assessment processes are effective and training providers are incentivised to adopt best-practice approaches, then graduate-entry courses will be encouraged to increase in length where it is necessary in the absence of additional input requirements. Any new national registration system which included rigorous and evidence-based processes for assessing whether teachers met the 'proficient' level of the professional standards would strengthen this effect.

The Commission's position was articulated as a recommendation in its draft report. While there was some support for the Commission's concerns (AMSI, sub. DR83; Australian Parents Council, sub. DR80; Business SA, sub. DR74; Western Australian Government, sub. DR90), there was also significant opposition from key stakeholders (for example, AITSL, sub. DR81; IEUA, sub. DR92; NSW Government, sub. DR84; Queensland College of Teachers, sub. DR79; University of Tasmania — Faculty of Education, sub. DR86). Given this, and the fact that jurisdictions have agreed to the new two-year requirement as a part of the national accreditation requirements, it appears unlikely that it will be rescinded, despite the limited evidence favouring its retention.

How to limit the adverse impacts?

If the requirement is not rescinded, governments should implement measures to limit the unintended consequences of extending the minimum length of postgraduate courses. At a minimum, governments should ensure that current employment-based pathways are not disadvantaged by the change. For instance, it is important that any additional on-the-job practical experience that teachers undertake under those pathways is recognised under the new national accreditation system. While the new standards explicitly allow for such pathways, Teach for Australia (sub. DR89) was concerned that they may need to be extended in length to meet the new requirement for a master's-equivalent qualification.

In addition to ensuring that existing employment-based pathway programs are not affected, it would be desirable to at least retain the current scope to introduce similar new programs. For instance, existing arrangements would allow governments to support new forms of employment-based pathways, such as programs where teachers begin unsupervised teaching after one year of training (three semesters in accelerated courses) while they complete their master's level qualification. Indeed, the Queensland Government's Teacher Education Implementation Taskforce (TEIT 2012) argued that it would be more beneficial for teachers if the master's level qualification was obtained in-service rather than at the pre-service level.

Exemptions which permit employment-based pathways, similar to those in Victoria, the ACT and Northern Territory could be adopted in other jurisdictions. This would require changes to legislation in Western Australia and Queensland.[11] In New South Wales, South Australia and Tasmania, only a change of policy by the teacher registration authority would be needed. Extending the use of employment-based pathways in this way is contingent on any future national registration standards permitting jurisdictions to use these exemptions.

If the increase in the minimum required length of graduate-entry teacher training is not rescinded, it is also important that the forthcoming review of the new accreditation system assesses its benefits and costs. If there is little evidence that longer courses are more cost-effective in improving student outcomes then the decision to extend the minimum required length of graduate-entry teacher training

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[11] The Teacher Registration Bill 2011 was tabled in the Western Australian Legislative Assembly by the Minister for Education on 1 December 2011, but has yet to pass. The purpose of this bill is to establish the Teacher Registration Board of Western Australia, which will assume teacher registration responsibilities from the Western Australian College of Teachers. This bill removes the legislative requirement that schools must demonstrate that no registered teacher is available before an unregistered teacher can be employed.

should be revisited. This could draw on information from the new Longitudinal Teacher Workforce study which will include both one and two-year courses (detailed in section 5.5). The decision should also be revisited if the new accreditation system's outcome-assessment processes are found to be effective in incentivising training providers to adopt best-practice approaches.

RECOMMENDATION 5.2

The Standing Council on School Education and Early Childhood should direct the Australian Institute for Teaching and School Leadership to revise its accreditation standards for initial teacher education programs (Program Standard 1.3) so that two-year graduate teacher training courses remain an option rather than a mandatory requirement.

If this requirement is maintained, governments should implement measures to limit the adverse impact on teacher shortages. This could involve greater use of employment-based pathways, including arrangements where individuals can begin teaching after one year of training on the condition that they continue to work towards their teaching qualification. To ensure that use of employment-based pathways are not impeded by extending the length of graduate courses, the new national accreditation system should appropriately recognise courses which substitute university-based training with additional practical experience. The forthcoming review of the new accreditation system should assess the benefits and costs of Program Standard 1.3 and modify it if appropriate.

Graduate-level testing

In an attempt to improve the quality of those entering the teaching workforce, the Queensland Government is currently in the process of implementing a pre-registration test for teachers, which is intended to ensure that teaching graduates have the skills required of them (box 5.13). In essence, this performs the same role as the accreditation system for pre-service training courses by ensuring that individuals who obtain teaching qualifications meet a certain standard.

Currently all employing authorities can introduce additional screening measures if desired. However, the Commission is not attracted to adding an additional layer of mandatory testing to the quality system currently in place. As Santiago et al. (2011) noted, the introduction of such a scheme risks unnecessarily reducing the public's confidence in the accreditation system. Hence, the Commission considers that it is best to first determine whether the new system improves the quality of graduate teachers through a thorough review process, before adding an additional layer of mandatory assessment.

Box 5.13   Queensland pre-registration test for primary teachers

In 2010, the Queensland Government announced the implementation of a pre-registration test for primary-school teachers in response to a recommendation by the Queensland Education Performance Review (Masters 2009). This test, which will be administered by the Queensland College of Teachers, is currently being trialled and will commence for all aspiring primary teachers during 2012.

The test will involve three separate computer-based assessments focused on literacy, numeracy and science. The assessments will test applicants' knowledge of subject content, teaching of the subject, and personal skills (for literacy and numeracy).

Candidates will be able to re-take each element of the test as many times as they wish, if they do not initially achieve a satisfactory result.

Source: QCT (2011).

That is not to say that there is no place at all for performance testing of graduates. Such testing is likely to be an important means for universities to demonstrate that their graduates meet the required standards in order to be reaccredited. However, for this purpose, only a sample of graduates would need to be tested, significantly reducing the burden placed on students and universities.

5.4   Professional development

Teachers will need a greater level of knowledge and skills over their working life than can be covered during their pre-service training. For instance, the 'Top of the Class' (SCEVT 2007) report observed that teachers will often need to:

- stay up to date with the developments in the knowledge base in their discipline area and in corresponding pedagogical approaches

- develop specific skills that complement their current skills set

- take on new functions or roles

- understand and implement new policies.

While these skills and knowledge can sometimes be developed through professional experience, more structured training — commonly termed professional development or professional learning — also plays an important role. According to the 2010 Staff in Australia's Schools survey (McKenzie et al. 2011), the professional development that teachers undertake is most often designed to improve teachers' knowledge of content or subject matter, prepare teachers for curriculum changes, or to assist teachers in developing effective measures for engaging students in subject matter.

Depending on its purpose, professional development can be delivered through a variety of mediums. It can be:

- school-based or undertaken offsite

- delivered externally — by private operators, professional associations and system administrators — or internally

- undertaken in groups or individually

- organised or relatively unstructured.

As the Independent Education Union of Australia observed, professional development can take the form of:

> … professional reading, collegial discussion and team work, professional reflection on students' learning, assessment and reporting, conference participation, staff presentations, in service seminars, action research projects, and formal university studies. (IEUA, sub. 12, p. 2)

Over recent years, there has been a general shift from traditional approaches where training is undertaken offsite and is separated from teachers' day-to-day work towards more school-based professional development (OECD 2005; VPETC 2009).

Professional development is usually linked to teacher-registration processes. In most jurisdictions, teachers are required to undertake a prescribed amount of professional development in order to maintain their registration. Indeed, in New South Wales, to fulfil registration requirements, a certain portion of each teacher's professional development must come from a provider endorsed by the NSW Institute of Teachers (NSW Department of Education and Communities, sub. 14; NSW Institute of Teachers 2011).

The linking of professional development to registration is a partial explanation of relatively high participation rates of Australian teachers in professional development. According to the OECD Teaching and Learning International Survey (TALIS), in 2008 Australia had one of the highest rates of professional-development participation among lower-secondary teachers, (96 per cent over 18 months compared to the average across all surveyed countries of 88 per cent). However, although more Australian teachers participate in professional development, they appear to spend less time in that activity. The average number of days that lower secondary teachers spent participating in professional development was relatively low for Australia compared to the other surveyed countries. Some researchers have noted that in certain high performing East Asian countries, teachers have relatively fewer teaching hours and use the extra available time to undertake additional professional development (Jensen et al. 2012).

How effective is professional development?

Professional development was widely viewed by study participants to be an important tool for fostering an effective teaching workforce. For instance, the Independent Schools Council of Australia submitted that:

> … ongoing professional learning is vital for teachers to be able to maintain their currency of information about teaching and learning as well as to improve levels of performance and student learning outcomes. (ISCA, sub. 18, p. 13)

Likewise, the Catholic Education Commission of Victoria argued that 'professional learning is crucial in providing opportunities to improve practice'(sub. 13, p. 15).

The available empirical evidence regarding the effect of professional development on student outcomes is quite varied. Some research has demonstrated that professional development can have a relatively large effect on student outcomes, while other research has found little or no effect on student outcomes. This is unsurprising as the activities that are labelled as 'professional development' can be quite diverse and resulting outcomes are therefore likely to be highly dependent on the particular circumstances in which those activities are undertaken (OECD 2005). While it is difficult to make strong conclusions given the presence of this variation, empirical research does seem to suggest that professional development, on average, has a moderate impact on student outcomes (Hattie 2009; Timperley et al. 2008; Villegas-Reimers 2003).

Survey evidence suggests that the professional development undertaken by teachers in Australia is reasonably effective in improving teacher performance. For example, the 2010 Staff in Australia's Schools survey (McKenzie et al. 2011) showed that in the six aspects examined, between 65 and 85 per cent of primary teachers thought their professional learning activities over the previous 12 months had increased their skills and capacity to perform their roles to a major or moderate extent.[12] However, the result for secondary teachers was lower, with between 55 and 70 per cent of secondary teachers considering that their professional development had been similarly effective, across the six aspects. The TALIS survey found professional development to be slightly more effective for secondary teachers than the Staff in Australia's Schools Survey, as about 80 per cent of Australian lower-secondary teachers considered the courses and workshops they participated in during 2008 to have had a moderate or high impact on their development as teachers (table 5.1).

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[12] The six aspects examined were: 'effectiveness in promoting student learning', 'capacity to meet learning needs of students', 'capacity to provide effective feedback to students', 'access to useful teaching materials and resources', 'capacity to engage students in worthwhile learning activities', and 'capacity to perform your role at the school'.

Table 5.1 Lower-secondary teachers' perceptions of the effectiveness of their professional development

Form of professional development	Percentage of teachers who considered their professional development to be effective[a]	
	Australia	TALIS average
Courses and workshops	79	81
Education conferences and seminars	68	74
Qualification programmes	79	87
Observation visits to schools	72	75
Professional development network	74	80
Individual and collaborative research	86	89
Mentoring and peer research	73	78
Reading professional literature	66	83
Informal dialogue to improve teaching	86	87

a Percentage of lower secondary teachers who indicated that the professional development they received in the previous 12 months had a high or moderate impact on their development as teachers.

Source: OECD (2009a).

The Staff in Australia's Schools and TALIS survey findings also suggest that the deployment of professional development could be improved. In particular, the TALIS survey established that for each broad type of professional development, a smaller percentage of lower-secondary teachers in Australia considered that it had a high or moderate impact on their development than the average of the other countries participating in the survey.

Participants also raised concerns about the effectiveness of professional development for non-teaching staff (chapter 7), with some contending that school support staff are often required to undertake new and complex tasks (such as implementing new technology systems, managing staff, financial management and dealing with parents) without appropriate training (CPSU/CSA, sub. 16).

Possible areas of improvement

Broadly speaking, there are two possible ways in which the overall effectiveness of professional development could be improved — better matching of training content to the development needs of teachers, and improving the delivery of professional development so that it is more likely to lead to gains in teacher knowledge and practice.

With regard to the former, the 2010 Staff in Australia's schools survey (McKenzie et al. 2011) found that Australian teachers most commonly reported that they required training opportunities which focused on:

- methods for assessing student learning and development

- effective methods for engaging students in subject matter

- developing learning activities relevant to students

- knowledge of the content or subject matter they are expected to teach.

While such information provides education departments and professional development providers with some insight into what forms of professional development are likely to be most beneficial, in most instances it is likely to be too broad to practically help schools meet the individual training needs of teachers.

In contrast, strengthening the link between professional development and performance appraisal is one approach that has the potential to help schools meet the individual development needs of teachers (chapter 6) (Catholic Education Office — Diocese of Toowoomba, sub. 11; Jensen 2011). This is a view supported by a recent review of Australia by the OECD (Santiago et al. 2011), which concluded that the provision of professional development is often not systematically linked to teacher appraisal.

As discussed in chapter 6, measures of student learning are one type of measure that can be used to assess a teacher's performance — and therefore their individual professional development needs — for the purposes of performance appraisal. There is some empirical evidence to suggest that the use of such measures, especially when they are employed directly by the individual teacher, can be a relatively cost-effective means of determining a teacher's individual professional development needs (DEECD, 2011c, Timperley et al. 2008).

Strengthening the link between professional development and performance appraisal should lead to more out-of-field teachers receiving professional development to improve their subject knowledge. Providing this type of training for out-of-field teachers is likely to be a useful means of reducing the effects of subject-discipline shortages in the short term, given that it may take a long time for universities to produce sufficient graduates in shortage areas such as mathematics and science to meet demand (chapter 4).

As was highlighted by Deakin University (sub. 24), there has been a significant amount of research analysing the characteristics of effective professional development, much of which pertains to its delivery. Of particular note is research conducted by Timperley et al. (2008), which analysed the limited body of research

linking professional development to student outcomes. Among other things, these researchers concluded that professional development had the most profound effect when:

- learning opportunities occurred over a significant period of time

- teachers were given the opportunity to engage in professional discourse

- it involved the use of external expertise.

However, again such research is likely to be highly context-specific, and thus may only be useful as a broad guide for schools, teachers and professional development providers. Furthermore, it generally does not consider the relative costs of different methods for delivering professional development.

The Ministerial Council for Education, Early Childhood Development and Youth Affairs has authorised AITSL to conduct a national conversation on a Professional Learning Charter. The draft charter outlines what AITSL considers to be the characteristics of effective professional development, and invites feedback on how professional development can best support major improvements in Australian education. The Commission supports the development of this charter but considers that strengthening the link between professional development and performance appraisal, to ensure that professional development meets the needs of individual teachers and their schools, will lead to a larger effect on student outcomes.

Institutional impediments

Participants suggested that in some cases institutional impediments are inhibiting the effective delivery of professional development. For instance, study participants noted that it can be difficult for some staff to undertake individual professional development as staff shortages mean that there is no appropriately qualified teacher to replace them. This is a concern which was also explicitly raised in relation to the professional development of non-teaching staff (CPSU/CSA, sub. 16). These difficulties could be addressed to some degree through general initiatives to ameliorate shortages (chapters 4 and 9).

In regard to non-teaching staff, some state education departments have recognised the difficulties associated with providing these staff with professional development and have made concerted efforts to improve the situation. For example, the NSW Department of Education and Communities (sub. 14, p. 11) noted that it provides 'professional learning programs for all school administrative and support staff at every stage of their career'. However, the concerns of some participants would suggest that this view may not be shared by all staff and that there remains a need for governments and schools to reassess their approach to the professional

development needs of non-teaching staff. It is therefore encouraging that the South Australian Department for Education and Child Development recognised the problems associated with the provision of training and professional development for non-teaching staff in a recent discussion draft on the potential directions for reforming the non-teaching workforce (DECS 2011a).

Finally, active participation in relevant professional development is more likely to be forthcoming if the benefits are apparent to the school workers. While that benefit can include improved student outcomes and increased personal satisfaction, at least one participant noted that a financial reward for being a better a teacher could also encourage participation in professional development (National Association of Field Experience Administrators, sub. 1). This could be particularly relevant for teachers who have been employed for more than ten years, given that they have fewer opportunities to have their performance recognised through remuneration.

The Commission emphasises, however, that there should not be an automatic nexus between participation in professional development or the acquisition of higher qualifications and higher pay. As discussed in chapter 6, appointments should be made through a needs-based competitive selection process.

Clearly, the effectiveness of professional development is highly dependent on individual school leaders. School leaders need to accurately assess where professional development is best targeted, given the characteristics of their school and teachers. In particular, as a part of the performance-management process, school leaders have a responsibility to provide teachers with guidance as to the most appropriate form of professional development given their skill and knowledge. The importance of school leaders in this regard will be enhanced as jurisdictional school systems provide greater autonomy to schools and improve school leadership (chapter 8).

5.5   A longitudinal dataset

The Commission considers that the collection of longitudinal data that tracks the experiences of graduate teachers over time would be valuable as it would enable a more rigorous assessment of what aspects of pre-service training — as well as induction and professional development — are most effective for enhancing student outcomes. The collection of such a dataset was strongly supported by participants (Australian Education Union, sub. DR82; Deakin University — School of Education, sub. DR85; NSW Government, sub. DR84; Western Australian Government, sub. DR88).

A longitudinal data collection on graduate teachers from selected universities in Queensland and Victoria was initiated in 2011. This is being undertaken by a group of researchers primarily from Deakin and Griffith Universities, with the assistance of education departments and teacher-registration bodies in Queensland and Victoria (box 5.14).

In early 2012, the research team was commissioned by the Australian Government, on behalf of the Australian Education, Early Childhood Development and Youth Affairs Senior Officials Committee's National Teaching Workforce Dataset Working Group, to undertake a similar longitudinal data collection nationally, which includes graduates from Teach for Australia and other employment-based teacher education programs. This project — titled the Longitudinal Teacher Workforce Study (LTWS) — will track a single national cohort of teacher-education graduates over eighteen months (from February 2012 to June 2013), and is being funded under the National Partnership Agreement on Improving Teacher Quality (with a budget of almost $776 000) (DEEWR, sub. 42).

The LTWS is one of two major projects overseen by this Working Group (the other being the National Teaching Workforce Dataset) which aim to deliver the National Partnership's Facilitation Reform to improve the quality and availability of workforce data. The LTWS has two main components: career progression from teacher education to teaching employment; and the relevance and effectiveness of graduates' teacher education for teaching employment. The LTWS will provide measures, based on the professional standards, of how well graduates are prepared for teaching and link this data to the characteristics of teacher education programs undertaken by graduates.

To a large extent, the national LTWS is an extension of the Queensland–Victoria longitudinal study. For example, the methodology and timing of surveys will be similar. A significant difference is that the Queensland–Victoria study includes case studies from around 50 schools to provide more detailed data for a subset of sampled teachers whereas the LTWS will collect less detailed qualitative data. The data being collected in the case studies include student-learning outcomes, drawing on school-based assessment data, NAPLAN results, and teacher and principal reports on student progress.

Box 5.14 **Queensland–Victoria longitudinal data collection**

In June 2011, a group of researchers primarily from Deakin University School of Education and Griffith University Faculty of Education commenced a longitudinal data collection that tracks graduate teachers from selected universities in Queensland and Victoria who are employed in both government and non-government schools. The project is a partnership between these researchers and the Victorian Institute of Teaching, Queensland College of Teachers, Victorian Department of Education and Early Childhood Development and Queensland Department of Education and Training. These agencies are assisting with the identification of graduates and principals from whom data will be collected. Total funding for the project is $693 000, with $293 000 provided by the Australian Research Council under a linkage grant and $400 000 from the Victorian and Queensland departments. The project aims to measure the effectiveness of pre-service teacher education in Queensland and Victoria by employing both surveys and case studies.

All graduates who completed a pre-service training course in Queensland or Victoria in 2010 and 2011 will be asked to participate in the study. Those graduates who agree to be included in the study (approximately 5000 for the 2010 cohort) will be surveyed three times over the life of the project. Graduates who completed a pre-service training course in 2010 are to be surveyed between 2011 and 2013. Graduates who completed their training in 2011 are being surveyed from 2012 to 2013. Aside from demographic information, the collected data are to include beginning teachers' perceptions of their preparation with regard to pedagogy, assessment, behaviour management, and engagement with school stakeholders and local community. Early-career teachers will also be asked to identify links between these perceptions and aspects of their teacher education programs. Principals will also to be surveyed in the graduates' first year in a school. These surveys are collecting descriptive data on schools, as well principals' perceptions of beginning teachers' performance across different aspects of teaching.

Longitudinal case studies are being undertaken in about 50 government schools to provide more detailed data for a subset of sampled teachers. The selected schools are to be distributed across sectors and rural/urban regions, and to capture the impacts of a range of different teacher education courses. The case studies are to be conducted three times (in 2011, 2012 and 2013) and will be based on:

- teacher interviews and self-reports on effectiveness, professional trajectory and career achievements

- interviews of principals

- measures of student-learning outcomes, including school-based assessment data, NAPLAN results, and teacher and principal reports on student progress.

Data gained from both the surveys and case studies will be matched to information on the characteristics and structure of each graduate teacher's pre-service training course to enable an analysis of which aspects of pre-service training are correlated with teacher effectiveness.

Source: Mayer et al. (2010).

The Commission considers that there is strong case for improving on the current design of the LTWS.

- The short duration of 18 months is an insufficient amount of time to adequately measure how well different aspects of pre-service training prepare teachers. Research suggests that practical experience obtained in the first three years of teaching significantly improves the effectiveness of teachers (Hattie 2009; Rivkin, Hanushek and Kain 2005). Therefore, to properly assess the relative capacities of different approaches (including alternative pathways) to increase student outcomes over the long term, in addition to short-term effects, it is necessary to follow teachers until the effects purely attributable to initial on-the-job experience taper off. Furthermore, following cohorts for at least five years would also capture the experiences and performance of those early-career teachers who exit the profession. Therefore, the Commission considers that the LTWS should be extended to follow graduate teachers for at least five years. The Department of Education, Employment and Workplace Relations noted that since the Commission's draft report was released, the Australian Government has 'allowed for flexibility' in the funding agreement for the LTWS to accommodate a five-year duration (sub. DR94, p. 6).

- The Commission sees value in expanding the LTWS to follow more than one cohort of graduate teachers. This would enable an assessment of the effectiveness of any experimentation in the delivery of pre-service teacher training which might occur in the future. On cost-effectiveness grounds, the inclusion of additional cohorts could be deferred for a short period to increase the likelihood of picking up future experimentation in teaching training courses.

- While the surveys to be undertaken as part of the LTWS will provide some useful information on the effectiveness of graduate teachers — such as perceptions of how well their training prepared them to teach from both the teachers themselves and their principals — it would be highly desirable to also include more objective measures of teacher effectiveness. As noted above, the case studies being undertaken as part of the Queensland–Victoria longitudinal data collection include the collection of information on student-learning outcomes (while noting the limitations of such measurement). Additionally, it is important that measures that assess the ability of teachers to meet the needs of disadvantaged students are collected, given the concerns that participants raised regarding this issue (chapter 9).

- The Commission sees value in collecting information on what factors influence where graduate teachers seek employment and the reasons why early career teachers leave their initial school of employment. For reasons discussed in chapter 9, the Commission considers that it would be particularly useful for this study to ask graduate teachers who teach in disadvantaged schools to rate the

extent to which factors such as training experiences and financial incentives contributed to their decisions to work at these schools. The collected information would help to improve the effectiveness of policies that aim to attract teachers to disadvantaged schools.

- The surveys of graduate teachers, as currently designed, will ask them to assess the usefulness of the induction and mentoring they received, and will ask principals to note whether such arrangements exist at their school. Additionally, the Commission understands that these issues will be a specific focus of the case studies that will be undertaken in Queensland and Victoria as a part of the original study. A more detailed understanding of the effect of induction and mentoring on teacher effectiveness could be gained by expanding the data collected to include:
  - graduate perceptions of the quality of the induction and mentoring processes, irrespective of how useful it was to them
  - more detailed information on the characteristics of induction and formal mentoring received by graduate teachers. This should include the length of time spent undertaking induction programs, the frequency with which graduates met with their mentor, and the experience level of the mentor.

The LTWS should have a sufficiently large sample to undertake useful analysis, given that all graduate teachers in Australia will be asked to participate. However, if the response rate of the first cohort is considered inadequate, it may be warranted to link survey responses for future cohorts to teacher registration.

Improving the LTWS as suggested above will have an associated cost, but this will be relatively small compared to the potential benefits. Australian expenditure on teacher training is around $450 million annually (Department of Industry, Innovation, Science, Research and Tertiary Education 2011). In contrast, the current budget for the LTWS is almost $776 000 and for the Queensland–Victoria longitudinal data collection it is $693 000.

Finally, while the information collected by both longitudinal data collections will be analysed by the team conducting them, it is important that the data are also made readily available to other researchers. The data collections are being funded largely by taxpayers and there is a strong public-interest case for having as many researchers as possible analyse the data. However, appropriate safeguards will be necessary to ensure that the privacy of individual teachers is protected.

The Australian Government should expand the Longitudinal Teacher Workforce Study to:

- *follow graduate teachers for at least five years*

- *track more than one cohort of graduate teachers to enable analysis of any future experimentation in pre-service training, induction and professional development*

- *include additional measures of teacher effectiveness (including the effectiveness of responding to disadvantaged students)*

- *gather detailed information on the induction and mentoring arrangements that graduate teachers undertake*

- *collect information on what factors influence where graduate teachers seek initial employment, and why early-career teachers leave their initial place of employment.*

The Government should ensure that the collected data are made readily available to researchers to stimulate an informed debate about how to improve the effectiveness of pre-service teacher training in Australia.

6   Teacher performance

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Key points

- For teachers to continue to develop professionally, they need high-quality performance appraisal. While a majority of schools can claim to have a performance appraisal system, it is failing to deliver the necessary feedback and support that many need. Further reform is required.

- Principals and teachers should have a major role in determining how appraisals are undertaken in their school.
    - This should include the use of school-based indicators and criteria, with more than one method used to gather evidence — including an indicator of student outcomes — so that various dimensions of performance are captured.

- Central agencies should play a supporting role by providing schools with broad guidelines and templates, sufficient resources to maintain an effective appraisal system, training, and guidance on performance measures and data management.

- Ongoing unsatisfactory performance by a teacher rarely leads to dismissal or other disciplinary action. Alongside improving performance appraisal, governments should delegate to government school principals the authority to take disciplinary action. For schools that do not meet the prerequisites for such delegation, governments should reform the centrally-determined procedures they require schools to follow so that there is more timely and effective intervention.

- There is limited use of performance-based remuneration in Australian schools.
    - Pay increments are notionally conditional on satisfactory performance, but are rarely withheld in practice. Nevertheless, current increment systems appear to be a cost-effective means of rewarding performance improvements typically observed in new teachers in their first few years of teaching.
    - Advanced-skill teacher positions have merit, but they only provide a single higher-paid classification for a relatively small number of more effective teachers.
    - Teacher performance bonuses are rare in Australia, and there is much to learn about how to design an effective bonus system. A current trial in some Victorian schools may provide further insights, but such experiments are unlikely to result in a widely-applicable system in the foreseeable future. Thus, efforts to improve teacher performance should not focus on the use of bonuses.

- The Australian Government should reformulate its Reward Payments for Great Teachers initiative to facilitate future consideration of a performance-based career structure for teachers. The initiative should be designed so that reward payments are only provided to high-performing teachers, and it does not entrench an expectation that higher certification automatically entitles teachers to higher pay.

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Empirical research confirms that, for a given student, schooling outcomes primarily depend on what their teachers know and do (Hattie 2009; OECD 2009c). The research also confirms, as every student, parent and principal knows, that there is marked variation in teacher effectiveness (Australian Institute for Teaching and School Leadership (AITSL), sub. 39; Podgursky 2009). Thus, there is a need to focus on how schools and education authorities can encourage and support teachers to become more effective. In addition to pre-service training, approaches to improve performance include:

- mentoring

- professional development

- performance management (through appraisal, feedback and support)

- management of unsatisfactory performance

- performance-based remuneration.

These approaches are not mutually exclusive but inter-related. Mentoring and professional development are examined in chapter 5. This chapter focuses on the use of appraisal and feedback to facilitate high-quality teacher performance, as well as the related issues of managing unsatisfactory performance and performance-based remuneration.

6.1   Current approaches to performance appraisal

For teachers to continue to develop professionally, they need high quality performance appraisal. While a majority of Australian schools can claim to have a performance appraisal system, there is clear evidence that many teachers are failing to receive the feedback and support they need.

The Grattan Institute (sub. 30) concluded that the current system of appraisal and feedback has serious shortcomings and little impact on teachers' careers or student learning in classrooms. The Australian Government's Department of Education, Employment and Workplace Relations (DEEWR, sub. 42, p. 19) similarly noted that 'teacher evaluation needs to be more systematic and meaningful and provide a better indication of where teachers are at in relation to career progression'. The SA Department of Education and Children's Services (sub. 35) commented that until very recently its performance management procedures did not meet the current needs of schools. It has therefore developed a new system that involved shifting from a prescriptive step-by-step procedure to a set of high-level principle-based guidelines.

Further evidence on the need to improve performance appraisal comes from an OECD survey of lower-secondary teachers in 2007-08. Around 60 per cent of surveyed Australian teachers thought that appraisal of their work was largely done to fulfil administrative requirements and had little impact on the way they teach (OECD 2009a). Around 70 per cent thought that a teacher would not be dismissed in their school for sustained poor performance, and about 90 per cent did not think that they would receive any recognition for improving the quality of their teaching.

The findings of various recent reviews are also critical of performance management arrangements for Australian teachers. For example, a study commissioned by the Ministerial Council for Education, Early Childhood Development and Youth Affairs (Nexus Strategic Solutions 2009) made a number of findings.

- Most appraisal systems lacked a succinct set of criteria against which a teacher's performance could be assessed. Some system policy statements included suggestions that schools use standards as a guide, others made no reference to standards and some schools (particularly independent ones) developed their own.

- There was a multiplicity and complexity of documents associated with performance management that inhibited its usefulness for busy schools.

- Monitoring processes focused on whether appraisals were being conducted, rather than on their effectiveness. The Victorian Auditor General's Office (VAGO 2010) made a similar finding in an audit of performance management in Victorian government schools.

- Responsibility for performance management training generally resided with individual schools, and costs typically had to be met from existing resources.

- Independent school associations and catholic-education offices tended to focus on performance management for school leaders, although some did, or were starting to develop, policies for all teachers.

More recent reviews by the Australian Government (DEEWR 2010b), OECD (Santiago et al. 2011) and Jensen (2011) confirm that arrangements continue to vary between jurisdictions for government schools (box 6.1).

There appear to be no studies that have systematically documented appraisal policies for teachers in the non-government sector, possibly reflecting a continued absence of formal policies in many cases. The OECD review reported that, unlike government schools, performance management in the non-government sector may not be mandated, and there is considerable variability in objectives, in the number of schools with formalised programs, and in the frequency of appraisals(Santiago et al. 2011). Nevertheless, there are case studies of individual schools that do have formal policies. Jensen (2011), for example, reported the use of

360-degree feedback and student surveys at Anglican Church Grammar School ('Churchie') in Brisbane. He also reported that appraisal and feedback at Methodist Ladies College in Melbourne is based on each teacher setting clear classroom objectives, with the focus often on curriculum and classroom teaching.

Box 6.1   Performance appraisal and feedback in government schools

All jurisdictions have a system of annual teacher performance appraisal for their government schools, with principals typically assigned responsibility for providing feedback to teachers. However, the details differ across jurisdictions.

Arrangements in South Australia, Western Australia and the Northern Territory are derived from policies used for all government employees. In the Northern Territory, classroom observation is mandatory for the development of a teacher's performance plan and performance data is a required input for performance reviews.

In other jurisdictions, policies tend to be more school specific. NSW teachers have to satisfy professional standards and show continuing efficiency, satisfactory performance and professional growth. Types of evidence expected to be used in appraisals are conferences between the teacher and principal; observations of educational programs; and a review of documentation such as lesson planning, lesson material and student work and evaluations and reports. A Teacher Assessment and Review Schedule includes the standards used to assess and develop teacher performance in alignment with the NSW Institute of Teachers' Professional Teachers Standards.

In Victoria, teachers have to demonstrate their skills against professional standards set by the education department. These describe the responsibilities for three career stages (graduate, accomplished and expert teacher).

Professional standards are also used as a reference point in Queensland schools, but they are not explicitly linked to appraisals. Queensland also differs from other jurisdictions by conducting appraisals on a team basis, rather than for individual teachers.

In Tasmania, teachers must have a performance plan that is guided by their role description. Teachers in the ACT are assessed against expected skills that are based on years of experience.

Jensen (2011) found that teachers are almost always required to provide their own evidence on how they have met performance requirements, with little consistency in the methods and types of evidence used. He further noted that only teachers in Victoria and the ACT are required to identify professional development as part of the appraisal process. However, the Developing Performance Framework used in Queensland does specify professional development as a matter to be considered at each step in its processes.

Sources: DEEWR (2010b);   Jensen (2011);   DET (Queensland) (2010);   Santiago et al. (2011); SA Department of Education and Children's Services (sub. 35).

The absence of a systematic approach to performance management is also evident when comparing individual schools. For example, the authors of the recent OECD review noted that they had seen examples of principals establishing well-structured performance management processes, but that other principals perceived performance management as simply 'signing off' a teacher's salary increment and recording their professional development needs (Santiago et al. 2011). As a result, they concluded that 'there are no guarantees in Australian schools that performance management processes are addressing the real issues and complexities of teaching and learning' (Santiago et al. 2011, p. 86).

Moreover, the OECD (Santiago et al. 2011) and Jensen (2011) found that the identification of professional development needs is not always a requirement of performance management processes. The OECD review noted that 'even though the necessity of professional development is widely recognised in Australia, the review team formed the view that its provision appears not thoroughly planned, fragmented and not systematically linked to teacher appraisal' (Santiago et al. 2011, p. 88). The Catholic Education Office (Diocese of Toowoomba) (sub. 11) observed that linking performance management with professional development would help to increase the benefits from that development.

Since 2009, the Australian Government has, in collaboration with each jurisdiction, sought to facilitate reforms through the National Partnership Agreement on Improving Teacher Quality. Among other things, this provides financial incentives to establish or improve performance management systems, and improve pay dispersion to reward quality teaching (box 6.2). However, jurisdictions' progress reports for this national partnership suggest that it has, from a national perspective, led to relatively minor changes in performance appraisal systems.[1] This is consistent with the findings of the above-mentioned reviews.

In light of the above, the Commission considers that further reform of teacher performance appraisal and development should be a high priority. Specific reform initiatives are considered in the next section. The Commission also notes, however, that the case for change is greater in some jurisdictions and sectors than others, given the variability of existing approaches and that some education authorities are currently in the process of reforming their arrangements.

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[1] Based on jurisdiction reports on the Smarter Schools website (www.smarterschools.gov.au).

| Box 6.2 | **National Partnership Agreement on Improving Teacher Quality** |

The National Partnership Agreement on Improving Teacher Quality (NPAITQ) is an agreement between the Australian, state and territory governments to deliver reforms to attract, train, place, develop and retain quality teachers and leaders in schools.

The Australian Government has allocated an indicative amount of $550 million over 2008-09 to 2012-13 to fund initiatives under the NPAITQ. This includes $444 million of direct funding to the states and territories, most of which will be 'reward' payments subject to meeting performance targets (assessed by the COAG Reform Council). The remaining $106 million is to be retained by the Australian Government to fund the development of school principals ($50 million) and joint national activities ($56 million).

Many of the initiatives funded under the NPAITQ are not specifically for changes to teacher appraisal. However, the NPAITQ does list the establishment of, or improvement in, performance management systems as being eligible for (facilitation) funding. In addition, 'improved pay dispersion to reward quality teaching' is listed as a reform that is eligible for (reward) funding.

Each jurisdiction periodically reports progress under the NPAITQ, with the relevant reports made available on the Smarter Schools website (www.smarterschools.gov.au). Those progress reports mention a relatively small number of changes to performance management systems and associated financial rewards, including:

- introduction of a temporary more highly paid position for highly-accomplished teachers (New South Wales)

- a trial of alternative performance pay systems (Victoria)

- reviews of, and revisions to, performance management policies in government schools (South Australia, Western Australia and the ACT).

Changes associated with performance management have also been reported for non-government schools, albeit on a smaller scale than for the government sector. The Catholic Education Commission of Victoria (sub. 13) noted that work was being done on identifying and rewarding high-performing teachers in Victorian catholic schools.

Sources: Australian Government (2011c); CRC (2010); National Partnership Agreement on Improving Teacher Quality; state and territory progress reports on the Smarter Schools website (www.smarterschools.gov.au).

6.2   Enhancing performance appraisal

Reforms to address current deficiencies in teacher performance appraisal and development should be tailored to reflect the diversity between and within school sectors. Principals and teachers should have a major role in determining how performance management is tailored to the circumstances of their school. Indeed, without their input it is likely that many teachers will continue to perceive

performance management as a bureaucratic requirement imposed from above (Australian Education Union, sub. 28).

The central agencies that oversee schools — particularly state and territory education departments and catholic education offices — should support the reform of teacher performance appraisal by:

- requiring the schools they oversee to develop and maintain an effective performance appraisal system for teachers

- providing schools with broad guidelines and templates, sufficient resources to maintain an effective appraisal system, performance appraisal training, and guidance on performance measures and data management

- monitoring the effectiveness of performance appraisal, rather than just compliance with specific processes.

In the case of government schools, support may be best delivered through the relevant regional office of the education department. Central bodies that oversee non-government schools — such as state and territory catholic education offices and independent school boards — can play a similar supporting role in their sectors. The Australian Government will continue to have a role in facilitating cooperation across jurisdictions when there is a case for doing so, such as in the development of generic standards and performance measures. In such cases, the central role might be assigned to a national agency.

The remainder of this section examines specific components of the proposed reform agenda.

Teaching standards and performance measurement

A starting point in assessing teacher performance is to define a set of standards that specify the characteristics of quality teaching (Mancera and Schmelkes 2010). In Australia, schools have increasingly used teaching standards as a framework for performance appraisals (Ingvarson et al. 2008). To date, these standards have differed between jurisdictions, although the recently-developed National Professional Standards for Teachers may lead to convergence to a broad framework for performance assessment over time.

The new national standards describe quality teaching in terms of a list of 37 descriptors that a teacher is expected to know and be able to do.[2] Jensen (2011)

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[2] There is a set of 37 descriptors for each of four career stages (Graduate, Proficient, Highly Accomplished and Lead Teacher), resulting in a total of 148 descriptors (AITSL 2011a).

observed that using this as a template for teacher appraisal could exacerbate the perception that performance management is a bureaucratic exercise. Professor Lawrence Ingvarson (sub. DR67) noted that this concern may be overstated, since the standards only comprise seven areas against which teachers will be assessed, with the descriptors providing further illustration of how to satisfy the seven areas.

In any case, standards are not by themselves sufficient for performance appraisal because they usually only describe what teachers should know and be able to do, rather than specifying practical and valid measures of performance (Gerard Daniels Consulting 2009). Thus, the OECD has recommended that Australian schools should use teaching standards as a reference point, but supplement them with school-based indicators and criteria (Santiago et al. 2011).

There is also a general consensus in the literature that appraisals should use more than one method of gathering evidence, because no single approach adequately captures the various dimensions of teacher performance (Ingvarson et al. 2008; OECD 2011c).

There are many potential ways to gather evidence (box 6.3). While it would be impractical to use all of them, schools can draw on a body of literature that reports the lessons from past experience, the pros and cons of different methods, and particular suites of measures that have been recommended by others. For example, Jensen (2011) advocated a system in which schools are required to base appraisals on measures of student performance, plus at least three out of seven other methods.[3] In contrast, Professor Lawrence Ingvarson (sub. DR67) cautioned that many of the potential methods of measuring performance (box 6.3) will require major research, development and piloting before they can be widely used.

The weight that should be given to student performance as a measure of the quality of teaching practice is the subject of ongoing debate. Hence, it is not surprising that an international comparison by the OECD (2009c) of performance management practices found that approaches vary, and continue to evolve, within and across countries. In Australia, the 2007-08 OECD survey of lower-secondary teachers suggests that student performance is only one of many aspects considered in appraisals and feedback, and is often not a major consideration.

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[3] The seven other methods were peer observation and collaboration, direct observation of classroom teaching and learning, student surveys and feedback, 360-degree assessment and feedback, self assessment, parent surveys and feedback, and external observation.

Box 6.3   **Methods of gathering evidence for teacher appraisals**

Many different methods can be used to gather evidence for teacher appraisals, including:

- indicators of student learning, such as test scores and samples of student work

- observation of classroom practices by the principal, a peer, or an external party (such as a principal or leading teacher from another school)

- a portfolio showing examples of the teacher's recent work

- surveys of students and/or parents

- evidence of teamwork with colleagues

- teacher interviews

- tests of teacher knowledge

- teacher self evaluation

- evidence of professional development.

There is a consensus in the literature that more than one method should be used because no single approach can adequately capture the various dimensions of teacher performance. For example, classroom observations can provide insights that are not revealed in standardised tests, which often only cover specific subjects taught by a subset of teachers (OECD 2011c). Classroom observations are compulsory for teachers in the Northern Territory and inform the development of their performance plans (DEEWR 2010b).

It is also important to use evidence from more than one source because principals, teachers, peers, parents, students and external parties do not value the same teaching capacities and knowledge, do not refer to the same collection of evidence, and have different perceptions and degrees of objectivity (Isoré 2009). For example, studies indicate that principals are particularly effective at identifying the very best and worst teachers, but have less ability to distinguish between teachers within those extremes. External reviewers can assess teachers relative to system-wide professional standards and know the specific content and skills for each teaching area, but are less able to adapt to the school context, problems and values.

However, principals should have responsibility for ensuring that individual appraisals are undertaken, with this responsibility possibly delegated to a senior teacher, as is currently the common practice in Australia (Jensen 2011; Santiago et al. 2011). This ensures that appraisals take account of local circumstances, while making it clear to principals that they are accountable for performance management in their school.

Using measures of student performance

The measurement and use of data on student performance is a particularly contentious issue. As noted by the Australian Education Union (sub. 28), the term

'student outcome' can have a range of meanings. This includes student attendance and retention rates, academic achievement, fulfilment and wellbeing, interpersonal or social relationships, and various types of participation in and contributions to school and general community life.

These wider perspectives are rarely reflected in student outcome measures, which are often based on standardised tests that only cover a subset of subjects and students. The OECD (2009c) has noted that such tests have gained popularity in the United States, but they capture only a fraction of the contribution that teachers make to student outcomes, and most teachers do not instruct in a tested grade or subject. Similar criticisms have been directed at the use of test scores in Australia, including in relation to the National Assessment Program — Literacy and Numeracy (NAPLAN) (for example, Australian Education Union, sub. 28; Australian Primary Principals Association, sub. 41; Centre for Research in Educational Futures and Innovation, sub. 24; SA Department of Education and Children's Services, sub. 35). While the Commission considers that NAPLAN is a positive development and observes that its coverage of grades and subjects is significant, it recognises that NAPLAN does not, and cannot be expected to, cover the wider perspective of performance for every student.[4]

The partial nature of student tests could encourage teachers to focus on improving what is measured (and measurable) even if this comes at the expense of other important aspects of schooling (Australian Primary Principals Association, sub. 41; Isoré 2009; Neal 2009; OECD 2009c). This is particularly the case if test results were the sole basis for determining performance based remuneration. There may also be an incentive for teachers to avoid certain schools, and shift their efforts to students who are most likely to maximise the teacher's chances of earning a reward — such as students who are close to a pass mark — at the expense of those who are behind or ahead (Isoré 2009; Neal 2011). Isoré (2009) noted that such an approach may even reward cheating by giving teachers an incentive to provide students with test questions and answers in advance.

A further concern arises when student test results are used to give teachers feedback on how they are performing relative to their peers. The literature shows that a large proportion of the variance in student outcomes is due to factors not controlled by a teacher, such as students' ability and socioeconomic background. A performance appraisal system will focus, more appropriately, on the outcomes achieved by students that reflect what teachers know and do. High-quality teachers can also have

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4 NAPLAN involves annual tests of numeracy, reading, writing and language conventions (spelling, grammar and punctuation) for all students in years 3, 5, 7 and 9 on the same days using national tests.

an impact on student achievement for several years after having taught them. Thus, there has been interest in using statistical methods to isolate the impact that current teachers have on test scores. This involves the use of 'value-added' models that seek to control for the effects of non-teacher factors and past teaching.

It is not yet common practice for education systems to use value-added models as part of performance management, but they are used in countries with many years of experience in standardised student assessments, particularly the United Kingdom and United States (OECD 2011c).

There are a variety of technical issues associated with value-added models that are beyond the scope of this report, and there is an ongoing debate on the most appropriate methods and how to use the results. At their current stage of development, it appears that value-added models are more appropriate for comparing schools rather than teachers, because existing data and models are not yet sufficiently robust to make valid comparisons at the teacher level (Isoré 2009; Jensen 2011; OECD 2009c).

Reflecting the above concerns, Hattie (2005) argued that there needs to be a shift away from system-driven demands for data and towards greater emphasis on how individual schools and teachers use quantitative evidence to track their performance and make improvements.

In conclusion, measures of student outcomes should, at best, be used in combination with other evidence, such as the means employed by teachers for achieving those outcomes. This could include an assessment of the knowledge and skills the teacher has acquired and whether their classroom practices are consistent with quality teaching. Feedback from peers, parents and students could also be used.

Stakeholder engagement and phasing in reforms

An effective performance appraisal and development system requires school leaders and teachers to play an active part in its design. They need to be confident that the system is constructive and useful. At present, however, there is a broad range of views about teacher evaluation, from pessimistic (for example, Australian Education Union, sub. 28) to optimistic (Grattan Institute, sub. 30).

On balance, the weight of arguments should favour the development of evaluation options which provide useful feedback and support to teachers. Depending on the existing workplace culture and the capacity for change (including the leadership skills of principals), there can be a case for gradually phasing in any changes. AITSL (sub. 39, p. 10) observed that time will be required for 'broad and extensive

consultation and trialling and meaningful research' to 'ensure performance management processes … are focused on improvement and result in system improvement'.

Resourcing

The resources devoted to performance management is another key determinant of its effectiveness. This includes training assessors to provide constructive feedback that leads to improved teacher performance, and providing support to teachers to understand appraisal procedures and to benefit from the evaluation results (Santiago et al. 2011). Moreover, there should be adequate resources to follow up appraisals with identified professional development.

Another resourcing consideration is to ensure that assessors and teachers have adequate time to prepare for, and undertake, appraisals, as well as follow-up professional development. The effectiveness of performance management is also very dependent on the availability and capacity of leadership and management within schools. However, the OECD recently observed that Australian school principals generally seem to not have the time to engage properly in the coaching, monitoring, and appraisal of teachers (Santiago et al. 2011). School leadership is discussed further in chapter 8.

External monitoring and support

As noted previously, a major weakness in existing arrangements is that, where monitoring occurs, it tends to focus on whether appraisals are being conducted, rather than on the effectiveness of a performance management system. This contributes to the widespread perception that appraisals are largely undertaken to fulfil administrative requirements.

A more systematic approach to performance measurement and data management could facilitate improved monitoring of the effectiveness of performance management systems, but should not necessarily be seen as the only means of doing so. Another way to source evidence would be through more regular and/or targeted surveys of teachers' perceptions of whether they are receiving useful feedback and support to become better teachers. This would supplement the national and OECD surveys mentioned previously (McKenzie et al. 2011; OECD 2009a), which have a broader focus and are not conducted every year.

Where monitoring identifies scope for improvement in a school's performance management system, assistance by a central agency may be warranted to support the

school. Thus, it would be useful for central agencies to have a clear framework specifying when such intervention would occur and what form it would take.

Many teachers are not being provided with the feedback and support they need to become better teachers. Efforts to address this deficiency are more likely to be effective if:

- *principals, other school leaders and teachers have a major role in determining how their school undertakes performance appraisals and associated support*

- *appraisals are based on school-level indicators and criteria*

- *more than one method is used to gather evidence on performance — including an indicator of student outcomes — so that the various dimensions of teacher performance are adequately captured.*

The central agencies that oversee schools — particularly state and territory education departments and catholic education offices — should support school-based improvements in teacher performance appraisal by:

- **requiring the schools they oversee to develop and maintain an effective performance appraisal system for teachers**

- **providing schools with broad guidelines and templates, sufficient resources to maintain an effective appraisal system, performance appraisal training, and guidance on performance measures and data management**

- **monitoring the effectiveness of performance appraisal, rather than just compliance with specific processes.**

6.3   Managing unsatisfactory performance

Unsatisfactory performance by a teacher has a direct adverse impact on their students. Further, ongoing poor performance can foster a workplace culture that does not attract and retain quality teachers. It is therefore concerning that there appears to be a widespread perception, including among teachers, that it is rare for unsatisfactory teacher performance to be addressed. As noted previously, around 70 per cent of Australian lower-secondary teachers surveyed by the OECD in 2007-08 thought that a teacher would not be dismissed in their school for sustained poor performance (OECD 2009a). In Queensland, the Catholic Education Office (Diocese of Toowoomba) (sub. 11) was concerned that performance management is non-existent.

It is apparent that very few teachers are ever officially deemed to be underperforming. The evidence, albeit somewhat dated, mainly comes from past reviews of government schools in New South Wales and Victoria.

- The Audit Office of New South Wales (2003) reported that, in 2001, only about 0.4 per cent of teachers in NSW government schools were subject to procedures for managing underperforming staff. The Audit Office argued that it was difficult to accept that, among a workforce of over 40 000 employees, so few had performance problems. More recently, the NSW Government reported that less than 30 teachers were dismissed for being inefficient in the three years from 2008 to 2010 (DEC (NSW) 2010).

- The Victorian Auditor General's Office (VAGO 2010) reported that, between 2004 and 2008, the Victorian education department initiated unsatisfactory performance procedures against only 61 teachers out of a workforce of around 37 000 classroom teachers. Earlier research by BCG (2003) estimated that only 0.15 per cent of teachers in Victorian government schools were rated as being unsatisfactory in their performance appraisal in a given year. In contrast, principals indicated in interviews with BCG that up to 20 per cent of teachers were 'significant underperformers'. Most recently, the Victorian Education Minister was quoted as acknowledging that the process for dealing with unsatisfactory teacher performance has a tendency to 'drag on' and this is 'demoralising for everybody involved' (Tomazin 2012).

Jensen (2011) suggested that the limited use of procedures for managing underperformance may be explained by the absence of meaningful teacher appraisal and development processes, making it difficult for employers to justify taking action against a teacher. This reinforces the case made in section 6.1 for improved teacher appraisal and feedback.

The Victorian Government (sub. DR95) suggested that workplace culture and/or a need for principals to have more support could also explain the low use of underperformance procedures.

Another relevant factor appears to be the procedures that education departments require government schools to adhere to when seeking to remedy unsatisfactory performance. The precise requirements and level of prescription vary between jurisdictions, but schools typically do not have the authority to dismiss a teacher or take other disciplinary action. The role of schools is essentially confined to providing a formal warning and period of case management in which a teacher has to remedy their underperformance. If the teacher fails to lift their performance to the required standard after being given reasonable time and support to do so, the school usually has to initiate a further process with the education department, in which a

written report is submitted to a senior departmental official to decide what action to take. In New South Wales, this has to be preceded by a review of the school's actions by an independent panel to ensure that the required procedures were followed (DET (NSW) 2006).

The lack of authority given to government schools to take disciplinary action, combined with sometimes prescriptive and time-consuming procedures, will tend to discourage these schools from addressing cases of unsatisfactory teacher performance.

It will continue to be challenging to address unsatisfactory performance while much of the power to remedy sustained poor performance is retained by central agencies that do not directly observe teacher underperformance or bear the immediate consequences of inaction. This was recognised by the WA Government (sub. 45), which argued that school leaders must be given greater capacity within industrial agreements to support the management of underperformance. Ideally, principals would be given the full range of options to remedy problems as they arise, including ultimately to dismiss a teacher from their school if performance does not rise to the required standard after being given reasonable time and support to do so. The 2010 Staff in Australia's Schools survey revealed that a large proportion of principals in government schools wanted more authority to dismiss teachers — 44 per cent in primary schools and 54 per cent in secondary schools (McKenzie et al. 2011). The equivalent proportions were lower in catholic schools — 28 and 17 per cent — and in independent schools — 6 and 13 per cent.

However, not all schools will have the necessary leadership skills and other resources to be adequately equipped to manage unsatisfactory performance themselves. Thus, this will have to be a matter that is delegated to schools on a case-by-case basis, as discussed in the Commission's broader examination of school autonomy in chapter 8.

Where delegating the management of unsatisfactory performance to a school is not appropriate, there is scope for central agencies to review their own procedures so that they are less of a deterrent to addressing underperformance. The SA Government has recently taken a step in this direction by issuing a revised policy for managing unsatisfactory teacher performance that provides greater flexibility to intervene in a timely fashion (DECS (SA) 2011b). The operation of this new policy will be assessed in the second half of 2012 (Weatherill 2011). The WA Government (sub. DR90, p. 4) noted that recent amendments to the *Public Sector Management Act 1994* (WA) have 'reduced some of the bureaucracy that previously surrounded the management of substandard performance' in WA government schools. Other

jurisdictions could benefit from monitoring, and sharing the lessons from, these and other reforms to the management of unsatisfactory performance.

FINDING 6.2

There is a widespread perception among teachers that sustained unsatisfactory performance rarely leads to dismissal or other disciplinary action. This is consistent with published statistics showing that very few teachers in government schools have been subject to underperformance procedures.

RECOMMENDATION 6.2

State and territory governments should remove any unnecessary impediments that government schools face when seeking to address unsatisfactory teacher performance by:

- **delegating to government school principals the authority to take disciplinary action — including dismissal — when a teacher's performance fails to rise to the relevant standard after being given reasonable time and support to do so. The prerequisites for such delegation should be that the school has the necessary leadership, resources and an effective system of regular performance appraisal**

- **for schools that do not meet the prerequisites for delegating authority, reforming the centrally-determined procedures they are required to follow in cases of teacher underperformance so that there is more timely and effective intervention.**

6.4   Performance based remuneration

The dominant system for remunerating teachers in most countries, including Australia, is a pay scale that is essentially based on qualifications and length of service (OECD 2009c).[5] Moreover, various study participants noted that current teacher remuneration arrangements in Australia are inflexible and typically involve a 'flat' pay scale in which the difference between starting (minimum) and maximum salaries is relatively small compared to other professions (for example, Catholic Education Commission of Victoria, sub. 13; Dinham 2011a).

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[5]   In Australia, pay scales are primarily based on length of service, whereas qualifications are a prerequisite for entry to the profession. In contrast, pay scales for US schools also typically include a substantial component to recognise the acquisition of higher qualifications (Ingvarson et al. 2008).

The appropriateness of basing remuneration on qualifications and/or length of service has been questioned because some overseas studies have found that the advanced qualifications being rewarded, and experience beyond the first few years of service, are not strongly correlated with student outcomes (Goldhaber 2009; OECD 2009c; Podgursky and Springer 2007; Springer 2009). This has fuelled interest in exploring alternative arrangements that more closely tie remuneration to outcomes, rather than to observed teacher characteristics. Springer (2009) has noted that this could have both:

- motivation effects — incumbent teachers have an incentive to raise performance

- selection effects — more effective teachers are attracted and retained.

In Australia, the Commission has previously observed that there may be a case for changing pay relativities within the teaching profession because, among other things, existing remuneration structures provide little recognition for differences in teachers' performance (Banks 2010; PC 2007).

AITSL (sub. 39, p. 8) observed that current 'pay systems do not encourage the best teachers to remain in the classroom'. DEEWR (sub. 42, p. 9) claimed that 'generally there are no financial returns to reflect ability or skill in teaching, with a rigid pay scale structure, based on years of experience, that limits the ability to reward for greater effort … This means the most able teachers are paid the same salary as the least able'.

The National Partnership Agreement on Improving Teacher Quality has the potential to facilitate change because it offers funding to jurisdictions that 'improve' pay dispersion to reward quality teaching. However, as previously noted, it seems to have involved relatively modest changes to date. This is despite a history of reports and inquiries commissioned by governments and parliaments to explore performance-based pay for teachers (for example, Committee for the Review of Teaching and Teacher Education 2003; DEST 2007; Ingvarson et al. 2008; SCEWRE 2007).

Performance-based remuneration can take many different forms. Four broad categories are considered in this section:

- performance-based increments — automatic progression to a higher point on the pay scale, subject to having met performance requirements in the preceding period

- advanced-skill teacher (AST) positions — typically a single higher-paid classification for more effective teachers, subject to a selection process

- performance-based career structures — teachers progress through several classification levels on the basis of merit and the availability of positions

- performance bonuses — lump-sum bonuses paid on the basis of recent performance.

Two or more of these could be used simultaneously.

Performance based increments

Teachers are typically subject to a system of salary progression in which they move up a pay scale in defined increments at regular intervals, usually annually, until they reach the maximum salary. In some jurisdictions — New South Wales, Victoria, and Tasmania — there is an explicit requirement that increments for government-school teachers are only granted if their recent performance has been assessed as satisfactory (Jensen 2011). The link between pay increments and performance appears to be less explicit in other jurisdictions. In the private sector, schools also typically have a system of incremental salary progression, with agreements usually providing scope to deny increments if a teacher's performance is unsatisfactory (Ingvarson et al. 2008).

While pay increments are notionally conditional on satisfactory performance, it appears that they are almost never withheld in practice (Ingvarson et al. 2008). As a result, where a teacher sits on the pay scale is largely determined by their length of service.

Length of service may be a reasonable proxy for performance improvements in the early years of a teacher's career. This is supported by past research which suggests that experience gained in the first few years of teaching is linked to an improvement in student outcomes (OECD 2009c; Podgursky and Springer 2007; Springer 2009).

In order to reward performance beyond this initial accumulation of experience, however, an alternative mechanism is required. Three options — AST positions, a career path with several classification levels, and performance bonuses — are considered below.

Another option would be to allow accelerated progression through the increment system for outstanding teachers who have not yet reached the top of the pay scale. This option already exists for government schools in Victoria and Tasmania (DEECD (Victoria) 2010a; PSMO 2010). While this can provide a useful means to reward the highest-performing teachers early in their career, it also brings forward the day when they reach the top of a pay scale and have to move out of teaching if

they want to earn more. As such it may need to be accompanied by other action (as discussed below) to be effective.

Advanced-skill teacher positions

Unlike the process for receiving pay increments, teachers need to apply for an AST position and are then subject to a selection process. AST positions exist in government school systems in most jurisdictions, and use the following nomenclature:

- Highly Accomplished Teacher (New South Wales)
- Leading Teacher (Victoria)
- Experienced Senior Teacher (Queensland)
- Advanced Skills Teacher Level 2 (South Australia)
- Level 3 Classroom Teacher (Western Australia)
- Advanced Skills Teacher (Tasmania)
- Accomplished Teacher (Northern Territory).

At the time of writing this report, staff in ACT government schools were about to vote on an enterprise agreement that would introduce a new classification of Executive Teacher (Professional Practice). This would be a higher-paid classification for teachers who lead and model best practice, including mentoring and building capacity, in the classroom (ACT Government 2011, 2012).

AST positions also exist in the non-government sector, such as an Experienced Teacher (Level 2) classification in Victorian catholic schools and Advanced Skills Teacher in Queensland catholic schools (Santiago et al. 2011).

Teachers are typically appointed to AST positions for a limited tenure of up to five years (Santiago et al. 2011), such as for the position of Leading Teacher in Victorian government schools (DEECD (Victoria) 2011c). At the end of this period, the school principal decides whether the appointment is renewed, or the position is advertised or abolished. The Highly Accomplished Teacher position offered in NSW government schools is a temporary appointment of two years, reflecting its funding under the National Partnership Agreement on Improving Teacher Quality (DET (NSW) 2010). An extension beyond the two-year period is possible where the school participates in the National Partnership on Low Socioeconomic Status School Communities, which has funding over four years.

The selection process for AST positions currently varies between jurisdictions and sectors. However, it appears that selection is typically based on experience, acquisition of additional qualifications and/or demonstration of quality teaching practice, but rarely an examination of evidence on student outcomes. For example, the position of Experienced Senior Teacher in Queensland government schools is restricted to teachers who have a minimum 14 years of experience, with at least four years of this as a Senior Teacher (Santiago et al. 2011). This could exclude some high-performing teachers who, on the basis of their contributions to sound student outcomes, should be considered for an AST position. As noted earlier, there is not a strong relationship between length of service and student outcomes beyond the first few years of a teacher's employment.

In NSW government schools, the position of Highly Accomplished Teacher is linked to accreditation by the NSW Institute of Teachers at the level of Professional Accomplishment or Professional Leadership. It is important that such credentialism is only rewarded if it is clearly linked to improved student outcomes. In the US school system, teacher pay typically increases with the acquisition of particular types of advanced qualifications, which the quantitative evidence suggests have little impact on student outcomes (Podgursky and Springer 2007).

Past Australian experience with the use of AST positions also provides a warning that they are not necessarily an effective means of improving student outcomes. Ingvarson et al. (2008) noted that AST positions were introduced in the early 1990s as a part of award restructuring, but did not lead to a robust link between remuneration and performance. They attributed this to flawed implementation. In particular, performance assessment was usually left to untrained school-based panels. Ingvarson et al. argued that this led to a lack of confidence in assessment processes. A shift to more effective appraisal processes, as advocated earlier in this chapter, might partially address this problem. However, the regular teacher appraisals undertaken at the school level would need to recognise that the level of performance required for AST positions is significantly higher than that for other teachers. The Commission also stresses that AST positions should not be incorporated into incremental pay scales, as has sometimes occurred in the past.

Ingvarson et al. (2008) also observed that, while the AST concept was supposed to be a pay-for-performance scheme, it sometimes transformed into a traditional pay-for-extra-work scheme by requiring AST teachers to take on extra duties beyond teaching students. The value of this approach would be dependent on the nature of the additional duties. For example, mentoring of other teachers would have a stronger link to teaching than taking on administrative tasks.

The risk that AST positions will remove more effective teachers from a teaching (or related mentoring) role still appears to exist. For example, guidelines for the position of Highly Accomplished Teacher in NSW government schools states that they have a reduced teaching allocation which, as a general rule, will be no greater than half the teaching load of a classroom teacher in a primary or secondary/central school (DET (NSW) 2010). During their two-year appointment, they are expected to achieve accreditation at the Professional Accomplishment or Professional Leadership level, join the school executive team, and help develop the school plan (NSW Government, sub. 14). More generally, the Catholic Education Commission of Victoria (sub. 13) observed that currently there are relatively few senior positions available for high-quality teachers, and most of these involve less teaching.

A further issue is how the AST concept intersects with the option of a more developed career structure for teachers. The current system of relatively flat pay scales based on years of service, with the maximum usually reached within ten years, does not provide a career path for highly-effective teachers to remain in a teaching role over the longer term. AITSL (sub. 39) therefore observed that many excellent teachers move to leadership positions or leave the profession to increase their earnings. Professor Stephen Dinham (2011a, p. 3) noted that there is a 'hidden resignation spike associated with teachers reaching the top of such salary scales after 8-10 years of teaching, a time at which salaries are rising steeply for the most able practitioners in other professions'. Further evidence comes from the 2010 Staff in Australia's Schools survey, which shows that the main reasons why teachers intend to leave the profession permanently before retirement include better opportunities outside of schools, and insufficient recognition or reward for teachers who demonstrate advanced competence (McKenzie et al. 2011).

By offering AST positions, schools are providing only a limited opportunity for career progression. This is particularly evident in the NSW government-school system, where only 226 people had been appointed to a Highly Accomplished Teacher position or equivalent by June 2011, compared to a permanent teaching staff of around 49 000 (NSW Government, sub. 14; NSW Government et al. 2012). Moreover, as previously noted, these positions depend on funding from two national partnerships that will cease within the next few years. In contrast, the Victorian education department aims to maintain around 10–15 per cent of full-time teaching staff in a Leading Teacher position (Santiago et al. 2011). Nevertheless, the AST positions currently available across jurisdictions and sectors fall well short of a performance-based career path where teachers can progress through several classification levels on the basis of merit and the availability of a position.

A career structure with several classification levels

Study participants noted that a career path already exists to some extent through the supplements that teachers can receive for taking on additional responsibilities, such as managing a department or coordinating a year level. As a result, many teachers already earn more than the top of the incremental salary scale. This is apparent from the 2010 Staff in Australia's Schools survey, in which almost 22 per cent of teachers in primary schools and 40 per cent of teachers in secondary schools reported that they earned more than $80 000 per annum (figure 6.1). Based on an examination of salary scales in a sample of school systems, it appears that the top of the incremental scale was typically around $80 000 in 2010.

Figure 6.1 **Distribution of teacher earnings, 2010[a]**
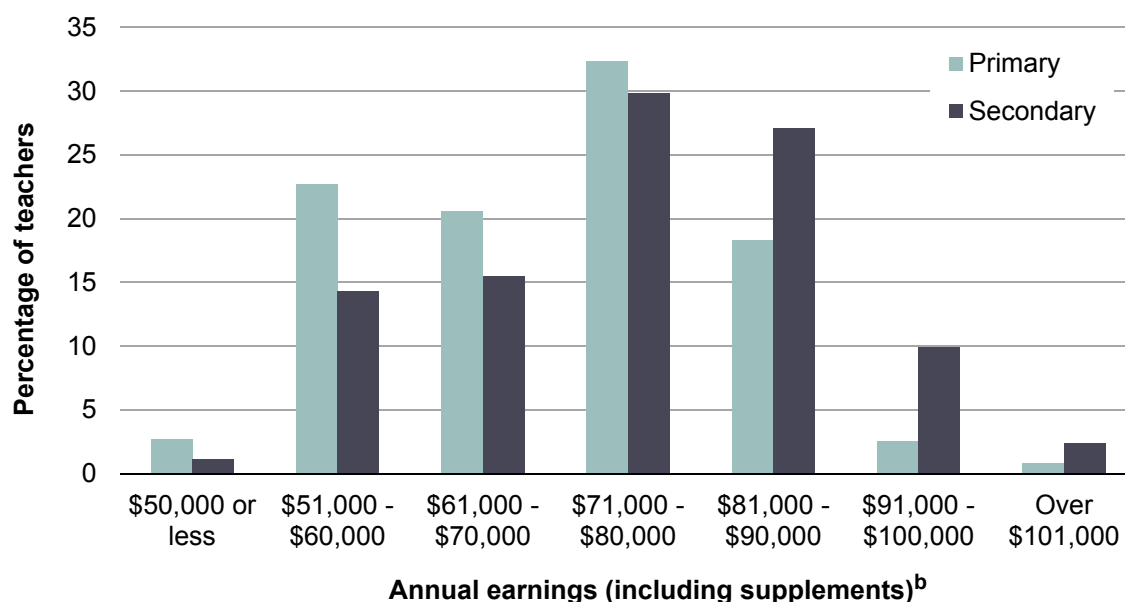
[a] Gross full-time equivalent earnings, including supplements for teachers in senior positions. Excludes principals, deputy principals and employer superannuation contributions. Data were collected from August to December 2010 as part of the Staff in Australia's Schools survey commissioned by the Australian Government Department of Education, Employment and Workplace Relations. [b] There is a $1000 gap between adjacent earnings ranges because teachers were asked to report an amount to the nearest thousand dollars.

Source: McKenzie et al. (2011).

Nevertheless, various participants indicated interest in developing a more comprehensive career path for teachers as an alternative to performance pay (for example, ACT Council of Parents and Citizens Associations, sub. 17; WA Government, sub. 45). The Australian Education Union (sub. 28; AEU 2010) advocated a career structure based on professional standards. Professor Stephen Dinham (2011a) called for the new national teaching standards — with its four career stages of Graduate, Proficient, Highly Accomplished and Lead Teacher —

and associated measures for assessment and certification, to be integrated into salary and career structures. This drew on an earlier proposal he had co-authored in a report for the Business Council of Australia, which would have increased annual salary costs by about 20 to 25 per cent, or around $4 billion in 2008 terms, when fully implemented (box 6.4). More recently, Dr Lawrence Ingvarson (2011) costed a similar proposal at $5–6 billion per annum.

Box 6.4   ACER proposal for a standards-based career structure

In 2008, the Australian Council for Educational Research (ACER) prepared a report for the Business Council of Australia on how to raise the quality of teaching. One of the proposals made in the report was to introduce a standards-based career structure.

The paper was written prior to the release of the national teaching standards, but the system it envisaged was similar to what has eventuated. In particular, that there would be four career stages, with the lowest two levels (graduate and proficient) being part of a mandatory regime of course accreditation and teacher registration, while certification at the highest two levels (accomplished and leading) would be voluntary.

The authors proposed that the salary for each career stage would be a multiple of that for beginning graduates — 1.25 times for proficient teachers, 2.0 for accomplished teachers, and 2.5 for leading teachers. It was expected to take around 10 years to move to a point where about 10 per cent of teachers were graduates, 40 per cent proficient, 30 per cent accomplished, and 20 per cent leading teachers.

In 2008 terms, salaries were expected to be around $90 000 to $100 000 for accomplished teachers, and $110 000 to $120 000 for leading teachers. Indexing these to 2010 values (assuming annual pay rises of around 4 per cent) suggests that salaries for almost all of these teachers would then be above $100 000. According to the 2010 Staff in Australia's Schools survey, only 0.8 per cent of primary teachers and 2.4 per cent of secondary teachers earned more than $100 000. ACER's proposal effectively envisaged that 50 per cent would be in this category. Thus, the cost of the proposal was significant. It was estimated that annual staffing costs would eventually be about 20 to 25 per cent higher than otherwise, or around $4 billion in 2008 terms.

Sources: Dinham, Ingvarson and Kleinhenz (2008); McKenzie et al. (2011); Productivity Commission estimates.

A performance-based career structure could address a concern expressed by the OECD that career structures in Australia are rarely linked to teaching standards and registration processes (Santiago et al. 2011). The challenge in doing so, however, will be to avoid rewarding 'inputs' that do not improve student outcomes. As Dinham (2011a) noted, there is a risk that poorly designed processes associated with a standards-based career structure could enable many unsuitable teachers to gain certification at higher levels, causing a salary 'blowout' with little improvement in outcomes. It is difficult to ascertain the magnitude of this risk under the national

teaching standards, as they have yet to be implemented and not all of the details have been released. Professor Lawrence Ingvarson (sub. DR67) argued that a comprehensive research and development program, along with extensive trials over several years, is required before an effective certification system could be implemented across Australia.

An important set of issues concern the operation of a career structure in conjunction with other elements of the remuneration system in schools. For example, how would schools accommodate the sort of remuneration-based incentives discussed in chapter 4 to address teacher shortages; would supplements for taking on additional responsibilities, such as head of department, be retained; and would the salaries of principals have to be substantially increased to maintain their level relative to the best-paid teachers.

The Commission considers that there is merit in the development, over time, of a performance-based career structure for teachers. In broad outline, it would have, as its foundation, the four career stages in the National Professional Standards for Teachers. Teachers would be assessed and, if found competent, would be certified accordingly, but this would not, of itself, result in a change to their salary. Separately, the staffing profiles of individual schools would include limited numbers of positions at the different career stages, with appropriate salaries. Principals would be able to amend profiles within overall staffing budgets to meet local needs. As vacancies arose, teachers certified at the relevant (or higher) level could apply. Selection would be on the basis of merit. The appointment could be time limited and/or subject to periodic review.

As detailed later in this chapter, a foreshadowed Australian Government initiative to pay short-term financial rewards over the next few years to teachers who gain certification at the two highest levels of the national teaching standards might provide useful lessons for a future shift to a performance-based career structure. Such a shift to linking ongoing remuneration to the teaching standards should only be considered after the effectiveness of the standards has been demonstrated.

Performance bonuses

Lump-sum bonuses are another means of linking teacher remuneration to performance. They create an element of uncertainty about pay by requiring teachers to repeatedly demonstrate high performance in order to keep receiving bonuses. This is in contrast to increments, AST positions and a performance-based career structure, which provide a longer-term and more certain reward.

Performance bonuses can be paid on the basis of an appraisal of:

- individual teachers
- teams of teachers within a particular school, such as by grade or department
- a whole school.

In a review of teacher-pay reform, Goldhaber (2009) found no research that had assessed the efficiency of group versus individual teacher performance-pay plans. In principle, linking bonuses to teacher-level appraisals would provide a direct incentive to individual teachers. However, as noted previously, it can be difficult to attribute student outcomes to individual teachers. Teacher-level appraisals may also discourage teamwork (Australian Primary Principals Association, sub. 41). Team or school-based appraisals could address these concerns, but they can also create an opportunity for underperforming teachers to 'free ride' on the high performance of colleagues.

The Victorian Government is currently trialling both teacher and school-level appraisals as a basis for bonuses in government schools (box 6.5). The teacher-based trial measures performance relative to other teachers in a given year, whereas the schools-based trial measures a school's performance relative to what it achieved in an earlier year. The number of schools participating in the trials has been lower than originally anticipated, particularly for the teacher-based trial, 'because the magnitude of change required to current performance and development processes in schools presented a more significant challenge than anticipated' (Victorian Government et al. 2011, p. 13).[6]

In June 2011, only 21 teachers received bonuses under the teacher-based reward scheme, and just four schools received school-based rewards (Victorian Government et al. 2012). While participation in the trials has been low, a planned *ex post* evaluation of the trials (most likely in 2013) may provide useful insights on the use of performance pay in an Australian context. Early feedback from participating teachers suggests that there has been little impact on teaching effort, but the trials have prompted school leaders to take a 'vigorous and careful approach' to performance management (Victorian Government, sub. DR95, p. 5).

Independent Schools Victoria has also been trialling performance pay (ISV 2011). A teacher-quality pilot program involving twelve teachers from six member schools was run in 2009 with Australian Government funding from DEEWR. Following an

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[6] The original plan was for 25 schools to participate in the teacher-based trial, but only 11 have (five schools participated in 2010, with the remaining six joining in 2011). The trial of school-based rewards was to involve 50 schools, but only 37 are participating. (DEECD (Victoria) 2009c; DEEWR, sub. DR94)

Box 6.5   Rewarding Teaching Excellence trials (Victoria)

In 2010, the Victorian Government commenced a trial of two alternative models for rewarding teaching excellence — bonuses based on appraisals of individual teachers (labelled Teacher Rewards) and schools (School Rewards). Schools participate on an opt-in basis and cannot trial both models at the same time.

Teacher Rewards

This model is being trialled in 11 government schools. Participating schools receive a bonus pool equivalent to 1.5 per cent of teaching-staff base salaries. At least 80 per cent of the pool has to be paid to the top 30 per cent of teachers, based on a 'balanced-scorecard' assessment. This implies average bonuses of 4 per cent of salary.

Participating schools can customise their assessment method and rewards structure within broad guidelines set by the Government. This includes a requirement that measures (and minimum weightings) used in the balanced scorecard include classroom excellence (40 per cent), teaming and leadership (20 per cent), and professional learning (10 per cent). Assessments have to be undertaken by a panel of at least three school leaders, including the school principal. The distribution of rewards across teacher cohorts — graduate, accomplished, expert and leading — has to be broadly consistent with the school's distribution of teaching staff.

School Rewards

This model is being trialled in 37 government schools. Reward payments are made to the 20 per cent of schools that achieve the greatest improvement in performance, based on a weighted index of school performance. The index includes measures of student learning, student engagement and wellbeing, and student pathways and transitions. Different indices are used for primary and secondary schools. The indices are calculated by the Victorian education department.

Each school's performance is assessed annually to determine year-on-year improvement from a pre-assessment baseline. Reward payments total 7.5 per cent of teacher base salaries at the school, with half paid at the end of the assessment period and the remainder at the end of the following year if performance is sustained. Schools are free to allocate the monies within broad parameters set by the education department.

Funding and evaluation

The Rewarding Teaching Excellence program commenced in 2010 and will run for three years at an expected cost of $12 million. Part of the funding is coming from the Commonwealth through the National Partnership Agreement on Improving Teacher Quality. There will be an independent evaluation of the trials, with participating schools' progress assessed relative to a 'control-group' of similar schools.

Sources: DEECD (Victoria) (2009c); DEEWR (sub. DR94).

independent review, the model was redeveloped in 2010 to be further trialled with schools each year from 2011 to 2013 under the National Partnership Agreement on Improving Teacher Quality. In 2011, participating teachers had to complete short pieces of reflective writings about their teaching (totalling about 11 000 words); submit student, peer and leadership survey results; have a number of classroom observations made of their teaching; and complete an interview after initial assessment. Outcomes will be reviewed and the model will continue to be refined and trialled in 2012 and 2013. However, a recently released progress report for the teaching quality national partnership revealed that principals and teachers were reluctant to participate in the trial, and that only one school had registered its interest to participate by the end of June 2011 (Victorian Government et al. 2012).

The Australian Government has announced a national bonus scheme for government and non-government schools, with the first bonus payments to be paid in 2014 based on an assessment of teachers in 2013 (box 6.6). It was originally proposed that around 25 000 teachers would receive a bonus in 2014 based on individual performance appraisals, and that the scheme would cost $425 million to implement over the four years to 2014-15 (Australian Government 2011a; DEEWR, sub. 42; Garrett, Gillard and Swan 2011). The Commission recommended in its draft report that this initiative be deferred — due to uncertainty about how to design an effective bonus system based on performance appraisals — and that in the interim there be smaller-scale experiments with performance-based pay. Shortly after the draft report was released, the Government announced that it would reduce funding for the scheme to $225 million over the four years to 2014-15 (Garrett 2011c). In essence, this is to be achieved by only rewarding teachers accredited at the two highest levels of the National Professional Standards for Teachers.

Lessons from past experience

Any attempt to introduce a bonus system should be informed by the long history of experiments with performance-based pay in schools. This history goes back to at least the nineteenth century, when Australian, English and US schools paid teachers according to student results, as assessed by tests and visiting inspectors (Ingvarson et al. 2008; Podgursky and Springer 2007). By the early twentieth century, this approach fell out of favour because, among other things, teachers were found to be using practices of doubtful educational value to secure their incomes (Ingvarson et al. 2008). As a result, the dominant remuneration system over the past century has been the 'input-based' pay scale based on a teacher's level of education and/or experience. This has fuelled a persistent concern over many decades that teachers' pay is not linked to outcomes, and led schools to periodically experiment with performance-related pay, particularly in the United States. Considerable

funding has been provided for this in recent years — including $US400 million for the US Teacher Incentive Fund in 2010 — and it appears that examples of performance-related pay now exist in almost all US states (NCPI 2011; USDE 2010).

Box 6.6   Reward Payments for Great Teachers initiative (national)

The Australian Government has announced a national system of reward payments for teachers who are accredited at the two highest levels of the National Professional Standards for Teachers. Highly Accomplished teachers will be eligible for a one-off bonus of $7500 and Lead Teachers will be eligible for $10 000. The first round of bonuses will be paid in 2014 to teachers who have been assessed against the standards in 2013.

A new Australian Teacher Performance and Development Framework will be introduced as part of the scheme. This will be developed by AITSL, with the aim of delivering a yearly appraisal of every teacher in every school. The best teachers will be encouraged to work towards and apply for certification as a Highly Accomplished or Lead Teacher. The framework will set out the aspects of a teacher's performance that will be assessed and will include lesson observations, student results, parental feedback, and contribution to the school community.

AITSL's proposed certification process for Highly Accomplished and Lead Teachers will be presented to education Ministers for endorsement in 2012. Ministers have already endorsed the principle that there will be no limit on the number of teachers who can qualify to become certified as Highly Accomplished and Lead teachers. However, it is proposed that teachers would have to renew their certification every five years. It is also expected that the evidence used to gain certification will include observations of a teacher's practice by their principal/line manager, and that external assessors will verify evidence and judge whether the relevant standard has been met.

The Government has committed $225 million over the four years to 2014-15 to introduce the Australian Teacher Performance and Development Framework and fund reward payments (it has also indicated an intention to continue the scheme to 2018-19 at an additional cost of $875 million). Expenditure on reward payments is expected to increase over time as more teachers are assessed, and as the teaching standards and performance framework are rolled out to full implementation in January 2015. The Government has stated that funding is available for at least 8000 teachers to receive the first round of bonuses in 2014.

Sources: AITSL (2011d, sub. DR81);   Australian   Government   (2011a);   DEEWR (sub. DR94); Garrett (2011c); Garrett, Gillard and Swan (2011); MCEECDYA (2011c).

Examples of performance-based pay also exist on a smaller scale in a handful of other countries, including the Australian schemes mentioned above (DEECD (Victoria) 2009c; ISV 2011; OECD 2009c). For example, in Singapore, teachers are eligible for bonuses equivalent to one to three month's salary based on their rating

in an annual evaluation. In the Netherlands, schools are able to award performance-related allowances or bonuses, with the conditions under which they are paid and the amounts awarded determined by the school within its personnel budget.

Despite the extensive experience over many years, there is surprisingly little empirical evidence that has rigorously tested the effectiveness of performance-based pay in improving student outcomes. The evidence that does exist is mixed, suggesting that some forms of performance pay may have the potential to improve outcomes, but further experimentation and evaluation will be required to demonstrate this and to identify the characteristics of a highly-effective bonus system (box 6.7 provides a sample of the evidence for schemes that link bonuses to appraisals undertaken within schools).

At present, critics are able to point to a long-term pattern of performance-based remuneration schemes being dropped after a relatively short period, suggesting that such schemes typically fail to meet expectations. For example, the OECD (2009c) noted that performance-based pay systems developed by a number of US school districts in the 1960s and 1970s were rejected by principals and teachers because the basis for teachers receiving a reward was unclear. Similarly, a widely-cited critique by Murnane and Cohen (1986) argued that most US attempts to implement performance-based pay up to the mid 1980s failed because it was impractical to observe and measure all aspects of teacher performance. Other arguments have included that performance-pay schemes are ill suited to schools' team-based culture and the non-financial motivations for teachers to be in the profession (OECD 2009c; Podgursky and Springer 2007; Springer 2009).

On the other hand, Springer (2009) argued that US compensation reforms in the 1980s and 1990s had a troubled history because they focused heavily on educational inputs and processes, whereas current reforms focus more on rewarding educational outputs. This is becoming increasingly possible because comprehensive school datasets are now being collected by governments (Goldhaber 2009; OECD 2011c; Podgursky and Springer 2007). The availability of such data was also a factor in making Victoria's trial of bonuses feasible (DEECD (Victoria) 2009c). These data collections should also make it somewhat easier to evaluate the effectiveness of future experiments with performance-based pay. This does not, however, guarantee that all trials will be successful, as evidenced by the most recent US examples mentioned in box 6.7.

In Australia, a major barrier is the considerable scepticism among key stakeholders about the concept of performance-related pay, driven in part by the mixed history overseas (for example, ACT Council of Parents and Citizens Associations, sub. 17;

Box 6.7 Empirical evidence on performance-based pay for teachers

The evidence on teacher performance pay is mixed. A number of studies have found no impact. For example, recent evaluations of a three-year trial of bonuses in New York schools found no improvement in student outcomes (Fryer 2011; Marsh et al. 2011). Similarly, Glazerman and Seifullah (2010) found no evidence of an increase in student test scores associated with a system of performance bonuses and more highly-paid positions in Chicago schools. Another example is a three-year trial of bonuses for maths teachers in Nashville, which did not yield consistent and lasting gains in student test scores (Springer, Ballou, Hamilton et al. 2010).

However, some studies have found a positive link between performance pay and student outcomes. The Victorian Government (DEECD (Victoria) 2010a) summarised several of these in the case it made for its trial of teacher bonuses (reproduced in the table below, with student outcomes based on standard tests of maths and languages). Another example is Springer, Lewis, Eglert et al. (2010), who found that an incentive-pay system operating in Texan schools since 2008 had a positive impact on student test scores.

Study	Country	Model type	School type	Average reward size (% salary)	Standard deviation improvement per annum
Winters et al. (2008)	US	Teacher	Primary	5–20	0.15–0.22
Figlio and Kenny (2006)	US	Teacher	High school	10–20	0.04–0.06
CTAC (2004)	US	Teacher	High school	~2 per objective	0.03–0.08
Muralidharan and Sundararaman (2006)	India	Teacher	Primary	~5	0.15
	India	School	Primary	~4	0.08
Angrist and Lavy (2004)	Israel	School	High school	1–2	0.1 (approx)
Lavy (2002)	Israel	Teacher	Grades 10 & 12	6–25	0.2 (approx)

Such results should be interpreted with care. For example, Figlio and Kenny (2006) cautioned that the correlation they found between US teacher incentives and student test scores could be due to better schools being more likely to adopt teacher incentives, rather than the incentives themselves. Similarly, the OECD (2009c) warned that US evaluations are often positive, but must be considered in light of the voluntary participation. More robust evidence comes from a handful of randomised trials in India, Israel and Kenya, with the Indian and Israeli results being positive (Springer 2009). The relevance of the approaches and results to Australia should be treated with caution.

Thus, further research is required. Podgursky and Springer (2007) perhaps best summed up the situation as one where the empirical literature is not yet sufficiently robust to prescribe how systems should be designed, but it does make a persuasive case for further experimentation. This should include robust evaluation, preferably involving randomised trials with control groups of similar schools and teachers, and detailed data that measures student outcomes.

Australian Education Union, sub. 28; Catholic Education Commission of Victoria, sub. 13; Catholic Education Office (Diocese of Toowoomba) sub. 11; National Association of Field Experience Administrators, sub. 1; National Catholic Education Commission, sub. 7; Queensland Catholic Education Commission, sub. 20; Queensland Department of Education and Training, sub. 40; SA Department of Education and Children's Services, sub. 35). As noted previously, a performance management scheme is unlikely to be effective if stakeholders are not convinced that it is useful.

Where to from here?

Clearly there is still much to learn about how to design an effective bonus system for teachers. This will inevitably require a continuation of the process of trial and error that has occurred over many years. The current experiments in a small number of Victorian schools are contributing to the knowledge base in this regard. However, the long history of mixed results from teacher bonuses overseas suggests that such experiments are unlikely to result in a widely-applicable system in the foreseeable future. Thus, efforts to improve teacher performance should not focus on the use of bonuses. Emphasis should instead be placed on addressing current deficiencies in teacher appraisal and feedback, as outlined earlier in this chapter, in addition to initiatives discussed elsewhere in this report, such as measures to improve pre-service training.

This leaves the question of the appropriateness of the proposed national bonus scheme. The Commission has reconsidered this issue in light of the changes that the Australian Government announced after the draft report was released. The changes have moved the scheme away from a traditional bonus system based on performance appraisals, to something closer to a short-term financial incentive for teachers to gain certification at the Highly Accomplished and Lead levels of the national teaching standards. Few teachers may bother to gain such certification otherwise, given that it will not be mandatory and there are no explicit rewards to do so under existing remuneration arrangements.[7] Hence, the revised bonus scheme may prompt teachers to improve their skills.

There are some potential drawbacks with the revised bonus scheme. It appears that bonuses will essentially be automatic for teachers who gain certification at the Highly Accomplished and Lead levels. This makes the scheme similar to a

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[7] A similar incentive has existed under the NSW Professional Teaching Standards. Appointment to the (temporary) higher-paid position of Highly Accomplished Teacher in NSW government schools has been conditional on gaining certification at the upper end of the NSW standards (at the level of either Professional Accomplishment or Professional Leadership).

standards-based pay system where remuneration is primarily based on a teacher's level of certification. Two concerns arise as a result.

- The national teaching standards may prove to be ineffective in identifying highly-skilled teachers. Bonuses could therefore be paid in return for little improvement in outcomes.

- Identification of who receives a bonus would essentially be determined by an independent certification body doing an external assessment, rather than the employer. Such a credentialist approach could entrench an expectation that higher certification automatically entitles teachers to greater pay, thus hindering future efforts by employers to move to a career structure where ongoing remuneration depends not only on a teacher's level of certification but also the availability of positions and a merit-selection process.

Another potential concern is the Australian Teacher Performance and Development Framework, which is to be developed by AITSL as part of the bonus scheme. This is intended to deliver a yearly appraisal of every teacher in every school, including those not certified at Highly Accomplished or Lead levels, and to facilitate professional development. AITSL (sub. DR81) noted that it is in the early stage of developing the framework, but supported the view that performance management should be tailored to school circumstances, with school leaders and teachers having a major say on how this is done. AITSL therefore anticipated that much of its work will involve identifying the support provided to schools, including possibly specifying the core characteristics of an effective approach to performance management and development. Nevertheless, the Australian Government has stated that the framework will set out aspects of a teacher's performance that will be assessed, including through the use of lesson observations, student results, parental feedback, and contribution to the school community (Garrett 2011c). There is a risk that this will impose a particular one-size-fits-all model across Australia.

One benefit of the revised bonus scheme is that, by linking higher certification to a financial reward, the scheme might provide some evidence relevant to a future move to a career structure where specific positions in schools (and their salary) has a link to the national teaching standards (AITSL, sub. DR81; NSW Government, sub. DR84). As noted previously, such a move would only be appropriate in the longer term once the effectiveness of the teaching standards has been demonstrated, and career progression would have to be subject to the availability of positions and a merit-selection process.

Efforts to improve teacher performance should not focus on the payment of performance bonuses. The long history of mixed results from overseas experiments with teacher bonuses suggests that an effective and widely-applicable system is unlikely to emerge in the foreseeable future.

The Australian Government should reformulate its proposed Reward Payments for Great Teachers initiative as a temporary program that aims to facilitate future consideration of a performance-based career structure for teachers. The initiative should:

- *only provide reward payments to high-performing teachers — this will, among other things, require the development of effective assessment methods to certify teachers at the Highly Accomplished and Lead levels of the National Professional Standards for Teachers*

- *not entrench an expectation that higher certification automatically entitles teachers to higher pay*

- *allow schools to tailor their regular teacher performance appraisals and professional development to local circumstances.*

The future career structure could have, as its foundation, the four career stages in the National Professional Standards for teachers. Teachers would be assessed and, if found competent, would be certified accordingly by the relevant registration authority. Separately, the staffing profiles of individual schools would include limited numbers of positions at the different career stages, with appropriate salaries. Teachers certified at the relevant (or higher) level could apply for vacancies. Selection would be merit based and appointments could be time limited and/or subject to periodic review.

7   Workforce composition and innovation

> **Key points**
>
> - Job design and workforce composition need to evolve so that schools can adapt to changing student needs and community expectations.
>
> - Different schools have experimented with alternative approaches to job design and workforce composition, but policymakers have not always facilitated such school-level innovations.
>   - Despite changes to pedagogy and growth in the share of non-teaching workers employed in schools, the 'solo' model of teaching remains commonplace.
>
> - A prevailing focus has been on reducing class sizes, despite mixed evidence about the effectiveness of this approach.
>   - Further across-the-board reductions in class sizes are unlikely to be a cost-effective way of improving student outcomes.
>   - The 'right' class size will vary according to school and student-specific educational circumstances.
>
> - A range of different approaches in the way that principals, teachers and other schools workers operate could offer new opportunities to improve student outcomes or free up resources that might be better allocated elsewhere.
>   - Judgements about which of these options would be most appropriate for particular conditions should not be prescribed on a system-wide basis.
>
> - The Commission has focused on impediments to schools adopting workforce innovations that improve student outcomes and that deliver greater cost-effectiveness.
>   - School-sector policies and institutional settings — including school autonomy and industrial relations arrangements — should be designed to facilitate innovation.
>   - At the grassroots level, changes to (often long-standing) custom and practice can take time to gain support. School leaders have a key role to play in building workforce capacity and community confidence in reform.
>   - Education authorities — particularly regional education offices — could also do more to ensure sufficient information is available to schools about the opportunities for workforce innovation.

The modern classroom differs notably from its predecessors of decades past. Many young students may be more comfortable using a computer than pen and paper, while chalk and blackboards are increasingly giving way to interactive 'smart' whiteboards and data projectors. The manner in which teachers run their classes has also changed. At the individual level, teachers have an array of pedagogical techniques at their disposal, giving them greater latitude to interact with students in ways better tailored to different learning styles. And across all schools, the responsibility of teachers to educate students has been broadened to include a wider range of student welfare objectives, as well as more extensive assessment and reporting requirements.

Change has been less visible in the overall composition of the schools workforce and in the way that teachers operate. Many study participants commented on a lack of variation from the 'solo' model of teaching. For example, the WA Department of Education argued that 'the traditional solo teacher model requires reconsideration given the demands placed upon modern teachers' (sub. 45, p. 12).

Educational support staff — including administrative assistants and teacher aides — have increased as a share of the overall schools workforce, amid some innovations in how teachers and non-teaching school workers are used. As section 7.1 outlines, individual schools have often modified existing teaching roles or designed new roles to meet their circumstances — sometimes to great effect. But it is not clear that education authorities have done all they can to facilitate such school-level innovation. As Tasmania's Department of Education stated, 'job design is an area which has evolved over a number of years without a great deal of strategic intent' (sub. 33, p. 8). Moreover, schools' ambitions for workforce composition are likely to have been curtailed by centralised controls in the government and (to varying degrees) Catholic school systems.

Changes in workforce structure and deployment could (among other things) improve student performance, better meet student welfare needs, increase community engagement with schools, boost the status and job satisfaction of teachers and other school workers, or deliver comparable outcomes more cost-effectively. The persistent pressures facing the sector — such as changing community demands on schools, and problems in securing a sufficient supply of some teachers and other school workers — might be ameliorated through greater innovation in how the workforce is used.

This chapter examines workforce composition and the scope for changes in job design and how the teaching and non-teaching workforces are deployed. It also considers the degree to which impediments to workforce innovation exist, and how these might be mitigated.

7.1 Recent changes in workforce composition and deployment

Historically, the policy focus in relation to the schools workforce has tended to concentrate more on teacher numbers rather than composition and structure. Particular attention has been paid to the number of students each teacher should be expected to manage in each class (box 7.1). Class size reductions have been pursued ostensibly with the objective of improving student outcomes, by increasing the capacity of teachers to provide more personalised attention to individual students within the classroom. All else being equal, such reductions can also serve to reduce teacher workloads. But decisions to reduce class sizes (by employing more teachers) may also have constrained resource allocation in other areas, such as increasing teachers' wages.

There is no direct time-series measure of Australian class sizes, but a common proxy is the ratio between students and teaching staff. According to Leigh and Ryan (2011), average student–teacher ratios in Australia fell by 43 per cent between 1964 and 2003. ABS data on student–teacher ratios suggest that this trend has continued through recent years (figure 7.1).

Figure 7.1   Student–teacher ratios[a, b], 1996–2011
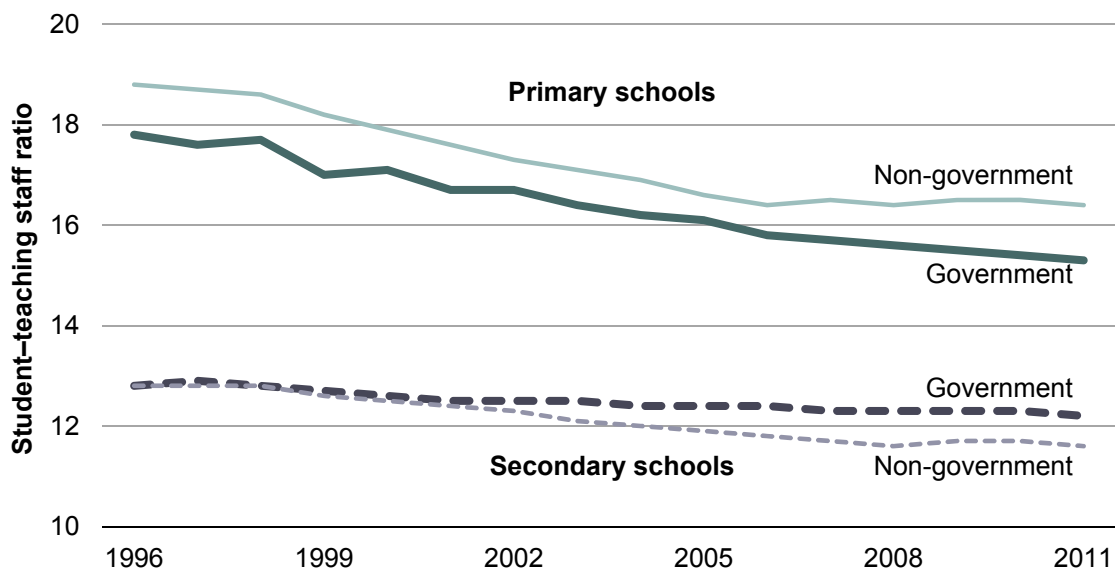
[a] Student and teaching staff numbers are both calculated on a full-time equivalent basis. Teaching staff include non-classroom teachers, such as principals. [b] Although the terms are sometimes used interchangeably, student–teacher ratios are different from measures of class size. Student–teacher ratios cover all teaching staff within a school, including principals or other full-time qualified teachers with limited teaching loads. This means, in general, student–teacher ratios will be lower than related measures of the average number of students in classes.

Source: ABS (*Schools, Australia*, Cat. no. 4221.0).

Box 7.1 **Class size and student performance**

Research on the impact of class size on educational outcomes is decidedly mixed.

- Much of the contemporary debate is inspired by US research — chiefly the work of Krueger and Hanushek. Krueger (1999) found that students in smaller classes perform better than those in larger classes. By contrast, Hanushek (1999) was not able to identify across-the-board benefits from smaller average class sizes.

- Data for Australia are poor, but Jensen (2010) concluded that class size reduction was an expensive policy approach, delivering only minor improvements (at best) to student performance. Leigh and Ryan (2011) identified class size reductions as a possible contributor to an observed decline in school productivity.

- Internationally, Woessmann (2007) contended that class size only influenced student outcomes where the quality of the teaching workforce was relatively low. Hattie (2009) emphasised the role of pedagogy — that teachers may need to adapt teaching techniques to achieve any benefits that might be offered by smaller classes.

While there are various interpretations of the quantitative evidence available, one of the few areas of general agreement among educational experts is that changes in class size will affect different types of students in different ways. For instance, while unconvinced of widespread gains for the average student, Hanushek (1999) suggested that smaller class sizes were more likely to be beneficial for early primary school students, students with specific learning difficulties, or students from educationally disadvantaged backgrounds. Data — both Australian and international — are typically too patchy to be able to disaggregate effects on specific groups of students.

Even at the broad level, there may be reasons to suspect that the empirical results misstate the effect of reducing average class sizes. As one example, not all studies account for the relationship between class size and teacher quality, and how this indirectly affects student outcomes. Specifically, to reduce class sizes (while still educating the same number of students), more teachers need to be recruited. And, assuming that higher quality teachers are employed first, then — *at any point in time* — each additional teacher that is hired will be of relatively lower quality than the last.

On the other hand, *over time*, class size reductions could have a positive effect on teacher quality. From a teacher's perspective, larger classes represent more tests, projects and essays to mark; more student report cards to write; and more families to communicate with. How much this extra work effort matters to any individual teacher is highly variable. However, holding pay levels constant, a reduction in class size should be expected to increase the overall attractiveness of teaching as a profession — aiding the recruitment and retention of school workers, and likely improving average teacher quality in the process.

The point to emphasise is that, despite widespread research, the net effect of class size on educational outcomes remains ambiguous. As such, good policy making requires judgement on where changes in class size hold a credible prospect of being beneficial (as well as where they are likely to have limited impact), rather than adopting a 'one-size-fits-all' approach.

Although the scale of the reduction in student–teacher ratios (and by extension class sizes) has varied across jurisdictions, it is not clear — at least in the most recent period — that the cost of this approach has been matched or exceeded by the benefit of significantly improved educational outcomes. Jensen, Reichl and Kemp (2011) estimated that class size reductions between 2000 and 2009 resulted in an 8–9 per cent increase in teacher expenditure per student in Australian schools, while student performance over the same period declined by 2.5 per cent (though the authors stressed that this does not imply a causal relationship). With average class sizes in Australian primary schools and lower levels of secondary schools now below 24 students (OECD 2011b), the merits of seeking further system-wide reductions become more questionable due to diminishing returns to students (at least relative to the costs).

However, this does not necessarily mean that further changes in class size would be inappropriate under any circumstances. The Commission notes evidence that there are several conditions — including to address educational disadvantage and special needs, as well as managing the transition to school for early primary students — where better targeting of resources might usefully involve smaller classes. By the same token, there may be other circumstances where larger classes could facilitate the adoption of different approaches with greater benefit — including, perhaps, changes in job design and workforce composition (section 7.2). This notion of context dependence was endorsed by many participants, such as the Independent Education Union of Australia, which concluded:

> … it is reasonable to say that classes should not generally exceed a certain number of students, and should be smaller towards the earlier years of schooling, but the optimal class size really depends on several factors: student profile, subject content, and physical environment. (sub. 12, p. 7)

Tailored approaches to class size can be harder to accommodate within a highly centralised system of education administration. For example, as chapter 11 notes, industrial agreements may constrain adjustments at the school level by establishing system-wide targets for class size. One tradeoff may be that lowering class sizes restricts capacity to reduce teaching hours for staff — a factor that may limit the opportunities for teachers to undertake professional development. In the Commission's view, it is preferable for judgements about the 'right' size for a particular class to be made at the school level (with appropriate reference to system-wide requirements, including resourcing constraints and overall workloads).

Changes in class size are likely to remain an important part of the policy mix for the schools workforce (chapter 11). However, workforce policy considerations extend beyond solely how many teachers a school system employs — it is also about how and where those teachers are deployed, and the extent to which they are complemented

by para-professionals and other non-teaching school workers (figure 7.2). As Victoria's Department of Education and Early Childhood Development identified, the link between quality teaching and student outcomes means that 'qualified teachers need to be able to focus on their core competencies' (sub. DR95, p. 19). Recent workforce initiatives are discussed below.

Figure 7.2 **Teaching and non-teaching workers: a stylised model**
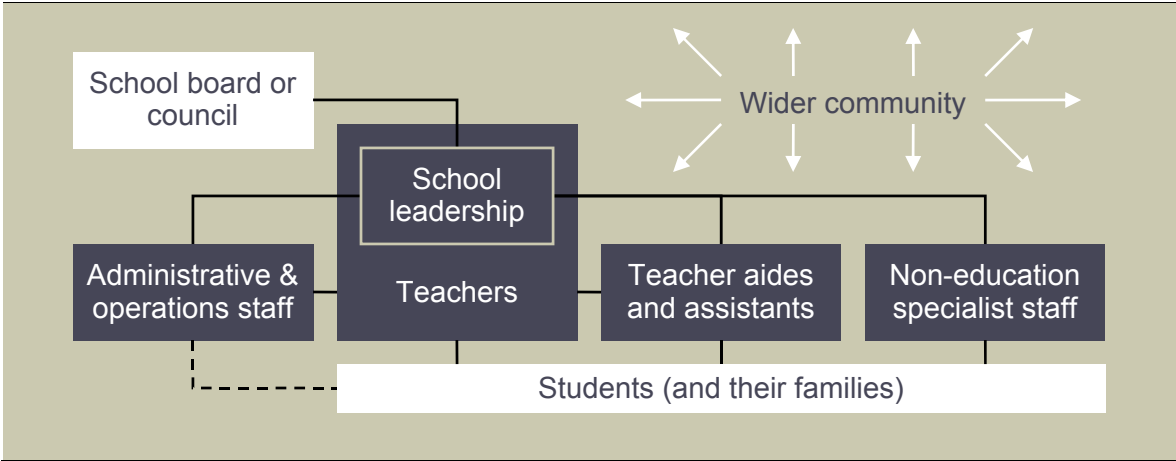
Deployment of teachers

State and territory governments appear to have routinely considered different ways of deploying their teaching workforce. Recent initiatives have sought to address specific areas of need, although many are relatively modest in scale. For example, the Victorian Government has commenced a trial of training selected primary school teachers to become mathematics and science 'specialists', who can in turn train other teachers in their schools on how to improve mathematics and science tuition (Dixon and Hall 2011).

Additionally, school autonomy in some jurisdictions has enabled innovations in teacher deployment at the school level — though again, often at a small scale. These have included 'team teaching', using multiple teachers to run particular classes; and appointing teachers as professional development specialists, to appraise the performance of classroom teachers and identify opportunities to improve their skills and techniques.

Expansion of the non-teaching workforce

The importance of maintaining a high-quality teaching workforce is widely acknowledged. But beyond teachers, there are different groups of non-teaching

workers who also contribute significantly to the good functioning of Australia's schools — and who may be in a position to contribute even more in the future.

- Teacher aides and assistants provide direct support to teachers and students in a range of contexts, such as integration aides for students with a disability, Indigenous and cultural support officers, non-teacher library assistants and science laboratory technicians.

- Although in many cases their interactions with students are more limited, clerical staff in school offices, building maintenance workers, canteen operators and others all provide valuable support to school communities and contribute to the overall culture of their schools.

- To facilitate students' learning, and in some cases to provide or coordinate help for their families, specialist support in non-educational domains is required. For example, schools benefit from the services of health professionals (such as school nurses and child psychologists) as well as counsellors and student welfare coordinators (who may at times also be teachers).

- Additionally, while not explicitly part of the schools workforce, the contributions of the wider community — including parent volunteers, former students and local businesses — are essential for schools to be able to deliver their services. (Among other things, community figures can play a valuable role in school governance, such as by serving on school boards or councils.)

As a proportion of the overall schools workforce, non-teaching school workers increased from 21 per cent in 1996 to 28 per cent in 2011 on a full-time equivalent basis (figure 7.3). Virtually all of this change can be attributed to growth in staff classed as 'administrative and clerical' (including teacher aides, library assistants, school administrators and Indigenous support staff) — their share increased from 16 to 23 per cent of the total schools workforce. This trend was broadly replicated across government and non-government sectors, and in all states and territories.

The modest decline in the share of teaching staff in the overall schools workforce does not appear to have been driven by any comprehensive system-wide changes in job design. South Australia's Department for Education and Child Development (SA DECD) identified that much of the change in that jurisdiction had been driven by decision-making at the school level (DECS 2011a). While there is inevitably some variation across different systems, its observation that schools with greater budgetary responsibilities (and flexibility) tended to spend more on support staff may be pertinent to all jurisdictions — particularly those that are currently progressing new initiatives to increase school autonomy (chapter 8).

Figure 7.3   **Schools workforce composition[a], 1996–2011**
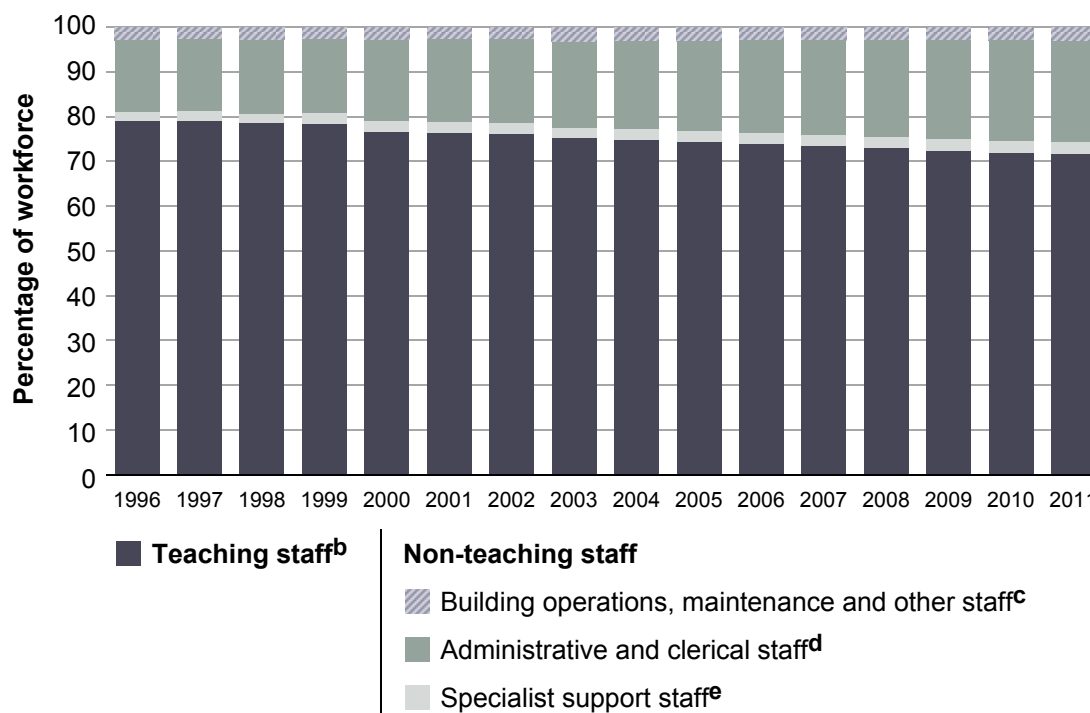
The National Catholic Education Commission suggested that the 'increased regulatory and accountability burden imposed by governments' (sub. 7, p. 5) had contributed to the growth in the non-teaching workforce in that sector. Although anecdotal, this broadly conforms with widespread comments from participants about the growing administrative requirements for schools (and the increased demands these place on teachers). This is likely to be more pronounced in independent and Catholic schools, which in many cases have little or no centralised support, as well as for 'autonomous' government schools in those jurisdictions that have devolved responsibilities from central education departments.

Changes in the composition of the student cohort will also influence employment practices. For example, SA DECD noted that between 2000 and 2010, the proportion of all students in South Australia's government schools that were recognised as having a disability increased from 6.1 per cent to 9.1 per cent (DECS 2011a). (Part of this may stem from better identification processes, although the department also reported that there had been proportional declines recorded for some types of disability.) The special needs of students with a disability generally

require more integration aides and other teacher assistants to be employed to support classroom teachers.

More concerted efforts to combat educational disadvantage in particular areas may similarly be a factor. The specific needs of Indigenous communities may at least partly explain why non-teaching staff in Western Australia and the Northern Territory accounted for more than a third of their schools workforces in 2011 (on a full-time equivalent basis). In 1996, the equivalent share in both jurisdictions was closer to a quarter. The workforce share of non-teaching staff is smallest in New South Wales and the Australian Capital Territory, at approximately 25 per cent in 2011 — up from less than 20 per cent in 1996 (ABS 2012b).

Although meaningful policy-level consideration of non-teaching workforce deployment has been generally patchy, there are emerging signs that at least some jurisdictions are increasing their focus on this area. One of the more comprehensive efforts in this regard was a field trial commissioned by Victoria's Department of Education and Early Childhood Development (box 7.2). SA DECD observed that Victoria enjoys greater flexibility than other jurisdictions in terms of its industrial relations regime and the capacity for various types of non-teaching workers to be employed. It also noted that a key advantage of the Victorian approach was to 'grow reforms in schools rather than impose them from above', with policymakers focused on providing guidance and expertise (DECS 2011a, p. 21).

SA DECD has also reported on the use of the non-teaching workforce in South Australia's government schools (DECS 2011a), drawing on extensive data collections, analysing employment practices and training standards, and scoping of future reform options. Between 2000 and 2010, there was a 25 per cent increase in the number of 'school services officers' in South Australia's government schools (on a full-time equivalent basis). During the same period, both teacher and student numbers declined. Around 44 per cent of school services officers operate in business management roles, 43 per cent fill student support roles, and 12 per cent perform technical functions.

Cautions from history

History offers evidence that innovations — whether promoted at the system-wide level or initiated locally — can be transitory features in cycles of ideas. For example, in order to facilitate team teaching, some primary schools are being constructed today without walls separating classrooms — a design principle that was similarly in vogue in the 1970s. Such concepts may win praise for a time, then fall out of favour, only perhaps to return once more in the future.

But this is not the full story of workforce innovation. Other approaches and initiatives can have greater longevity, producing lasting positive impacts on students' education. Moreover, some past ideas may find greater success when reattempted, given improvements in technology or different implementation strategies. Plainly, achieving *sustained* benefits for students, staff and the community should be the focus of schools, education authorities and policymakers in this area. In this regard, changes that are incremental in nature and informed by evidence as to the effectiveness of different approaches are likely to add greatest value.

Box 7.2   **Wider Workforce Field Trial — Victoria**

During 2009–10, the Department of Education and Early Childhood Development conducted a field trial to examine the capacity of government schools in Victoria to use non-teaching school workers — including parent volunteers. The field trial covered 21 initiatives in 25 different schools (with two programs involving school clusters rather than individual schools). These trials either established new roles, redefined existing roles, or sought to improve workforce capacity (such as through professional development). Some of the specific initiatives included:

- creating a 'one stop shop' for wellbeing and special needs staff in order to improve communication about students' progress (Carrum Downs Secondary College)

- refining the role of support staff to provide direct teaching support, including for student assessments (Berwick Chase Primary School)

- establishing a new student data management position, enhancing the information available to teachers to assess their effectiveness (Ascot Vale Primary School).

The field trial generated generally high support among teachers and parents. Better student attendance, engagement and confidence were observed, indicating the potential gains to educational performance more broadly. Many teachers found that the better use of support staff and para-professionals provided them with more time to focus on their teaching, including to target the different needs of individual students.

However, there were also challenges. In particular, schools found it difficult to locate people with the required skill sets for some para-professional and content-specific support roles. Inflexibility in setting remuneration and other employment conditions were seen as a central barrier in this regard (consistent with the problems in addressing teacher shortages discussed in chapter 4). There were also thought to be problems in establishing career pathways for non-teaching staff — including those that would allow non-teachers to develop the required skills to become teachers. Prescribed student–teacher ratios were noted as another potential barrier to innovation, with some concerns that these did not adequately recognise the impact of non-teaching school workers. However, the evaluation report for the field trial noted that some of the reported impediments were based on misperceptions about the limits placed on schools by the education department.

Source: I&J Management Services (2011).

7.2 Future directions for workforce innovation

Whether teacher, principal, other school worker or parent, the roles of all members of school communities are relevant to issues of job design and workforce composition. In this light, participants raised a variety of potential ways that the roles of these school workers and the relationships between them could be reformed to achieve better outcomes.

The role of school leaders

As noted in chapter 8, there is a general shift towards autonomy for government schools, which in turn is a significant factor in the evolution of school leaders' roles. The traditional educational-leadership function of principals is increasingly being supplemented by managerial duties — decision making over school finances and staffing being among the more challenging aspects. Even in relatively centralised school systems, the consolidation of schools and broadening of curriculums has meant that a myriad of specialised leadership positions have often been established.

A variety of aspects of school leadership (and particularly the role of leaders in an environment of autonomy) are canvassed in chapter 8. But to summarise, the Commission considers that there is scope for further refinements in the composition of the leadership workforce — including in the interaction with non-teachers, such as finance managers and bursars — which may bolster school performance.

The role of teachers

As noted above, while the solo-teacher model still largely prevails, there have been some changes over time to the role of teachers and how they are deployed. Many participants to this study offered further ideas about the future of the teaching workforce, often building on these initiatives.

- A broader range of teaching styles could be facilitated through greater diversity in class sizes, ranging from focused small-group tutorials to large lecture-style classes (particularly in secondary schools).

- Schools already allow for differentiated roles and levels of responsibility among their teachers. However, such differentiation could also feature in efforts to expand career structures for teachers, providing high-performing teachers with greater authority over areas such as curriculum design and implementation.

- Multi-teacher classes might be helpful for new teachers entering the profession, as an adjunct to staff mentoring programs (Catholic Education Office — Diocese of Toowoomba, sub. 11).

- Just as specialist arts, music and foreign language teachers have been established in primary schools, further specialist roles are emerging and will likely continue to emerge in the future — for example, dedicated mathematics or science teachers in primary schools, as a response to concerns about general primary teachers' own aptitudes in these disciplines.

- Teacher librarians already play a role in developing the research skills of students (particularly those in senior secondary levels), but could also be used to build awareness about online safety and intellectual property rights. (The Hub: Campaign for Quality School Libraries in Australia, sub. DR61)

- Raised specifically with respect to school leaders, but with applicability for the teaching workforce more widely, the then SA Department of Education and Children's Services (sub. 35) noted the potential benefits of greater job-sharing. Such benefits include maintaining the involvement of teachers who have become parents (and might otherwise leave the profession entirely to raise their children), or are approaching retirement (and could be tempted to stay in the workforce longer if they were not required to work on a full-time basis).

- Job-sharing arrangements could also facilitate specialisation in some contexts, with part-time workers being appointed to complement skill sets. For example, if two part-time teachers were to jointly run a primary school class, one teacher might have a main focus on mathematics while the other principally targeted humanities.

- Where teachers have a particular specialisation that is relatively limited but of wide relevance to schools, teaching resources could be shared across 'clusters' (groups or networks) of schools. In rural and remote areas, where clusters can be geographically dispersed, greater use of technology (through regular videoconferencing between classrooms) may assist in allowing high quality teachers (including specialists) to have a positive impact on a wider pool of students.

The role of the non-teaching workforce

As identified in section 7.1, non-teaching school workers have accounted for a rising share of the overall schools workforce over at least the past decade and a half. Part of this story relates to non-teaching professionals and para-professionals assuming responsibilities that were once the preserve of teachers. Looking ahead, proposals for how non-teaching staff might be better deployed focus largely on

facilitating role specialisation (for teachers and non-teachers alike). Study participants offered many suggestions to this effect including:

- more administrative support for teachers, particularly in areas such as research capacity and records management, and to handle accreditation and registration requirements (ACT Council of Parents and Citizens Associations, sub. 17; Independent Education Union of Australia, sub. 12)

- greater career progression and skills development for teacher aides, with different para-professionals able to concentrate on specific areas of student need (Catholic Education Office — Diocese of Toowoomba, sub. 11; Department of Education — WA, sub. 45)

- improved training of teachers on how to best use teacher aides (Independent Education Union of Australia, sub. 12)

- improved training of teachers on how to interpret and employ the advice of health specialists such as therapists and psychologists (National Disability Services, sub. DR78)

- improved training for support staff to assist teachers in dealing with specific pressures, including student behavioural issues and technology (Department of Education — WA, sub. 45)

- using graduates with discipline-relevant qualifications (but without teaching qualifications) to provide specialist support to students who are underperforming or, alternatively, overperforming for their level

- expanding the involvement of health workers and counsellors in schools, particularly to strengthen early detection and support for students with mental illness (Queensland Catholic Education Commission, sub. 20; Victorian School Nurses Special Interest Group, sub. DR52)

- appointing 'parent liaison officers' to improve the quality of communications between schools and families (Australian Parents Council, sub. 19 and DR80)

- enhancing the role of managers of information and communications technology systems within schools to better identify opportunities for technology use in the classroom, and to provide advice to teachers on emerging trends that may relate to student educational outcomes and welfare (such as 'cyber bullying')

- better use of in-school careers advisers to foster links between schools and employers, and to improve the 'job readiness' of students looking to enter the workforce.

Some caution is justified about how much of a difference such changes might make to the duties and workloads of teachers. For example, the Catholic Education Commission of Victoria argued that 'there remain questions about what work of

teachers could realistically be transferred, and whether the amount of work so transferred would have a significant impact upon teachers' workloads' (sub. 13, p. 11). And as one roundtable participant noted, some of the responsibilities that might be considered ideal for transfer to non-teaching workers can in practice be aspects of the job that teachers enjoy.

Furthermore, in the absence of additional resources, transferring responsibilities from teachers to other school workers is likely to increase the workload of the latter. The Community Public Sector Union — Civil Service Association of Western Australia (sub. 16) argued that a variety of types of school support staff already face 'excessive' workload pressures. This trend may be compounded by a reduction in community volunteer support, requiring schools to reassign some duties to paid positions (Independent Schools Council of Australia, sub. 18).

Non-teaching workforce capacity and skills

As with the teaching workforce, some types of non-teaching roles can be difficult to fill. For example, schools can experience difficulties in employing information and communications technology support staff, owing to the range of other — generally more stable and higher-paying — job prospects available to those workers (DECS 2011a). Attracting support staff into hard-to-staff schools can also be challenging, particularly in remote areas. One option proposed by the WA Department of Education (sub. 45) is for governments to provide support for schools to hire staff from their local communities. This is broadly consistent with practice in South Australia, where much of the non-teaching workforce is 'primarily recruited from the local community and the majority from the parent group within the school community' (DECS 2011a, p. 15). On the other hand, SA DECD also noted that the employment of parents and community members in non-teaching roles was not always consistent with merit-based selection processes.

Some participants suggested that the generally low training levels for many school support staff is a significant concern (for example, Community and Public Sector Union — Civil Service Association, sub. 16; Community and Public Sector Union — State Public Services Federation, sub. 6). In South Australia, only 37 per cent of non-teaching workers held a tertiary qualification, which SA DECD noted was far lower than for comparable professions such as child and health care.

Generally speaking, tertiary qualifications are not a prerequisite for most classes of administrative and classroom support roles. But a notable exception is Queensland, where many teacher aides require a certificate level III qualification in education support. Moreover, those performing specialised support roles (such as child

psychologists and school nurses) must possess relevant qualifications — typically a three-year degree or diploma.

The diversity of non-teaching roles in schools indicates that a variety of approaches to training and accreditation (where relevant) will also be needed. Mandatory qualifications could shut off schools' access to a local, reliable and enthusiastic pool of workers — parents and other members of the school community. A particular concern in tackling educational disadvantage is that it may limit the capacity of schools to appoint Indigenous and other cultural support staff, whose mere presence within school communities (irrespective of their training levels) can act as a powerful driver for student engagement. And in the context of workforce innovation, system-wide directives on minimum qualifications for particular roles could limit the scope for schools to create new positions that do not fit within predefined job descriptions, and for which the specified training standards would not be appropriate.

Notwithstanding this, if greater responsibilities are to be delegated to non-teaching school workers, it is reasonable to expect that those workers will require greater skills to perform their jobs well. In some cases, expanded or new roles may best be filled by candidates with specific tertiary qualifications. But skill needs may also be addressed through on-the-job training and ongoing professional development opportunities — both of which will require continuing investment by schools and education authorities. Many of the innovations under Victoria's Wider Workforce Field Trials (discussed earlier) specifically included professional development for support staff.

Given the various tradeoffs between the availability of potential workers, the skills required for a particular role, and the resources available to the individual school, governments should be cautious about imposing system-wide requirements.

Data on the non-teaching workforce

The Community and Public Sector Union — State Public Services Federation Group argued that 'it is very difficult to obtain proper data in order to obtain a good picture of the present and future need of workforce planners' (sub. 6, p. 9). As such, it recommended that the Australian Bureau of Statistics compile a comprehensive data set on the non-teaching workforce, which would (among other things) draw together details about the quantity of workers, their pay and education levels.

As noted in section 7.1, some jurisdictions have already undertaken pilot studies and data analyses into the non-teaching workforce. South Australia's research in this area has also drawn together comparative data from other states and territories

(although with somewhat patchy results, owing to differences in data coverage between jurisdictions). The evidence from the efforts to date is that good quality policy-oriented research can inspire reform opportunities. In that sense, all states and territories could benefit from reflecting on their understanding of how non-teaching school workers are used and deployed, recognising that any changes in these areas should be driven from the school level. Where jurisdictions identify data deficiencies, cost-effective measures to improve that data, build knowledge and raise awareness could make a useful contribution.

From ideas to reality

Workforce innovations offer scope to improve student outcomes by various means. As the preceding discussion has illustrated, some workforce changes could facilitate greater role specialisation, enhance the capacity for schools to deliver more personalised support to individual students and their families, and provide new opportunities for addressing educational disadvantage. Workforce innovations have the potential to assist where there is a shortage of qualified teachers (chapter 4). And changes in how school workers are deployed (including in how para-professionals are used) could free up teachers for professional development, performance appraisal and the mentoring of new staff — all of which would be expected to have a positive effect on teacher quality.

That said, the precise benefits of individual changes in job design and workforce composition are unclear (especially in the absence of trials), and will generally be context dependent. Their efficacy within any school environment is likely to depend on the quality of school leadership, the needs of students, the mix of existing staff, and the availability of resources to support new initiatives. To this end, judgements about which measures would be the most worthwhile are best made by practitioners at the forefront of education delivery, in conjunction with education authorities who can provide the necessary policy and funding support.

Accordingly, the Commission's focus has been on removing potential impediments to workforce innovation. Section 7.3 considers how barriers to innovation might be reduced, and how changes in institutional settings might support schools in adjusting job design and workforce composition to better meet the needs of their staff and the students, parents and local communities they serve.

7.3 Removing barriers to workforce innovation

Several factors may limit changes in job design and workforce composition in the school sector. The costs of new approaches are often clear and upfront, and can be significant. Against this, the prospective benefits will generally be less certain and spread over time. Moreover, given the long-term effect that education has on students (and the potential difficulty in offsetting any negative impacts), school leaders, policymakers, parents and the community may be understandably cautious about making significant changes to a system that is delivering good outcomes for many, but certainly not all, students.

Such constraints on innovation are evident in virtually any environment, and do not of themselves represent market or policy failures requiring correction. Rather, they are a valid part of the decision-making process about whether to change existing practice.

However, these general constraints can be exacerbated by other factors that — where they exist — can be of greater policy concern. These include:

- inflexible system-wide arrangements
- deficiencies in leadership at the school level
- limited awareness of the opportunities for innovation.

Inflexible system-wide arrangements

Schools are key drivers of workforce innovation. But government and Catholic schools operate within wider systems, where varying degrees of centralisation mean that not all decisions about how a school operates will be made at the school level. Furthermore, all schools — including independent schools — are subject to regulations and legal obligations that may circumscribe the decisions they can make.

One consequence of this is that inflexible centralised policy settings can raise the costs of innovation — or indeed preclude innovation outright. Policy areas that might produce such impediments include:

- standardised remuneration structures (chapter 4) and industrial relations arrangements (chapter 11) that do not accommodate innovations in the roles of teachers and non-teaching school workers
- a lack of autonomy at the school level (chapter 8), such that school leaders have little authority over the hiring and deployment of staff

- teacher registration requirements that are based on professional standards (chapter 5), which — if too narrowly defined or applied — might exclude opportunities for changes in job design and workforce composition.

Deficiencies in leadership at the school level

Lowering policy and institutional barriers, while important, will not alone result in beneficial workforce innovation. Improvements in job design and workforce structure still require inspirational and innovative school leaders (and education policymakers) to seek out such opportunities.

As noted above, there will tend to be little pressure for change where people believe a system is generally working well. But there will always be room for improvement, particularly within the specific conditions of each individual school. Good principals and other school leaders will be ones who can identify areas where their schools can perform better, understand the challenges facing their communities, and think creatively about the best ways to improve student outcomes. And as noted below, regional and diocesan education offices can also provide guidance in these areas.

School leaders, as drivers of overall school culture, are also instrumental in promoting tolerance for new approaches and ideas within the workforce and among parents and students. But cultural impediments to change are not always easy to overcome.

- For those who have become accustomed to particular processes and ways of working, learning how to adjust can be difficult. Longer-serving workers who are familiar with one set of techniques may be less comfortable with adopting new technologies (and the teaching practices associated with them).

- At times, the views among staff and parents about the educational impact of a proposed change can be highly polarised. The degree of any aversion to change can vary across schools depending on their individual circumstances.

As discussed in chapter 5, training and development make significant contributions to workforce quality. They can also raise both the capacity and tolerance for innovation. But to be successful, not only do suitable professional development and mentoring programs have to be available, workers must productively engage with the opportunities offered. Here too, school leadership has a central role to play.

Limited awareness of the opportunities for innovation

The range of different school systems, both by sector (government, Catholic systemic and independent) and by jurisdiction (within Australia and overseas), means that there is extensive scope for different workforce innovations to be trialled and applied. Some study participants (for example, Catholic Education Office — Diocese of Toowoomba, sub. 11) indicated that information on workforce innovation is typically shared between employers, across professional organisations and through education unions. This can often be valuable, particularly where high levels of trust between parties can help provide encouragement for change.

However, the information that is shared between parties must be soundly based. The final report of the Victorian Government's Wider Workforce Field Trial revealed that 'schools have a generally low knowledge and understanding of what is possible in employing and deploying a wider workforce within current workforce parameters' (I&J Management Services 2011, p. 7). This issue is particularly significant in Victoria, because its government schools tend to have greater autonomy to manage their own affairs than that granted by education authorities in other jurisdictions (chapter 8). The more that decision-making responsibilities are centralised, the more likely it is that barriers to innovation are real rather than perceived. Nevertheless, misperceptions about what is possible can have the same effect as actual constraints, even where there is both a desire and a real (but misunderstood) capacity for change. Thus, there is an important role for education authorities to clearly communicate to schools what scope they have under existing arrangements to tailor workforce composition and deployment to local circumstances.

As one measure to address information deficiencies, the Commission proposed in its draft report that the School Leadership Development Strategies Clearinghouse run by the Australian Institute for Teaching and School Leadership be expanded to disseminate research on workforce innovation. Some participants questioned whether the institute was the appropriate body, given its focus on teachers — rather than school workers more broadly — and its lack of expertise in program or policy evaluation (for example, WA Department of Education, sub. DR90). Other participants questioned whether a central research clearinghouse would, by itself, facilitate changes in practice (for example, Principals Australia Institute, sub. DR91). Instead, they suggested that efforts should be concentrated on producing new workforce-focused research, and that schools should be more proactive in searching out the lessons from others' experiences with innovation.

Taking on board participants' views, the Commission reassessed its draft proposal and has concluded that workforce innovation would be better bolstered by education authorities taking measures to:

- make schools aware of the scope to redesign job roles and adjust workforce composition, as noted above

- encourage pilot studies and research into new and promising workforce innovations (such as the Victorian field trials discussed in box 7.2)

- maintain sufficient capacity to monitor innovations in Australia and overseas, and use that knowledge to support innovation within their jurisdictions.

Education authorities should be cognisant of the limitations of attempting to compel or drive workforce innovation from above rather than granting schools the autonomy and leadership to explore innovations that best meet local needs. What works in one school may be ineffective — or, indeed, counterproductive — for another school, given differences in circumstances. Such considerations warrant locally inspired solutions rather than centrally directed mandates on how to 'innovate'. As such, education departments — and the relevant authorities and support bodies for the Catholic and independent school sectors — should focus on how they can assist schools in making their own decisions.

The degree to which ideas are spread depends on the quality of the connections between different departments, regional offices and school leaders. As some schools and systems are already demonstrating, strong relationships can allow good ideas to propagate widely.

- Seminars, conferences and professional development all provide forums through which principals, teachers and other school workers can be informed about what is possible under the institutional and policy framework for schools.

- Likewise, regional education offices (and their diocesan counterparts in the Catholic system) can provide guidance on the opportunities for workforce innovation as part of their regular contact with individual school leaders.

- School clusters may also provide a useful channel for workforce innovations to be shared.

- To supplement the internal capacity of education departments, there would be merit in enhancing links with the educational research community (chapter 10).

Central repositories for advice, such as a clearinghouse (or something similar) to document workforce innovations, may also be part of the solution. State and territory education departments should consider the extent to which they can add value by providing such resources beyond those that already exist. Major research

entities (such as the Australian Council for Educational Research) already provide extensive online databases, academics contribute to a range of education research and policy journals, and education authorities produce publications — including reports, newsletters and websites — that discuss matters relevant to workforce policy and practice. These all provide avenues for informing school leaders of the options for (and prospective benefits of) workforce innovation.

FINDING 7.1

Changes in job design and the composition of the schools workforce have the potential to improve student outcomes and promote more efficient use of staffing resources (both teaching and non-teaching). The success of such workforce innovations is contingent on schools being delegated the authority and provided with the resources and leadership capacity to make decisions that are appropriate for their local circumstances. The role for state and territory education departments — along with Catholic education offices and support organisations for independent schools, to varying degrees — is to facilitate such school-level workforce innovation.

Education authorities are best placed to provide support and guidance to school leaders and communities by:

- *raising awareness of the scope to redesign job roles and adjust workforce composition within the prevailing legislative, regulatory and institutional framework*

- *encouraging pilot studies and research into new and promising workforce innovations*

- *maintaining sufficient capacity to monitor, assess and disseminate the changing use of the schools workforce in different systems and jurisdictions, including overseas.*

8   Leadership and school autonomy

Key points

- Strengthening school-level leadership could raise student outcomes by enhancing quality teaching, enabling better management of resources, and improving the responsiveness of schools to the needs of students and the local community.

- Measures to enhance school leadership include:
  - investment in soundly based training and professional development for current and prospective leaders
  - robust protocols for evaluating school leaders' performance, drawing on external oversight by relevant education authorities and school boards and councils
  - improving management capacity by strengthening the role of non-teaching administrative staff.

- The centralised control of schools can limit the scope for principals and other school leaders to exercise leadership. The significance of this constraint currently varies between sectors and jurisdictions.
  - Non-government schools (particularly independent schools) have traditionally enjoyed greater autonomy than most government schools.
  - Among government schools, Victoria's typically enjoy the most autonomy, although Western Australia is progressively implementing an Independent Public Schools program. New South Wales, which currently has the most centralised system, has foreshadowed moves to greater autonomy.
  - The Australian Government has announced a new initiative — Empowering Local Schools — to encourage greater school autonomy in all jurisdictions and sectors.

- Greater school autonomy should improve student outcomes, provided:
  - schools have the necessary leadership skills
  - school-level governance arrangements ensure accountability for student outcomes, with appropriate oversight from education authorities
  - there is adequate support and guidance from central agencies on matters such as training, teacher standards, and curriculum.

Principals and other school leaders have a significant impact on the overall ethos of their school community, the quality of education provided and, in turn, the performance of students. As such, efforts to improve school leadership can be intrinsically beneficial.

The importance of school leaders is heightened where a greater range of responsibilities are exercised at the school level. This is the case for independent schools and some government and Catholic systemic schools (section 8.3). Given a trend towards the self-management of schools, consideration should be given to what powers can sensibly be devolved. The focus of such consideration should be the capacity of school leaders (and their schools) to assume additional responsibilities.

In short, the scope for school leaders to influence outcomes will be relatively low if they have few leadership responsibilities to exercise. And just as significantly, without the right leadership skills in place, the potential benefits of school autonomy are considerably less likely to be realised.

8.1 The roles, skills and knowledge of school leaders

The term 'school leadership' encompasses the roles of principals, assistant principals and other executive-level staff members. The work of these leaders (and the skills and knowledge that they require) can vary considerably, depending on the degree of decision making that is devolved to them, which itself will depend on the jurisdiction and sector (government, Catholic or independent) in which they operate (section 8.3). The Australian Primary Principals Association suggested that principals require:

- skills to 'engage with stakeholders — school governing body and parents, teachers and administrative staff, system administrators and jurisdictions, and, most importantly, students'

- 'a practical knowledge of governance structures' — both in terms of the legal framework, and the relationship with external agencies

- 'well-developed and future-focused decision-making and management skills' that can 'lead the community'

- decision-making ability 'in regard to the school's finances, physical environment, facilities and staffing levels'

- 'the insight to build an effective team in line with sound employment practices' and 'the capacity to consult and negotiate in a collaborative framework'

- 'the ability to supervise and mentor staff', requiring 'a thorough knowledge of

curriculum and pedagogy together with the experience to be actively involved in teacher professional development' (sub. 41, p. 5).

Empirical literature stresses the importance of school leaders for good educational outcomes. Leithwood et al. (2004) suggested that approximately one quarter of total school effects on student outcomes can be attributed (directly and indirectly) to school leadership. A meta-analysis by Hattie (2009) found that the most significant impacts of leadership come from its influence on teachers' professional development and performance appraisal. He also found a significant benefit from leaders' resourcing decisions and organisational goal setting.

Professional standards

A desire to reinforce school leadership quality has motivated the development of a National Professional Standard for Principals by the Australian Institute for Teaching and School Leadership (AITSL) (box 8.1). The standard, which has been endorsed by all states and territories, provides high level guidance on 'what principals are expected to know, understand and do to achieve their work' (AITSL, sub. 39, p. 11).

The standard is unlikely on its own to underwrite the quality of school leaders. But it might provide a consistent benchmark across the sector, and be used as a foundation for devising programs to enhance school leadership. AITSL (sub. 39) stressed the potential use of the standard in improving professional development opportunities for current and aspiring school leaders. Additionally, the standard could be one factor feeding into performance appraisal regimes for school leaders (although an evaluation report for an early pilot study of the standard indicates that this is not its intended purpose — see Dinham 2011b).

Engagement with the profession

The extent to which the standard generates benefits will depend on its application. As AITSL acknowledged, this will in part be driven by how it is accepted by education authorities, school boards and councils, and principals themselves.

One relevant issue is whether principals feel they have been sufficiently involved in the framing of the standard. AITSL noted that the standard was 'developed through active consultation and tested by the profession' (sub. 39, p. 10). But Principals Australia (sub. 37) reported that only 25 per cent of respondents to a survey of its membership believed that there had been appropriate engagement in relation to the standard's development.

Box 8.1   **National Professional Standard for Principals**

The National Professional Standard for Principals was agreed to by the (then) Ministerial Council for Education, Early Childhood Development and Youth Affairs in July 2011. As with the National Professional Standards for Teachers (chapter 5), the standard for principals is in an embryonic phase, with implementation plans still being developed. Notably, and in contrast to the standards for teachers, there is no separate registration process for school leaders to which the National Professional Standard for Principals could be linked.

At the broad level though, the standard appears to encapsulate some common-sense notions. These are covered in three 'leadership requirements', which are given effect by five 'key professional practices'.

Leadership requirements

- *Vision and values*: Principals provide educational, professional and moral guidance, which are in turn imbued in the ethos of the schools they lead.

- *Knowledge and understanding*: Principals should be aware of relevant and contemporary education sector research, as well as applicable laws and policies, and know how these should be applied in the school environment.

- *Personal qualities and interpersonal skills*: Principals must work with others, adapting to different situations as necessary. They should resolve problems, build trust and provide a positive learning atmosphere for staff and students.

Professional practices

- *Leading teaching and learning*: Principals must promote effective teaching methods, and implement a curriculum that meets students' needs. Underpinning this is quality assessment of student learning and teacher performance.

- *Developing self and others*: Principals should appraise their own skills and take responsibility for their own professional development. They should encourage the professional development of their staff, and identify and guide the development of prospective school leaders.

- *Leading improvement, innovation and change*: Principals are integral to driving change within their schools. They should base proposed improvements within their schools on evidence, and ensure effective monitoring and evaluation of innovations.

- *Leading the management of the school*: Principals should ensure that available resources are deployed efficiently within their schools. Accountability is to be achieved through collaboration with school boards, parent groups and others.

- *Engaging and working with the community*: Principals will embrace diversity within their school communities, creating a tolerant, inclusive environment that accounts for the holistic (that is, not purely educational) needs of their students.

Source: AITSL (2011a).

Principals Australia (now the Principals Australia Institute (PAI)) further contended that a key problem associated with the standard is the use of AITSL — an Australian Government owned entity, rather than an industry body — to promulgate it. Instead, it suggested a 'profession-owned approach' (sub. 37, p. 4), whereby AITSL could partner with PAI to engage directly with school leaders:

> We are not advocating wholesale change in direction; rather supporting the process in train by the profession itself taking the lead in refining and promulgating the new national standard, monitoring and evaluating its impact on practice and reporting to AITSL on its effectiveness. (PAI, sub. DR91, p. 1)

There is a strong case for principals to be actively involved in the development and implementation of standards for their profession. (Indeed, given that the National Professional Standard for Principals is the first of its kind in Australia, such participation is all the more important.) And to the extent that principals feel that they have not been engaged in the process, there would be benefit in AITSL seeking opportunities for strengthening the level of professional input.

Nevertheless, although PAI did not consider that its proposals represented a 'wholesale change', restructuring the role and responsibilities of AITSL along the lines outlined by PAI would represent a fundamental modification. Given the relatively recent introduction of the National Professional Standard for Principals, it would be precipitate to make such changes now. Rather, sufficient time should be allowed for the standard to be bedded down and then properly reviewed. This would be consistent with the review processes already required for the National Professional Standards for Teachers and the initial teacher education course accreditation process (chapter 5). Should material concerns about the standard and its implementation become apparent during such a review, then further consideration would be warranted about options for restructuring. The issues could, if required, be dealt with in a broader review of AITSL itself (chapter 10).

8.2   Underpinning leadership quality

Training and professional development

Leadership quality depends highly on the vision, knowledge and skills of those in leadership positions. In part, this will be driven by innate abilities, which are refined over time through learning and practice. Indeed, the diverse paths for school leaders' career progression provide considerable opportunities for 'on-the-job' learning.

While teaching background and classroom experience are highly relevant for developing school leaders, they need to be supplemented by specialised training and professional development opportunities. The schools sector appears to have a number of processes for developing the knowledge and skills of school leaders, as well as for identifying and nurturing prospective leaders.

- In the case of government schools, state and territory education departments have developed a range of training and development programs to foster school leadership. In support of these, some jurisdictions have established specialist bodies, either on their own (such as Victoria's Bastow Institute of Educational Leadership) or jointly with training providers (for example, the Northern Territory's Centre for School Leadership, Learning and Development at Charles Darwin University).

- Catholic education authorities also run programs for current and aspiring leaders in their own systems. For example, the Catholic Education Office of Melbourne has a leadership standards 'framework', which guides aspiring teachers through leadership and principal ranks (and eventually into mentoring roles). It will also open a Catholic Leadership Centre in the second half of 2012 (Catholic Education Commission of Victoria, sub. 13).

- State and territory associations of independent schools provide a range of support services to their members in relation to professional development — including, in at least New South Wales and Queensland, dedicated leadership centres (Independent Schools Council of Australia, sub. 18).

- PAI has partnered with Flinders University to provide a suite of programs focused on skills development for leaders of rural, regional and remote schools, ranging from short courses to full postgraduate studies (Flinders University — School of Education, sub. DR53; PAI, sub. DR91).

- Between 2006 and 2011, AITSL offered a professional development program, 'Leading Australia's Schools'. The program, which was managed in conjunction with the Hay Group and the University of Melbourne, provided support and training to groups of principals drawn from all sectors.

As with professional development opportunities for the wider schools workforce, there is a mixed scorecard across jurisdictions and sectors. Australia's education authorities tend to focus on pre-service and in-service training opportunities for school leaders, but there are also alternative approaches overseas that might provide lessons for Australian policymakers and schools (box 8.2).

Mentors and fellow principals, as well as senior managers and liaison officers in education authorities, all help to enhance 'on-the-job' training and skills

Box 8.2   Professional development of principals in other countries

Other countries adopt a mix of approaches to professional development for new and experienced principals, including both pre- and in-service training, as well as formal induction processes for new appointments (see table). There is significant diversity in professional development opportunities across countries, with programs ranging from short courses to postgraduate qualifications, and the content of courses depending on (among other things) the level of autonomy within school systems.

International school leadership development approaches[a]

Training type	Australia	Austria	Belgium	Chile	Denmark	England	Finland	France	Hungary	Ireland	Israel	Japan	Netherlands	New Zealand	Norway	Nth Ireland	Portugal	Scotland	Singapore	Slovenia	South Korea	Spain	Sweden
Pre-service	■	■			■	■	■	■		■	■	■	■	■	■	■	■			■		■	■
Induction	■	■			■	■	■	■		■	■		■		■		■			■			■
In-service	■		■			■	■	■	■	■	■		■	■	■		■	■	■	■	■	■	■

a Government schools only.

Source: OECD (2012b).

Specific examples from overseas

- Teachers in **Finland** are required to obtain a master's degree in order to teach. However, professional development programs for principals are far more variable, with training requirements (if any) set at the municipal level. Various universities have established postgraduate courses in educational leadership, though there are no national standards to govern these.

- In **England**, new school leaders can obtain a National Professional Qualification for Headship. (Prior to reforms in 2012, the program was mandatory.) The qualification is granted after completion of a 6 to 18 month program, which includes attendance at conferences and seminars, one-to-one interaction with a mentor, peer learning opportunities and practicum (Department for Education 2011; NCSL 2011).

- Education policy varies between jurisdictions within the **United States**, but most states require principals to be licensed. These licenses are generally granted on the basis of completing specific school leadership courses, set against professional standards (which, while cross-jurisdictional, are interpreted and implemented by the states according to their needs).

- In **New Zealand**, which has a highly devolved school system, professional development for school leaders tends to be organised at the school level. The central government provides some overarching assistance — including by funding an 18-month induction program for principals — but does not mandate any courses.

Sources: Ingvarson et al. (2006); Pont, Nusche and Moorman (2008).

development. The support provided by professional networks of school leaders may be further strengthened by 'Palnet', an online resource led by PAI and funded by the Australian Government. Palnet, which was launched in October 2011 and has been actively promoted since February 2012, allows current and prospective school leaders to access and share resources to support their professional development (PAI, sub. DR91; Palnet 2011).

Another online resource of recent origin is the School Leadership Development Strategies Clearinghouse, established by AITSL as an online gateway for disseminating research on professional development for leaders. The clearinghouse also offers details on training programs, and includes opportunities for school leaders to interact directly with one another through the website.

Both Palnet and the clearinghouse are still relatively new, and their impacts are difficult to assess. In particular, it is not clear how widely known or used such resources are within the profession. At this stage, it would be premature to reach any conclusions about their efficacy. However, one potential weakness (relevant to both websites) may be the absence of any formal mechanism to independently assess the quality of the research and other material that is shared.

In response to this particular concern, PAI (sub. DR91) emphasised that Palnet provides scope for school leaders to collaboratively identify 'what works'. Undoubtedly, contact between school leaders is a valuable part of the evaluation process. But evaluation will be even more valuable where researchers and analysts can offer a critical perspective on different ideas, practical examples and research. The importance of effective evaluation protocols is discussed further in chapter 10.

Further scope for improvement?

There is no reliable measure currently available for objectively determining the effectiveness of different training and professional development programs for school leaders. But subjective measures — in terms of self-reporting by participants in such programs — do exist.

The Staff in Australia's Schools survey for 2010 (McKenzie et al. 2011) indicated that approximately 90 per cent of employed school leaders (defined for survey purposes as principals, deputy principals or equivalent) undertook some form of training for their role early in their leadership career. All forms of training (including specific development programs, induction, mentoring and postgraduate studies) were labelled as 'helpful' or 'very helpful' by at least 66 per cent of primary and secondary leaders. At least 80 per cent of leaders who took part in employer-organised leadership development programs regarded the experience as

'helpful' or 'very helpful'. Such programs were also the most common form of leadership training, with 55 per cent of all leaders participating. Regional or district programs with other leaders, along with structured mentoring by experienced colleagues, were similarly endorsed by respondents, although these generally had lower participation rates (30 to 40 per cent).

Despite generally high satisfaction with the available training opportunities, McKenzie et al. (2011) found that only 39 per cent of surveyed primary leaders and 46 per cent of secondary leaders considered that they had been 'well prepared' or 'very well prepared' for their *first* leadership position (most likely as a deputy principal). It is unclear how much of this self-perceived lack of preparedness can be attributed to training specifically. Arguably, any new job that involves a substantial escalation of responsibilities may seem initially daunting. In these contexts, training (while very important in its own right) cannot substitute for on-the-job experience, especially where the latter is supported by high quality induction and mentoring.

Reinforcing this point, leaders' confidence in their own abilities appears to grow as they become more established in their roles. At least two-thirds of surveyed principals and deputy principals assessed themselves as 'well prepared' or 'very well prepared' for the majority of the job functions in their current leadership position (table 8.1). Respondents generally felt 'poorly prepared' in dealing with such aspects as stress management, school finances and dealing with the media. As more jurisdictions seek to devolve greater decision-making responsibilities to the school level, these are areas where the demand for training will likely increase and where different approaches to leadership may be beneficial (see below).

The Principal Health and Wellbeing Survey (Riley 2012) also offers insight into school leaders' confidence. On a seven-point scale (with seven expressing the highest level of confidence), over 70 per cent of surveyed principals rated their ability to work with parents and solve problems at either six or seven. At the opposite end of the spectrum, only 35 per cent of principals rated their capacity in dealing with stress and pressure and 'managing myself and my time' at six or seven (although this increases to over 60 per cent for both categories when ratings at level five are also included). There was generally a high level of confidence in handling responsibilities associated with autonomy, including the management of teaching staff and non-teaching staff (for which, respectively, 68 per cent and 65 per cent of respondents rated their confidence at levels six or seven). There was slightly lower reported confidence for another aspect of autonomy — managing school budgets — for which 53 per cent of school principals rated their confidence at levels six or seven (although 77 per cent when ratings at level five are included). Overall, two thirds of surveyed principals considered that their leadership education had helped them to cope with the demands of their job.

Table 8.1   **School leaders' perceptions of preparedness[a], 2010**

'How well prepared do you currently feel in the following aspects of the school leadership role?'	Primary		Secondary	
	Very/well prepared	Poorly prepared	Very/well prepared	Poorly prepared
	%	%	%	%
Relationships with families, school community	92.7	0.0	91.5	0.1
Student welfare and pastoral care	92.2	0.4	92.7	0.3
School curriculum and assessment	87.4	0.3	85.4	0.6
Managing human resources	80.6	0.3	79.5	1.1
School goal-setting and development	82.2	1.2	82.8	2.1
Managing physical resources	78.2	2.0	66.9	4.8
Assessing teacher performance	77.4	2.2	75.4	1.8
Conflict resolution	76.0	1.8	76.0	1.7
Change management	76.0	2.0	75.3	1.3
Time management	73.9	2.0	73.2	3.3
School accountability requirements	68.6	3.3	66.6	5.2
Stress management	57.5	9.7	54.7	7.8
Managing school budgets and finances	57.3	9.7	48.3	15.4
Managing external communications (media)	36.1	18.2	39.4	19.1

a 'Somewhat prepared' responses are omitted. Hence, the values presented do not add up to 100 per cent.

Source: McKenzie et al. (2011).

Separately, a survey conducted by Principals Australia (2011) found that 68 per cent of all school principals surveyed (and 58 per cent of government school principals) felt they were 'well prepared' or 'very well prepared' to handle the additional responsibilities associated with autonomy. The same survey also revealed that principals were most likely to participate in professional development in relation to implementing the national curriculum, with high interest also recorded for programs relating to technology and performance management. However, 16 per cent of respondents were not expecting to undertake any professional development over the next two years, with time constraints and cost cited as key reasons.

Course accreditation

Aside from the individual aspects of what leadership development programs could and should cover, some participants focused on overarching changes to the institutional structure for training school leaders.

- The Australian Primary Principals Association (sub. 41) supported a system of 'authentic profession-led accreditation' for professional development programs.

- Similarly, PAI (sub. DR91) sought a formal mechanism to recognise school leaders' participation in professional development courses in order to meet the National Professional Standard for Principals.

PAI pointed to particular initiatives with which it had been associated, including Palnet (discussed above) and the L5 Leadership Framework (which provides structured modules for professional development). However, it emphasised that it was not proposing a mandatory qualification for principals.

> PAI is not advocating that all principals be required to immediately meet a standard, but that accreditation should be available to distinguish principals who have attained excellence ie they have demonstrated they have achieved the [National Professional Standard for Principals]. It will become the benchmark that distinguishes principals from teachers who achieve other school leadership positions. (sub. DR91, p. 2)

This is broadly consistent with reforms to England's National Professional Qualification for Headship (mentioned in box 8.2), which principals in that jurisdiction were previously required to obtain. As Pont, Nusche and Moorman (2008, p. 119) noted, the then mandatory qualification was criticised for not providing 'enough freedom to develop different types of training' and failing to recognise the benefits of other qualifications for school leaders, such as master's degrees. The National Professional Qualification for Headship became optional in 2012, with the UK Government intending for it to become a highly regarded and sought-after 'mark of quality' (Department for Education 2011).

Under a similar model, PAI may wish to endorse particular courses and recommend them to their members, without any obligation for principals to undertake those particular courses. Such an informal and non-binding 'accreditation' scheme would be unobjectionable. But despite its stated rejection of mandatory qualifications, PAI also appeared inclined towards a stricter application of the National Professional Standard for Principals, stating that:

> … without the profession itself leading the next steps in using the standard *as the basis for defining entry into the profession* and recognizing the achievement of entry into the profession, there will be no significant impact on increasing the numbers of people aspiring to become principals and practice change will be minimal. (sub. DR91, p. 2, emphasis added)

This implies a role for PAI (representing the profession) in determining the courses that candidates for leadership positions would have to complete in order to become principals. Such a formal accreditation approach presents some concerns. Rather than being a mechanism to increase numbers and expand quality, there are risks that accreditation would restrict the pool of prospective candidates and fail to adapt to changing conditions. As the Commission noted in its study into the health workforce, course accreditation in that sector (which for various professions is driven by peak associations) often had a tendency to reinforce traditional professional boundaries, and could be slow to respond to changes in service and patient needs (PC 2005b). There is some international evidence to suggest the same

can occur in the context of school leaders. For example, Cheney and Davis (2011) found that certified higher education programs for principals in the US were often outdated and insufficient, leaving principals unprepared.

The diversity of school leadership roles can also exacerbate the risks of slow responsiveness in the accreditation system. Unlike for more homogeneous professions, the mix of training and development needs will vary between school leaders, making across-the-board solutions ill-suited. A further consideration is that the National Professional Standard for Principals is relatively new and has yet to be fully evaluated in practice. Linking accreditation to a standard that is itself still emerging may have unforeseen pitfalls.

Taking account of these concerns, the Commission considers that formal course accreditation for school leadership programs is unwarranted at this stage. Instead, the emphasis should be on enabling school leaders to pursue professional development opportunities that are relevant to their needs. This requires education authorities to provide appropriate support for such programs — both in terms of direct financial contributions to the costs of such programs, as well as by ensuring sufficient staffing resources are available to cover for those participating in training opportunities. It also relies on leaders, and their supervisors and mentors, being able to identify the professional development programs that will be of greatest value — a role that PAI can usefully contribute to.

Performance appraisal and development

As discussed in chapter 6, principals must be accountable for the operation of, and reporting on, performance appraisal and development systems for teachers. As is currently the common practice in Australia, it is appropriate that principals have responsibility for ensuring that individual appraisals are undertaken — even where the appraisals themselves are delegated to a senior teacher.

It is similarly commonplace across all school sectors that principals and other leaders should themselves also be subject to regular appraisal. For example, in Victoria, the Guidelines for Principal Class Performance and Development provide a framework for evaluating school performance and leadership effectiveness. The Catholic Education Commission of Victoria has introduced a Performance Management Strategy that explicitly incorporates performance appraisal. And while independent schools, because of their autonomy, handle their own performance management processes, state and territory associations of independent schools can provide advice on how best to structure those processes.

Having a performance appraisal system is necessary, but it is not a sufficient condition for ensuring high quality school leadership. Indeed, unless performance appraisal systems are themselves of high quality (and include effective mechanisms to manage instances of underperformance), they will do little to underpin good student outcomes (see below).

Contract-based employment

As one institutional mechanism to facilitate performance management, many principals are employed on individual contracts rather than through awards or enterprise agreements. This is particularly the case in the non-government sector (although some Catholic principals are employed under enterprise agreements). And some government school systems have moved to contract-based employment — for example, Victoria (box 8.3) and the Northern Territory. However, in most jurisdictions, government school principals remain employed under system-wide industrial arrangements.

Defined-period, contract-based employment for principals offers some advantages.

- Awards and enterprise agreements are not developed chiefly with principals in mind. The negotiation of individual contracts can deliver better targeted, more responsive arrangements.

- The time-limited nature of contracts, often with built-in evaluation requirements, serves to focus the attention of both employer and employee on the expected outcomes — including the changing needs of a given school community over time.

- Associated with the above, the explicit specification of the key results a principal is expected to achieve can facilitate effective performance appraisals and management.

- Letting contracts expire is a (notionally) easier option for education departments (as employers) to manage unsatisfactory performance by principals. (Although the principal may still be guaranteed employment within the system in a lower-ranked position.)

However, contract-based employment of principals is not without its drawbacks either.

- The additional uncertainty introduced by time-limited appointments can dissuade some applicants — particularly if the specified time is short.

Box 8.3   **The Victorian principal contracting model**

Victoria employs principals on (what are typically) five-year contracts, with the job role of each principal specifically tailored to the needs and expectations of the school community he or she is to lead.

Underpinning this approach is a system of ongoing evaluation. Principals' contracts can only be renewed once. If a principal wants to stay at a school at the end of his or her second term, the position must be openly advertised — that is, the principal must stand against other applicants to compete for the job. Where a principal's contract expires without renewal or a new appointment, the standard contract provides for the employee to be retained by the department as an assistant principal or lead teacher.

Roles and responsibilities

While the precise specification of these may vary from contract to contract, a standard set of accountabilities for Victorian school principals includes:

- ensuring delivery of a comprehensive, high quality education program to students

- implementing the school council's decisions as an executive officer of the council

- establishing and managing financial systems

- representing the education department in the school and the local community

- contributing to system-wide activities, including policy, planning and development

- effectively managing and integrating the resources available to the school

- consulting with staff, students and the community about school policies, programs and operations

- reporting to the department and school community on school achievements

- complying with regulatory, legislative and departmental requirements.

Source: DEECD (2010b).

- Related to this, greater uncertainty in employment conditions may be expected to lead to principals demanding higher pay as compensation. For governments facing competing demands on public funds (including other aspects of education resourcing), this is a tradeoff that requires careful consideration.

- The process of renewal and reapplication can be time consuming. In cases where principals are widely agreed to be performing well, forcing them to reapply for their jobs can divert resources away from more productive uses.

- Succession planning within schools may be undermined if there is uncertainty about whether an existing principal will be reappointed to a post or replaced by a new candidate.

In fact, contracts are not of themselves an intrinsically good (or bad) approach to hiring principals. They are simply a tool available to employers that may be appropriate in some contexts, but not in others. For instance, impediments to identifying and addressing underperformance within a system or school's prevailing award or enterprise agreement might provide impetus for contract-based employment. But — as with the schools workforce more widely — if rigidities in the industrial relations regime could be directly addressed (chapter 11), then some of the benefits of contracts would fall away.

Moreover, the success of any contract system will depend on sound implementation. For example, if application processes for principal positions lack rigour, or if renewal is seen as an automatic process, then contracts will do little to assure leadership quality. Again, the central factor is how effectively performance is evaluated, with the onus being on employers to communicate their expectations of school leaders, and to monitor and transparently assess these.

Hence, in the Commission's view, the primary focus of policy should be to address the underlying factors that lead to the use, and enhance the benefits, of contracts. Crucially, these factors are just as relevant to promoting good outcomes from the tenured workforce as those in contract-based employment.

Administrative and managerial expertise

Many participants stressed the importance of the 'educational leadership' function of principals (for example, AITSL, sub. 39; Australian Education Union, sub. 28; Catholic Education Office — Diocese of Toowoomba, sub. 11; Department of Education and Children's Services — South Australia, sub. 35; Department of Education — Tasmania, sub. 33; Principals Australia, sub. 37; Queensland Catholic Education Commission, sub. 20). But some were less supportive of the managerial role many principals now assume. For example, Deakin University's School of Education cautioned that:

> … too much effort, time and energy has been spent on management work rather than pedagogical work in schools as the job of the principal in self-managing schools has expanded. (sub. 24, p. 29)

These managerial functions might pose some challenges for the recruitment of principals. A Victorian Government report stressed the tension between 'the type of person who is generally available for appointment to principal positions and the demands of the job' (DET Victoria 2004, p. 22), with teachers entering the profession due to an interest in helping children to learn, but having to assume a management role as they became principals.

On the other hand, some candidates will be attracted to school leadership by the challenges involved in management roles. Many principals surveyed by Educational Transformations (2007, p. 101) welcomed the opportunity to shape their schools to meet community needs and suggested that greater decision-making scope provided — among other things — 'freedom to take risks'.

The net effect of these factors is unclear: some teachers might be dissuaded from applying for leadership roles because of the additional responsibilities, while other candidates enter the field specifically because they are attracted by those responsibilities. As such, the changing demands on principals are not a problem per se. The concern instead is whether applicants have the necessary managerial skills to perform the additional duties expected of them.

In part, the development of such skills requires good training to be available to principals (as discussed above). Concerns about principals' managerial capabilities might also be addressed through more effective use of administrative staff in schools. The contributions of bursars and accounting specialists are integral to schools with responsibilities for their own finances. In fact, recognising the importance of such roles, the Community Public Sector Union/Civil Service Association of Western Australia suggested that senior school administrative staff be 'recognised as an integral part of the leadership team in schools' (sub. 16, p. 5). The WA Department of Education also observed that many of its schools had expressed interest in appointing senior support staff to non-teaching managerial positions in areas such as 'finance, communications, public relations and human resource management' (sub. DR90, p. 9)

As with the broader schools workforce (chapter 7), the different demands placed on school leaders may merit greater specialisation in their roles. This has, in part, already been realised through the diversification of school leadership roles to target specific subjects, year levels, school programs and student needs. But recognising the challenges associated with administration and management, further gains may be achieved through specialisation of leadership functions, and by looking beyond qualified teachers for some leadership roles.

Non-teacher appointments to school leadership positions have some precedents overseas. For example, the Netherlands has a specific program for attracting business leaders to become school principals. Sweden also employs some psychologists, military officers and former corporate executives as school leaders — though candidates are required to have 'pedagogical insight' (Pont, Nusche and Moorman 2008). Evaluations of these initiatives have been patchy — although at least in the case of the Netherlands, early evaluations pointed to promising

outcomes, including an apparent increase in support from school boards for non-teacher principal appointments (SBO 2005).

Given the identified importance of educational leadership — and related to this, the need for leaders to have the confidence of school workers and communities — it is likely that teachers will remain the best-suited candidates for principal positions in the vast majority of cases. However, for those occasions where a non-teaching candidate could make a useful contribution in a school leadership position, the regulatory environment (including industrial agreements and teacher registration requirements) should not unduly impede such appointments.

Irrespective of who is appointed to senior school leadership positions, the proper functioning of schools will rely heavily on the contributions of bursars, finance managers and other clerical staff. High quality principals will invariably require high quality administrative and managerial support.

FINDING 8.1

Principals and other school leaders play a pivotal role within their school communities. Measures that have the capacity to augment and enhance school leadership include:

- *investment in soundly based training and professional development for school leaders*

- *effective protocols for evaluating school leaders' performance, drawing on external oversight by education departments (and Catholic education offices) and school boards and councils*

- *improving management capacity by strengthening the role of non-teaching administrative and clerical staff.*

8.3 School autonomy

The scope for principals and other school leaders to exercise leadership will tend to be constrained by the degree of centralised control of school-level decision making. This can in turn make schools less responsive to the diversity of student needs and the expectations of their local community.

The extent of school autonomy varies between jurisdictions and sectors. In a 2009 survey for the Program for International Student Assessment (PISA), school principals revealed that:

- with respect to allocating resources, the level of school autonomy is greatest in Victoria and the Northern Territory, lowest in New South Wales, and around the

'middle of the pack' in most other Australian jurisdictions

- with respect to curricula and assessment, the level of autonomy is much higher in Victoria, followed by Queensland and South Australia, with a lower degree of autonomy in the remaining states and territories

- both of the above types of autonomy are greatest in independent schools, followed by Catholic and then government schools (Thomson et al. 2011).

More recent evidence for government schools comes from studies commissioned for the Review of Funding for Schooling and the Ministerial Council for Education, Early Childhood Development and Youth Affairs (Deloitte Access Economics 2011; Keating et al. 2011). With respect to school staffing, the studies reported that:

- responsibility for staff appointments lies at the school level in Victoria, except for some leadership positions (box 8.4). In other jurisdictions, staff appointments are typically centralised

- configuration of staffing is undertaken at a central level in New South Wales and the Northern Territory. In Queensland, configuration of teaching staff is a regional responsibility, based on central allocations. In other jurisdictions, responsibility for staff configuration is typically at the school level

- staff payments are typically centralised in all jurisdictions.

Study participants confirmed that non-government schools typically have greater autonomy than in the government sector. The Independent Schools Council of Australia (sub. 18) noted that day-to-day responsibilities for education programs and staffing are delegated to the management team in many independent schools, while longer-term planning and supervision is the responsibility of school boards.

The extent of autonomy in Catholic schools can vary according to whether they provide primary or secondary education, are in a particular diocese, and whether they are owned by a religious order or a parish or group of parishes (Catholic Education Commission of Victoria, sub. 13). But principals in Catholic schools typically have responsibility for staffing, often within a framework that is moderated at a diocesan or district level (National Catholic Education Commission, sub. 7).

One roundtable participant observed that the types of responsibilities generally referred to by the term 'autonomy' have shifted over time — previously schools had far greater control over setting their own curriculum and assessment exercises, but these are now becoming more centrally coordinated. In this regard, non-government schools may be operating with less autonomy than they once did, just as some government schools are gaining more.

Box 8.4   **Autonomy in the Victorian government-school system**

Government schools in Victoria tend to have greater autonomy than in other jurisdictions. They are usually governed by school councils that are accountable to the Minister for Education. School councils comprise elected parents (must be more than one-third of members), education department representatives (including the principal and other teachers, no more than one-third of members), and sometimes community members.

The responsibilities of a school council include establishing the broad direction and vision for the school, developing and updating school policies, and overseeing the use of school resources. The school principal is executive officer of the council, meaning that he or she is responsible for providing advice to the council and implementing its decisions. The following table summarises how responsibilities for particular issues are divided between a principal and school council.

Issue	Principal	School council
Finances	Develop and implement a budget to manage the school's resources, given expected revenue from education department, other government sources, and locally raised funds. Prepare financial reports.	Assist development of the budget. Approve the budget. Monitor revenue and expenditure against the budget and, where needed, take actions to address issues that arise.
Staffing	Hire staff and manage their deployment, subject to school budget and human-resource policies of education department. Identify excess and underperforming staff. Manage them according to the policies of education department. Where appropriate, recommend the retrenchment of excess and underperforming staff to the Secretary of education department.	Recommend whom to appoint as principal to the Secretary of education department. Approve employment of certain staff, such as casual replacement teachers and canteen staff.
Facilities	Arrange the completion of minor works and routine maintenance. Participate in the development of major capital-works proposals.	Allocate contract for school cleaning. Enter contracts for building and grounds improvements.

The Department of Education and Early Childhood Development sets, and/or provides guidance on, the framework within which schools operate. This includes a school's state-funded budget (based on characteristics of the student population), the classification structure and associated salary rates for teachers, other human-resource policies (such as for managing underperforming staff), curriculum guidelines, and requirements for managing finances and organising school councils. The Department also assists with the selection of principals and monitors school outcomes. Regional offices of the Department play an important role in advising schools on a wide range of issues, including school management, curriculum and learning, workforce planning, leadership, professional development and student wellbeing.

Sources: DEECD (2009b, 2011b, 2011c).

Current and foreshadowed initiatives to increase school autonomy

Several jurisdictions are in the process of exploring and/or introducing greater autonomy for their government schools.

- In Western Australia, the state government has been rolling out its Independent Public School program since 2009. This offers greater autonomy to schools that successfully apply for it (box 8.5). The Community and Public Sector Union/Civil Service Association (sub. 16) praised the greater scope that the Independent Public School program gives schools to employ support staff but was concerned that greater autonomy could also add to the workload of such staff. United Voice (sub. DR66) was also critical about the impact on school support staff, and noted that any problems would not be recognised until 2013 at the earliest, when an independent review of the program is scheduled. The WA Government (sub. 45) reported that participating schools had employed finance and human-resource assistants, maintenance support, and administrative assistants to free up teachers and leaders from administrative tasks. It also noted that some schools had hired teachers with specialist skills. According to the WA Government, principals generally rated this staffing flexibility as the greatest benefit of autonomy:

  Having the opportunity to select their own staff through merit processes and establish a workforce with the specific skills to meet the needs of their student cohort cannot be underestimated as a strategy to improve a wide range of social and academic outcomes for students. (sub. DR90, p. 9)

  The WA Government further noted that principals of Independent Public Schools reported in a recent survey that their workforces had become more motivated and are taking greater responsibility for student outcomes.

- South Australia is transitioning to a more devolved funding model, with schools being granted greater autonomy over the use of allocated resources (Deloitte Access Economics 2011). The reforms will include 'appropriate authorities to devolve relevant employment responsibilities to principals, directors and other education leaders' (SA Department of Education and Children's Services, sub. 35, p. 8).

- ACT government schools are also moving towards a system of greater autonomy. In 2011, eight schools were granted autonomy, which expanded to 23 schools in 2012. Some 40 other schools in the territory have reportedly also applied to become autonomous (DET ACT 2011; Tucker 2012).

Box 8.5   **WA Independent Public School program**

The Independent Public School program gives WA government schools the option to obtain greater autonomy on a range of matters. The program commenced in 2009 and involved 98 schools in 2011. A further 109 schools are due to participate by 2013. There are currently around 800 government schools in Western Australia.

Individual schools, or a cluster of schools, can nominate to participate in the program. There has to be a written nomination from the school principal(s) that is supported by the school council(s). This has to demonstrate the capacity of the school (or cluster of schools) to assume greater responsibility for its own affairs; the level of local support, including staff support; and the potential benefits to students and the broader school community. An independent selection panel recommends schools to the Director General of the WA Department of Education.

Once identified as an Independent Public School, a school determines when, if and how to exercise autonomy on a range of allowable matters (termed 'flexibilities'). With respect to finances, the school is able to manage its affairs through a one-line budget. This can include authority to manage utilities (electricity, water, gas and waste management) and faults (breakdowns and repairs), determine accounting and financial procedures and practices within broad guidelines, and establish a wider range of reserve accounts (such as salary, and buildings and facilities). Principals are also able to award contracts and dispose of assets valued up to $150 000, and exercise or decline contract extensions and approve price variations of up to $150 000.

With respect to staffing, a school can select and appoint all staff, determine its staffing profile within the one-line budget, and exempt itself from centrally managed systems for staff transfers and placements.

Regarding buildings and facilities, schools can manage contracts using funds in their one-line budget for property services (such as window cleaning and mowing) and routine maintenance (such as for fire extinguishers and electrical testing). They can also have the authority to submit requests directly to the WA Department of Education for capital works.

All Independent Public Schools must negotiate a Delivery and Performance Agreement, which is signed by the principal, chair of the school board, and Director General of the WA Department of Education. Each agreement identifies the resources the school will receive, the support that will be provided, the programs it will be contracted to deliver, how student achievement will be monitored, and the performance and accountability of the school over the life of the agreement (three to five years).

Each Independent Public School has an independent review in the final year of its Delivery and Performance Agreement, with the report made public. The school also has to produce an annual report and business and strategic plans, which are co-signed by the school council.

Sources: Department of Education — WA (2011a, 2011b, sub. 45).

- Although its arrangements have historically been the most centralised, New South Wales trialled school-level decision making from early 2010 (box 8.6). Based on these trials, the NSW Government announced in March 2012 that it would be devolving greater decision-making responsibilities to the school level, in particular over school budgets. Principals will also be granted greater control over staffing levels, and will have an 'increased say in filling vacancies' (O'Farrell and Piccoli 2012). Full details on this policy are still to be confirmed, subject to further consultation with principals, teachers and school communities. However, some aspects will be introduced from as early as the second school term for 2012, including greater flexibility for principals to make purchases of up to $5000 rather than rely on central procurement processes.

- As with New South Wales, the Queensland Government has also signalled an intention to devolve greater authority to schools. A discussion paper on school autonomy was released in November 2011, as part of a consultation process that concluded in March 2012 (DET Qld 2011). While the Government elected in March 2012 has yet to announce precise plans for school autonomy, the Liberal National Party had in opposition endorsed a model similar to Western Australia's Independent Public Schools program (Newman 2011).

The more nascent of these state and territory developments are likely to be influenced by an Australian Government effort to encourage government and non-government schools in all jurisdictions to move further down the autonomy path (box 8.7). The Empowering Local Schools initiative will be gradually phased in, and allow autonomy to be tailored to the circumstances of individual schools.

Box 8.6   **NSW school autonomy pilot**

New South Wales' Increased School-Based Decision-Making Pilot commenced in January 2010, and involved 47 schools. The pilot gave participating schools partial autonomy over recruitment, staffing mix and budget, and was partially funded under the National Partnership Agreement on Improving Teacher Quality (Australian Government 2011b). In some cases, schools that participated in the trial did so as a group, sharing financial and staff resources, including staff-mix variations (NSW Smarter Schools National Partnerships 2010).

The NSW Government released a review of the pilot's progress up until October 2011 (ARTD Consultants 2011). This was largely based on a survey of principals in participating schools, all of whom reported that the pilot had led to concrete improvements. But the review also concluded that there are significant cultural and organisational challenges to implementing greater school autonomy in New South Wales. These included concerns among the NSW Teachers Federation and some principals, a highly regulated staffing system, complex budget systems, and the likely difficulty of initiating change in a large system.

Box 8.7	**Empowering Local Schools initiative**

Empowering Local Schools is an initiative of the Australian Government that aims to facilitate greater autonomy for government and non-government schools. As of late April 2012, most state and territory governments had signed a national partnership agreement to give effect to the initiative. Bilateral implementation plans for participating jurisdictions are currently being finalised. In parallel with this national partnership, the Australian Government is negotiating funding agreements and implementation plans with non-government education authorities in each state and territory.

The Australian Government has committed $63.4 million to fund the first phase of the initiative, involving 1000 schools in the government, Catholic and independent school sectors over 2012 and 2013. Of these, 714 schools are expected to be government schools, while one-third of all participating schools will be in regional areas. Phase one schools will be eligible for grants of $40 000 to $50 000 under the initiative. Phase two of the initiative is expected to be rolled out nationally from July 2015. The total budget for the initiative, including phase one, is $480.5 million over seven years.

Indicative allocation of phase one funding, government schools

		NSW	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*NT*	*ACT*	*Total*
Schools	no.	229	166	131	61	81	22	16	8	714
Funding	$m	12.6	9.4	7.6	4.0	5.0	2.0	1.7	1.3	43.6

The focus of phase one of the initiative will primarily be on strengthening school-level decision making in the areas of workforce, governance, funding and infrastructure. Participating schools will receive funding to help them manage the transition to greater autonomy. The specific actions that each school takes will be determined by the school and their education authority through an application process, and will be based on the school's size and current level of independence. Phase-one schools will be required to take part in an evaluation study.

Sources: COAG (2012); DEEWR (2011b, sub. 42); Garrett (2011a); MCEECDYA (2011d).

Considerations for school autonomy

The shift to greater school autonomy should generally be seen as a positive development to the extent that it removes impediments that can prevent principals and other school leaders exercising leadership. This can potentially lead to improved outcomes, given that school leaders tend to be better informed than central agencies about the circumstances of their schools, such as the specific needs of their students.

Nevertheless, some participants expressed concerns about the general progression towards school autonomy. The Australian Education Union (sub. 28) argued that

greater school autonomy does little to improve student outcomes and exacerbates educational disadvantage. Indeed, this would seem likely where autonomy is granted to disadvantaged schools that have limited leadership skills and resources. But the fact that many independent and Catholic schools — a wide assortment of which serve disadvantaged students — are able to operate successfully under varying degrees of autonomy indicates that the issue is more complex.

This is confirmed by past studies, which have found mixed impacts from delegating decision-making authority to schools (for example, research cited by the Australian Education Union, sub. 28; Department of Education, Employment and Workplace Relations, sub. 42; Educational Transformations 2007; Hanushek, Link and Woessmann 2011; OECD 2010b; Thomson et al. 2011). A key lesson from the experiences to date is that autonomy is a broad concept, with its effects dependent on what responsibilities are devolved, the school's capacity to take on those responsibilities, and how accountability for student outcomes is ensured — including in terms of school-level governance and central agency oversight. Rather than a one-size-fits-all approach, decision-making responsibilities should continue to be delegated selectively, taking account of each school's capacity to self-manage its affairs.

A spectrum of autonomy

As indicated above, different jurisdictions take different approaches to how (or even if) authority over matters such as staffing, budgets, curriculum and assessment should be delegated to schools. Even in high-autonomy systems, some functions are still commonly fulfilled at the departmental (or diocesan) level. For example, large-scale capital works and back-office functions like payroll administration are likely to be more efficiently handled at a central level for most schools (although this depends on the relative efficiency of central agencies, as demonstrated by the differing costs they incurred under the Building the Education Revolution program (BERIT 2011)).

Just as jurisdictions have adopted or experimented with school autonomy, it is worth noting that policymakers have also sought greater national consistency in such areas as curriculum and student assessment (chapter 3). Although this reduction in variation across schools (and systems) necessarily involves some authority being withheld from school leaders, there remain opportunities for school-level differentiation.

- Despite moves to introduce a national curriculum, there is still the potential for schools to specialise in specific content areas, or to offer alternative education programs (such as the international baccalaureate or vocational education and

training courses). The provision of extra-curricular activities also allows for differentiation between schools, as does the ability to develop a culture that best aligns with the local community.

- For many schools, there is scope to supplement national student assessment procedures with school-level data collection and analysis. This can provide school leaders with potentially richer 'diagnostic' information for identifying where students require specialised attention or where teachers may benefit from greater professional development (Hattie 2005; Timperley 2011).

Perhaps most commonly (although not exclusively), autonomy for systemic schools is taken to mean devolving to school leaders such responsibilities as managing budgets, as well as hiring staff and allocating them to specific roles. To re-emphasise though, success here will depend on the circumstances of each school. A school might poorly manage its budget unless it has school leaders or senior administrative staff with sufficient expertise. And devolved responsibility for staffing will require schools to have transparent and accountable employment processes, including an effective performance appraisal regime (chapter 6).

Building capacity for autonomy

The capacity of a school to take on greater autonomy is clearly linked to the leadership skills of its principal and other school leaders. Hence, recruitment processes, training and performance appraisals for school leaders are important — as noted earlier in this chapter. The National Professional Standard for Principals could prove to be useful in this regard. AITSL (sub. 39) suggested that principals will need to have the capability to use their greater independence in decision making effectively. In the case of independent schools, the Association of Heads of Independent Schools of Australia (sub. 2; AHISA 2011) has developed a model of autonomous school principalship.

Another factor that may influence a school's capacity for autonomy is its size. As a consequence of assuming greater responsibilities from central offices, the administrative costs for very small schools (which start off with less resources) may exceed the benefits of autonomy. In these circumstances, one approach is to allow 'clusters' of schools to share resources and leadership. This is an option under the WA Government's Independent Public School Program, and was also available to schools in the NSW Government's Increased School-Based Decision-Making Pilot.

The level of educational disadvantage within a school community is also relevant. An analysis of 2003 PISA results by Schuetz, West and Woessmann (2007, p. 34) concluded that 'there is not a single case where a policy designed to introduce

accountability, autonomy, or choice into schooling benefits high-SES students to the detriment of low-SES students'. However, the authors also acknowledged that there were some situations where the benefits to high-SES students were greater than those to low-SES students, increasing relative disadvantage. As such, student outcomes under autonomy will need to be underpinned by a system-wide focus on the adequate resourcing of all schools — and particularly to identify where there are deficiencies in arrangements for schools with higher levels of disadvantage (chapter 9).

School-level governance arrangements

A factor that is critical to the success of autonomous schools is the quality of governance at the local level. Educational Transformations (2007, p. 7) noted that 'government schools in the states and territories have a connection with and draw on the support of bodies such as parents and friends associations and the like, [but] there are few instances where there are governing bodies such as school councils or school boards, with significant authority and responsibility of the kind exercised by counterparts in independent schools and to a lesser degree, systemic Catholic schools'. Nevertheless, the autonomy models for Victorian and WA government schools do have specified responsibilities for school councils (boxes 8.4 and 8.5).

The capacity of school boards and councils to take on greater governance responsibilities will be a key consideration in judging what responsibilities can be sensibly devolved to the school level. The overriding condition for most autonomy initiatives is that school leaders be held accountable for student outcomes. Local governance is therefore required to assess how successfully school leaders are meeting the needs and expectations of their students, parents and communities. In this regard, and as mentioned above, data collection and analysis within schools can play a key role in determining educational performance — both in terms of student outcomes and teacher effectiveness.

Expanding the duties of school boards and councils may require efforts to reinforce the quality of those serving on such bodies. The Independent Schools Council of Australia noted that the 'two biggest challenges currently being faced by [independent] schools are achieving the right skills mix on the governing body and the succession plans for principal and chair' (sub. 18, p. 18). As government school systems move towards greater autonomy, such concerns could also become more pronounced in the public sector.

Many systems already offer professional development opportunities for board and council members. For example, as part of its Independent Public Schools program, the WA Government runs regular training seminars for school board members. And

the Victorian Government has established online professional development opportunities for its school councils (DEECD 2011b).

But skills development alone is unlikely to be enough, particularly if there are insufficient candidates volunteering to serve on school boards and councils. Some roundtable participants indicated that shortages exist in various Australian contexts, with disadvantaged schools more likely to experience difficulties in attracting candidates. Pont, Nusche and Moorman (2008) suggested that many parents choose not to join boards or councils because of the time and work required and the responsibilities involved. This suggests that, as greater governance obligations are established, it may become harder for schools to encourage willing participation on their boards or councils — a cautionary reminder that strengthening local governance arrangements is not costless.

Oversight by education authorities

While governance at the local level is an important consideration, the system-wide policy objectives for education mean that education authorities also have a stake in the outcomes achieved by individual schools.

Issues of compliance need to be considered in the context of broader system-wide reforms, including the relaxation of restrictions on teacher remuneration, class sizes and job mix. But there should also be a clear delineation of governance and administrative responsibilities between education authorities, school boards and councils, and school leaders. The WA Independent Public Schools system appears to have some processes in place to ensure such demarcation (as noted in box 8.5), and these may be helpful for other jurisdictions as they pursue new autonomy initiatives.

Regardless of specific arrangements, education departments and regional (and diocesan) education offices should maintain a broad oversight role over autonomous schools, including performance monitoring of school leaders and school boards and councils. To the extent that the local exercise of responsibility proves demonstrably deficient in a particular school — and consistent with the selective devolution of power — education authorities would ultimately reserve the right to reclaim some or all of the decision-making responsibilities delegated to the school in the interests of good outcomes for students.

Increased school autonomy removes impediments that can prevent principals and other school leaders tailoring school operations to best meet the needs of the local communities they serve. It thus has the potential to improve student outcomes. The full realisation of these benefits is contingent on schools having the necessary:

- *leadership capacity to manage the responsibilities delegated to them*

- *governance arrangements, which ensure that school leaders are held accountable for student outcomes, including:*

  - *sufficiently representative and competent school boards or councils*

  - *effective oversight from education departments, and regional and diocesan education offices*

- *funding and resources, as well as support on matters such as training, professional standards and curriculum, from education departments, regional and diocesan education offices, and other sectoral organisations.*

9   Reducing educational disadvantage

Key points

- Students' individual, economic and social circumstances can impede them from achieving their educational potential. The schools workforce has an important role to play in reducing the adverse effects these factors can have on student outcomes, and in enabling all students (including gifted students) to achieve their potential.

- Educational disadvantage is more likely to be experienced by students from low socioeconomic backgrounds, students in rural and remote locations, Indigenous students, and students with disabilities, learning difficulties or other special needs. Many, especially Indigenous students, face multiple sources of disadvantage.

- Despite a long history of policy efforts, outcomes for disadvantaged students generally remain well below the rest of the student population. Addressing educational disadvantage must be a high priority for schools workforce policy.

- Overall, it is important that teachers (and schools more broadly) have the capacity to respond to students' individual needs, recognise and act on underachievement, and maintain high aspirations for all students regardless of their background. An added challenge for schools with disadvantaged students is how to attract and retain a sufficient number of quality staff.

- Deficiencies in evaluation make it difficult to identify the most effective ways to address educational disadvantage, yet it is clear that a combination of initiatives is needed. Policies that improve the schools workforce's overall effectiveness will assist, but need to be accompanied by targeted initiatives that include:
  - amending teacher training to place a greater emphasis on the learning needs of disadvantaged students
  - additional support for teachers working in disadvantaged communities, including enhanced induction, mentoring and professional development
  - greater use of pay differentials to attract teachers to hard-to-staff schools
  - greater opportunities for workforce innovation, enabled by strengthened school leadership and increased school autonomy.

- There could also be a role for expanding initiatives that engage parents and the community in students' schooling, lift the share of teachers from disadvantaged backgrounds, and make greater use of communication technology in schools.

- While recent reforms have added impetus for action, there is an urgent need for a more robust, systematic and transparent approach to the ongoing evaluation of initiatives that target educational disadvantage, and for policymakers to make greater use of this evidence in policy development.

As noted from the outset of this report, reducing the impact of disadvantage on students' educational opportunities is one of the key challenges for Australia's schools workforce. This chapter examines the ways in which students' individual, economic and community circumstances can disadvantage them from achieving their educational potential, and the challenges that are involved in lifting the capacity of the schools workforce to help students overcome these barriers. The chapter examines various policy options, which include targeted measures as well as relevant initiatives to enhance the overall quality and capacity of the schools workforce (as canvassed in more detail elsewhere in this report).

While there has been — and continues to be — much policy action aiming to improve the educational outcomes of disadvantaged students, a key message to emerge from the analysis is that policy making needs to put greater emphasis on undertaking rigorous evaluation, learning from past experiences, systematically gathering and sharing knowledge about what works or not, and using this knowledge in policy design.

9.1 Aiming for equality of educational opportunity

As discussed in chapter 3, the Commission has interpreted equity in educational outcomes to mean that all students should have equal opportunity to realise their educational potential — irrespective of their individual, economic or social circumstances, or their level of ability.

This principle was reiterated in the recent Review of Funding for Schooling, which asserted that mechanisms for funding allocations must ensure that:

> … differences in educational outcomes are not the result of differences in wealth, income, power or possessions [and that] all students have access to a high standard of education regardless of their background or circumstances. (Gonski et al. 2011, p. xxxi)

While this chapter focuses on students who are at greatest risk of educational disadvantage, many of the measures discussed here apply to giving each and every student the opportunity to achieve their potential.

In what ways can students experience educational disadvantage?

Although each student's performance is influenced by both school and non-school factors, comparisons of educational outcomes bring to light particular factors that can impede students from performing to the best of their ability. As presented in chapter 2 (box 2.4), educational outcomes are lower, on average, for students from

low socioeconomic status (SES) households, rural and remote locations, Indigenous backgrounds, and for students with disability (where this is measurable).

The ways in which a student's individual, economic and social characteristics can impede them from achieving their educational potential have been the subject of intensive research. Compared with their counterpart student groups:[1]

- Students from **low-SES backgrounds** — who can already be at a financial disadvantage in affording an education — tend to experience lower levels of parental educational attainment and higher levels of parental unemployment. They often live in more deprived communities with fewer resources and a higher prevalence of dysfunctional societal behaviour. Such factors can make it difficult for students to attend school, reduce parents' capacity to assist their children with schooling, and weaken students' attitudes towards schooling and expectations of themselves.

- Students in **rural and remote areas** are likely to face barriers to accessing educational resources and have fewer of the complementary resources and support services that are available elsewhere.

- Some students from **non-English-speaking backgrounds** are more likely to face cultural and linguistic challenges, and their parents might be less capable of offering assistance with their schooling compared with English-speaking parents.

- **Indigenous** students are also more likely to have different cultural customs and experience linguistic challenges, particularly since many Indigenous families in communities do not speak Standard Australian English at home. Furthermore, Indigenous children are considerably more likely than non-Indigenous children to be living in overcrowded conditions and acquire hearing impairments — both factors that can impede their learning (SCRGSP 2011). Given that proportionally more Indigenous students live in low-SES and/or rural and remote locations (relative to non-Indigenous students), they are also at greater risk of encountering many of the challenges described above.

- Students with **learning difficulties or disabilities** (including dyslexia, dyscalculia, autism and attention deficit disorder), or other intellectual and/or physical disabilities, can require additional support to be capable of engaging in the same educational experiences as other students.

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[1] Drawn from Ainley and McKenzie (2007); Berthelsen and Walker (2008); Boese and Scutella (2006); Considine and Watson (2003); Cresswell and Underwood (2004); Helme et al. (2005); Le and Miller (2002); Teese and Lamb (2009); Thomson and De Bortoli (2007).

In sum, these background factors have a potentially detrimental impact because they mean that 'children are unequally prepared and supported to manage the cognitive and the cultural demands of school' (Teese and Lamb 2009, p. 9). While not all students with these characteristics are low achievers, these factors generally place students at a greater risk of achieving less than their potential. Similar observations were made in the Review of Funding for Schooling (Gonski et al. 2011).

To give an example of the significance of students' background characteristics on their outcomes, socioeconomic status was found to explain between 12 to 14 per cent of variation in Australian students' scores in reading, mathematical and scientific literacy in the 2009 Program for International Student Assessment (PISA) tests (OECD 2011b). In a meta-analysis of all the possible factors influencing student outcomes, Hattie (2009) found that home environment, socioeconomic status and parental involvement were among the most important. These factors can also have a bearing on the way a school operates and how its workforce is trained and deployed. For instance, the quality of resources and staff allocated to a particular school has been shown to be correlated with its socioeconomic, demographic and geographic characteristics. In this way, educational disadvantage can be reinforced or compounded by the operation of school factors.

Based on the premise that educational equality means giving every student equal opportunity to achieve their potential, it is also important to recognise the learning needs of gifted and talented students who have the potential to excel beyond the achievements of an average student. Indeed, the fact that international comparisons reveal some decline in the achievements of Australia's top-performing students over recent years (chapter 3) highlights the importance of ensuring that the needs of this group of students are also met.

What is the schools workforce's role in addressing educational disadvantage?

The goal of enabling every student to perform to the best of their ability means that, ideally, the schools workforce will take into account — and help to mitigate — the potentially adverse effects of students' background characteristics on their educational performance. Given the varied and complex ways in which these factors can influence students' educational experiences, schools workforce policy is just one part of a wider suite of responses needed to address educational disadvantage. Nonetheless, it is a vital part.

Certain skills and attributes are particularly relevant for the schools workforce, including the capacity to recognise the individual attributes and circumstances of

each student and how these factors might impact on student learning. Being able to detect any setbacks in learning is especially important early on in a student's schooling experience, before learning problems become entrenched (Gonski et al. 2011; Masters 2007).

The provision of appropriate learning opportunities for disadvantaged students can also require some specific pedagogical and classroom management practices. For instance, the schools workforce can have a role in compensating for the lack of support and encouragement that students might otherwise receive from home.

> Disadvantaged students may need better than average experiences to be able to perform at high levels and overcome their difficulties. If schools are going to be a catalyst for social mobility they may need to provide disadvantaged students with higher quality experiences and work hard to improve the students' motivation and confidence. (OECD 2011a, p. 82)

As highlighted by study participants and researchers (for example, Allard and Santoro 2004; Catholic Education Commission of Victoria, sub. 13; CPSU/SPSF Group, sub. 6; United Care Children, Young People and Families, sub. 8), desirable skills for school workers to attend to the learning needs of disadvantaged students would include the capacity to:

- identify and appropriately meet the needs of students who have a learning difficulty or disability, physical or intellectual disability, or other special learning needs

- understand differences in the cultural and linguistic practices of different groups, including the Indigenous population

- meet the needs of gifted and talented students by, for example, recognising the scope for acceleration and modifications to curriculum

- encourage appropriate classroom behaviour among students

- strengthen parents' engagement in their children's education

- collaborate with other workers and services within the community who are also involved in students' education and welfare

- foster a school culture which embraces diversity within the student population.

In addition to specific skills, certain personal characteristics are likely to be relevant in enhancing the capacity of school workers to attend to the needs of disadvantaged students. As noted by study participants, these include a willingness and desire to 'make a difference', resilience to take on a challenging working environment, and a long-term commitment to assisting disadvantaged students. The desirability of these types of attributes is usually explicitly acknowledged by education authorities and school operators when recruiting staff for rural, remote or Indigenous communities, in particular.

Overseas studies on the characteristics of successful teachers in disadvantaged schools reinforce the importance of these attributes. An analysis of several provinces in Canada — a country which demonstrates relatively strong outcomes in educational equity (OECD 2012a) — found that:

> Educators in [disadvantaged] schools seem to require special qualities, as many of their students come from homes on the margins of … society. Educators must assume some parenting responsibilities, extend special efforts to reach these students both emotionally and intellectually, and be highly imaginative in the selection of content and teaching approaches. High expectations coupled with support and warm relationships are especially effective in schools serving at-risk populations. (Henchey et al. 2001, p. 6)

Alongside teachers and principals with these skills and attributes, specialist and support staff can play an important complementary role. For example:

- Literacy or linguistic specialists and cultural liaison officers can assist with teaching students from non-English speaking backgrounds.

- Allied support staff can help identify the needs of students with learning difficulties and students with the potential for accelerated learning.

- Teacher aides and teacher assistants can help students with disabilities perform practical tasks.

- School counsellors, welfare support staff and youth workers can encourage students from low-SES communities to remain engaged in education by, for example, providing career guidance and co-curricular activities.

- Support staff, including nurses, can provide services to help meet students' essential needs (such as nutrition, medical attention and transportation to school) where these are not being provided by parents or other community services.

- Transitional support staff can assist students move from rural or remote locations to boarding schools in metropolitan centres (as often occurs in later years of schooling).

The contribution of these specialist and support staff towards students' educational outcomes means that the ability to collaborate effectively is also a very important skill for teachers and principals.

Perhaps the most important attribute for all types of staff who are involved in the schooling of disadvantaged students — as emphasised by many study participants — is the practice of maintaining high aspirations for their students. International studies also highlight this as a hallmark of high-performing schools (Henchey et al. 2001).

Identifying these skills and attributes matters insofar as policy initiatives can attempt to foster these traits within the schools workforce or attract workers who have them. Given the research and comments by study participants that the needs of educationally disadvantaged students are not currently being met by the mainstream schooling system (Burnett Youth Learning Centre, sub. 4; Teese and Lamb 2009), the present arrangements for recruitment, training and deployment might not be generating a workforce sufficiently equipped with these skills and attributes.

9.2 Challenges in reducing educational disadvantage

Some common, and often longstanding, challenges confront the schools workforce in attempting to better address the needs of disadvantaged students. While these challenges are encountered by many schools, they tend to be more pronounced in schools with disadvantaged students.

Attracting and retaining staff

As discussed in chapter 4, many schools with disadvantaged students report persistent difficulties in attracting and retaining sufficient staff with appropriate skills and attributes. Data from the 2010 Staff in Australia's Schools (SIAS) survey show that recruiting and retaining suitably qualified teachers is more difficult for schools whose students are more likely to be in disadvantaged circumstances (table 9.1). The extent of these recruitment and retention difficulties is reflected in their perennial nature. For example, the question of how to effectively alleviate teacher shortages in rural and remote locations has been an issue confronting policymakers for many years.

Recruitment difficulties apply not only to general teaching staff, but also to specialist and non-teaching support staff who play an important role in supporting disadvantaged students, including teachers of English as a Second Language (ESL) and special needs teachers (National Disability Services, sub. 21). In the case of some disadvantaged students, staffing shortages are exacerbated by the need for higher teacher-student ratios. Staffing requirements for students with disabilities are a case in point (Burnett Youth Learning Centre, sub. 8).

The greater prevalence of recruitment and retention difficulties in disadvantaged schools can have significant repercussions for the quality of education being delivered to the students. As discussed in chapter 4, staff shortages can intensify the workload placed on existing staff and lead to 'out-of-field' teaching. High turnover can discourage investment in teachers' professional development and create unstable learning environments for students (Lamb and Teese 2005). Due to teacher

shortages, some schools in rural and remote schools report that they are unable to offer a full curriculum (McKenzie et al. 2008). In some cases, subjects as fundamental as English or science cannot be offered (Australian Secondary Principals Association (ASPA) 2006). Shortages of ESL teachers have repercussions for students from Indigenous and other cultural backgrounds; shortages of special education teachers mean that the learning needs of some students with learning disabilities (such as dyslexia) are not properly identified or adequately accommodated; and an undersupply of school counsellors and guidance officers means that students who require assistance can face long waiting times for their welfare issues to be addressed (Uniting Care Children, Young People and Families, sub. 8).

Table 9.1 Proportion of schools that had difficulties in recruiting and retaining staff, 2010[a]

	Difficulty in suitably filling staff vacancies				Difficulty in retaining suitable staff			
	Major difficulty	Moderate difficulty	Minor difficulty	No difficulty	Major difficulty	Moderate difficulty	Minor difficulty	No difficulty
	%	%	%	%	%	%	%	%
Primary schools								
School SES								
Low SES	10.7	24.8	28.6	35.9	7.7	8.7	31.8	51.8
Medium SES	5.6	22.5	41.3	30.6	6.6	10.0	30.0	53.3
High SES	2.5	16.4	25.6	55.5	1.2	11.9	20.2	66.7
School location								
Remote	9.5	29.2	26.3	35.0	14.6	9.5	24.8	51.1
Provincial	9.1	17.9	35.3	37.7	6.9	8.3	25.0	59.8
Metropolitan	4.1	22.2	30.0	43.6	3.2	11.5	29.0	56.3
Indigenous[b]								
ATSI focus schools	29.5	35.5	24.6	10.4	27.7	26.6	16.8	28.8
All other schools	4.4	20.0	32.2	43.4	3.4	9.1	28.2	59.3
Secondary schools								
School SES								
Low SES	15.1	27.2	35.4	22.3	12.5	12.7	37.4	37.4
Medium SES	9.2	33.6	41.8	15.4	1.8	29.3	43.6	25.3
High SES	2.8	33.7	36.2	27.4	4.7	9.1	36.0	50.2
School location								
Remote	23.2	42.9	16.1	17.9	10.7	46.4	23.2	19.6
Provincial	14.7	27.2	38.6	19.6	5.9	32.5	32.7	29.0
Metropolitan	5.8	33.0	39.3	21.9	5.6	10.1	43.7	40.6
Indigenous[b]								
ATSI focus schools	37.5	35.8	18.3	8.3	24.4	16.0	47.9	11.8
All other schools	6.9	31.2	39.8	22.0	4.5	18.3	39.0	38.3

a Based on principals' responses to the Staff in Australia's Schools survey. **b** Aboriginal and Torres Strait Islander (ATSI) focus schools, which were identified as high-need schools as part of the Aboriginal and Torres Strait Islander Education Action Plan 2010-2014.

Source: McKenzie et al. (2011).

In part, difficulties recruiting and retaining staff in schools with disadvantaged students can be attributed to the challenging work conditions. For instance, schools in low-SES areas report higher rates of student truancy and disorderly classroom behaviour, and staff in schools with low retention rates (as typifies many low-SES schools) are more likely to encounter verbal abuse and disrespect from students, face difficulty managing their classes, and spend time concerned with their students' personal problems (Angus, Olney and Ainley 2007; Helme et al. 2005).

In rural and remote locations, staff face the impediments of remoteness and isolation, such as having limited access to everyday goods and services and support networks. In impoverished communities, staff can confront the challenge of children turning up to school without their essential needs being met (such as nutrition, health and hygiene). The Commission heard first-hand from school staff who encounter these challenges and provide additional support to their students. Surveys of pre-service teachers have found that concerns about these types of challenges can deter them from applying to work in rural and remote locations or other types of disadvantaged schools (Faculty of Education, University of Tasmania, sub. DR86; Sharplin 2002).

Also contributing to recruitment difficulties, as observed by study participants, is a general preference among some teachers to return to the type of school and geographic locality where they themselves were educated. This 'localisation effect' imposes recruitment challenges for schools in low-SES, rural and remote, and Indigenous communities, because their students are less likely to attain tertiary qualifications. This leaves the school system with a disproportionately smaller pool of teachers who are from these communities and who might, therefore, be more likely to prefer working in these locations.

There are indications that shortages of general teaching staff could be having a detrimental impact on filling vacancies for the types of specialist staff needed for disadvantaged students. For instance, 2010 SIAS survey data estimate that around one-third of teachers with specialist qualifications in teaching special-needs students were not actually teaching in that area.[2] Rather, they were assigned to other teaching areas, such as English, mathematics and science. Although some of these teachers might be unable to find suitable employment in their specialist field, this could also reflect a decision by schools to give higher priority to filling vacancies in mainstream teaching roles that generally cater for a larger number of students. While several universities offer teacher education courses which specialise in

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2 The 2010 SIAS survey data estimate that 9.8 per cent of all teachers were qualified to teach special-needs students, yet only 2.8 per cent of all teachers do so (equivalent to one-third of the 9.8 per cent) (Weldon et al. 2011).

teaching special-needs students, these courses appear to attract relatively few enrolments and are likely to be more resource intensive than general education courses.

Teachers in disadvantaged schools also tend to have less experience than those in other schools. Research commissioned by the Australian Primary Principals Association (APPA) found that the average salary costs of teachers in high-SES schools considerably exceeded that of teachers in low-SES schools, which was partly reflective of differences in their experience (Angus, Olney and Ainley 2007). Insofar as teaching quality is a function of experience, this differential suggests that the highest quality teachers are generally not being placed in schools where they are needed the most (Deakin University — School of Education, sub. 24). APPA (sub. 41, p. 10) argued that 'if low SES students are to achieve their potential, that trend must be reversed'.

Attracting teachers to disadvantaged schools, in part, entails giving prospective teachers an accurate perception of the teaching environment, especially during their training. However, a study of pre-service teachers enrolled in rural education subjects found that they were generally under-informed about teaching in rural and remote areas, and that their reliance on 'narrow stereotypes' was detrimental to the recruitment of teachers in these schools (Sharplin 2002). Similarly, a longitudinal study of trainee teachers' who undertook rural practicum during their training course detected that there is a considerable need for universities to provide trainees with better information about the issues they can expect to encounter during their rural experiences (Reid and Hastings 2011).

In attracting staff to work in disadvantaged communities, the availability of professional support, the adequacy of the community's amenities, and (in some cases) the suitability of employment and educational opportunities for a teacher's spouse and their family members, can also be key considerations. The fact that not all of these factors are within the scope of schools policy reflects the need for a wider policy approach.

Another recruitment issue is that disadvantaged groups are under-represented in the schools workforce. This is particularly evident for Australia's Indigenous population. While Indigenous students comprise around five per cent of the student population (chapter 2), SIAS 2010 survey data indicate that less than one per cent of school teachers and leaders identified as being Indigenous (McKenzie et al. 2011).

This discrepancy matters, as Indigenous staff can help adjust teaching methods and curriculum content to be culturally suitable, their presence can make Indigenous students feel less intimidated by the school environment, and they can provide

positive role models by exemplifying the gains of attaining an education and making a difference to their community. In assessing the value of having Indigenous staff, it has been noted that:

> If the students do not see the school, its English speaking staff and its curriculum as relevant to their emotional and educational needs, then the incentive to attend is reduced. (Giles 2010, p. 57)

Evidence from Canada — which is also striving to lift educational opportunities for its Indigenous population — shows that schools which successfully overcome disadvantage are characterised by a high share of Indigenous staff (SAEE 2007).

However, it can be particularly difficult for people from Indigenous backgrounds to undertake the necessary training to become part of the schools workforce:

> Attracting Indigenous students from remote locations is even more difficult as they have little access to resources such as the Internet, libraries, computers and other students. They are not able to travel and stay in larger centers to attend courses internally. Completing a professional experience placement in another school would be a daunting task for an individual to organize, given their extensive family commitments, and lack of resources and confidence. (Giles 2010, p. 58)

A more representative schools workforce would enable teachers and other school staff who come from disadvantaged backgrounds to serve as motivational role models, and potentially establish a stronger rapport with their students, which could enhance student outcomes (OECD 2012a). Schools workforce policy needs to acknowledge that the types of barriers that can impede students from disadvantaged backgrounds from achieving their best at school (as discussed in section 9.1) can also impede them from undertaking the post-secondary qualifications that would enable them to join the schools workforce.

Equipping teachers with the skills to meet the learning needs of disadvantaged students

Alongside the important role of specialist teachers and other support staff for disadvantaged students, the diverse composition of Australia's student population makes it fundamental that *all* teachers have a sound awareness of the learning challenges that can confront disadvantaged students. This entails being able to recognise signs of learning difficulties or other incidences of disadvantage, and knowing how to respond effectively. Responses can entail adapting their teaching methods to better suit the students, enlisting the assistance of support staff, and referring students to specialists for proper diagnosis.

Even if not all graduate teachers are expected to work in schools with large concentrations of disadvantaged students, it would be extremely unlikely for any teacher not to encounter a student who is at risk of disadvantage or has a special learning need. Participants in this study agreed that most teachers should expect that they will need to draw upon these skills at some stage of their teaching career. As noted by Karen Starkiss from Dyslexia Assessment and Support Services:

> Every teacher is going to meet students with learning difficulties in every class that they teach. This will happen from the first day that they start teaching (sub. DR49, p. 2).

Similarly, the NSW Government observed that:

> … a very high proportion of early career teachers in the jurisdiction are appointed to 'challenging' (low socioeconomic status) schools. (sub. DR84, p. 10)

International evidence supports the value of equipping all teachers with an understanding of the learning needs of disadvantaged students. This was highlighted in the OECD's recent report on equity in education:

> [I]n Finland, all teachers are trained in diagnosing students with learning difficulties and in adapting their teaching to the varying learning needs and styles of their students. It is also the case in Sweden where … all teachers receive a specific preparation to teacher students from diverse backgrounds. The contrary can be an obstacle to student improvement. In Germany, for example, one of the weaknesses that may explain the country's low result on the PISA 2000 test was that the teachers were ill-equipped to deal with students from an immigrant background. (OECD 2012a, p. 131)

Furthermore, it is increasingly recognised that, in most cases, students with special needs will achieve better outcomes when integrated in mainstream schooling arrangements, rather than be segregated in separate classes (Maher 2011). In an inclusive schooling system, it is therefore also to the benefit of all students that all mainstream teachers know how to appropriately attend to the special needs of any individual student, so as to minimise the disruption that could be experienced by other students in the classroom, and to exemplify the importance of respecting diversity within the population (Maher 2011).

Investing in all teachers' skills can also help address recruitment issues by raising the interest, motivation and readiness of teachers to apply to work in schools with disadvantaged students.

Ensuring that all teachers are adequately prepared to work with disadvantaged students is the responsibility of all training providers, not just the ones located in these communities. With respect to rural teaching, for example, researchers have commented that:

> … the shortage of rural teachers in schools must not be the sole responsibility of rural communities or rural and regional universities alone, rather this is an issue that requires

a targeted and synchronised approach by *all* education providers and education stakeholders to take responsibility for rural students (White et al. 2009, p. 3)

However, a survey of trainee teachers who took up practicum placements in rural schools found that the pre-service teacher education curriculum was too metro-centric, and more attention needs to be afforded to how to deliver education to rural and Indigenous students (Reid and Hastings 2011).

There are other indications that many pre-service training courses lack sufficient focus on the skills that are particularly relevant for teaching disadvantaged students. Data from the 2010 SIAS survey show that between 20 to 30 per cent of early-career teachers felt that their pre-service teacher education course was 'not helpful at all' in equipping them with such skills as how to teach students with learning difficulties, how to teach students from Indigenous or different cultural backgrounds, and how to collaborate with parents (table 9.2). Among all the skill areas of teaching included in the survey, these ones stood out as those for which early-career teachers felt the least prepared. Among other relevant areas — how to use a variety of instructional methods for diverse student needs and how to handle a range of classroom management situations — teachers reported slightly better levels of preparedness, yet there still appears to be scope for improvement.

Table 9.2   Early-career teachers' perceptions of their pre-service training, 2010[a]

	Not helpful at all	Of some help	Helpful	Very helpful
	%	%	%	%
Primary school teachers				
Teaching students with learning difficulties	19.6	49.8	22.8	7.8
Teaching students from Indigenous backgrounds	27.4	43.1	22.6	6.9
Teaching students from different cultural backgrounds	20.8	50.2	21.3	7.7
Working effectively with parents/guardians	24.5	38.6	29.1	7.8
Handling a range of classroom management situations	9.4	43.0	35.7	11.8
Using a variety of instructional methods for diverse student needs	7.4	41.2	40.4	11.1
Secondary school teachers				
Teaching students with learning difficulties	27.8	44.4	21.9	6.0
Teaching students from Indigenous backgrounds	33.5	40.5	20.8	5.1
Teaching students from different cultural backgrounds	23.0	46.3	24.5	6.2
Working effectively with parents/guardians	31.3	37.9	24.8	5.9
Handling a range of classroom management situations	15.0	40.1	33.8	11.2
Using a variety of instructional methods for diverse student needs	9.4	33.3	43.1	14.1

a Based on responses to the Staff in Australia's Schools survey. Early-career teachers were defined as those who had been teaching for five years or less.

Source: McKenzie et al. (2011).

A similar perspective was evident among school principals. In the 2010 SIAS survey, no more than 30 per cent of principals felt that recent teacher graduates were 'well' or 'very well' prepared to understand and cater for differences among students, or to communicate with parents (McKenzie et al. 2011).

Several study participants gave first-hand accounts that support these findings. For example, Karen Starkiss from the Dyslexia Assessment and Support Services, who has been a teacher for 30 years, commented that:

> I have not yet met a teacher who has told me that initial training about learning difficulties has adequately prepared them to meet the needs of their students in the classroom. I have not met one teacher who has had any training about dyslexia at university. (sub. DR49, p. 2)

Likewise, Jo-Anne Woodward — a teacher who works with children with learning disabilities or specific learning difficulties — observed that:

> Most teachers currently have little or no knowledge of specific learning difficulties. When I use terms such as dyslexia or auditory processing disorder, teachers ask me what they mean … [There is a] gaping hole in teachers' knowledge. (sub. DR76, p. 2)

Teachers' lack of training in how to recognise signs of learning difficulties, or other forms of disadvantage, has clear repercussions for the educational prospects of these students. This was an issue also identified by Jo-Anne Woodward:

> Because teachers are kept in ignorance of specific learning difficulties, students are under diagnosed and under supported. Teachers are not able to recognise the signs which should lead to testing by a psychologist or specialist in specific learning difficulties. Furthermore, they often don't know who the student should be referred to. (sub. DR76, p. 2)

Difficulties engaging parents in their children's schooling

Staff in some disadvantaged (especially low-SES) schools report that it is often difficult to engage some parents in their children's education. Such engagement is important as it can build on the effectiveness of teachers' contributions to the students, and can also make a considerable difference to students' attendance rates (Berthelsen and Walker 2008). Research indicates that over 20 per cent of students' learning takes place out of school, through such activities as homework and tutoring (OECD 2008). Yet many parents are unable to help their children with their homework, are reluctant to visit the school to discuss their child's performance with teachers, or fail to ensure their child's attendance. Attendance issues are discussed in box 9.1.

Box 9.1   **School attendance among disadvantaged students**

Schools workforce initiatives ideally need to be accompanied by a wider suite of reforms that address other dimensions of educational disadvantage. Strategies to lift attendance rates among some groups of disadvantaged students are a case in point.

Although students' attendance can be influenced by a range of factors (including the quality of their school and its workforce), comparisons between different student groups suggest that their background characteristics can also have a bearing. In particular, attendance rates for Indigenous students are significantly lower than non-Indigenous students. In the Northern Territory, attendance rates for Indigenous students average 70 per cent, compared to 90 per cent for non-Indigenous students, and are even lower in some individual schools (SCRGSP 2012).

As an example of a high-level initiative to complement schools workforce policies, the Australian Government has been administering the Improving School Enrolment and Attendance through Welfare Reform Measure (SEAM) program. The program aims to lift attendance rates by making the receipt of income support and family assistance payments conditional on a family's school-aged children attending school regularly.

The program was initially trialled in several Indigenous communities in Queensland and the Northern Territory, before being recently expanded across the Northern Territory. An evaluation of its effectiveness found that the SEAM program had a positive impact on student attendance rates, although the effect was generally short-term with relapses commonly occurring after the compliance period. The evaluation also pointed to the importance of other forms of support to promote student attendance, such as the role of social workers and other school-level initiatives (DEEWR 2012a).

While it is outside the scope of this study to assess these types of policy approaches, they are a reminder that strategies to improve the capacity of the schools workforce to address educational disadvantage will have limited impact if other school-related policies, as well as the broad community conditions, are not also taken into account.

There are a number of possible reasons for a lack of parental engagement. For instance, some parents may have had a negative experience of school themselves. In this respect, there is evidence that students whose parents have lower levels of education are found to be less positive in their attitude towards school and more likely to have learning problems (Considine and Watson 2003). Many parents also struggle to find time to spend with their child due to long work hours. Further, while many parents in disadvantaged communities have high aspirations for their children, some do not. For some, the costs of a post-school education seem unaffordable (Helme et al. 2005). Low aspirations can be reinforced by others within the community and through wider societal attitudes.

Low expectations among the schools workforce

Teachers' capacity to set expectations that align with their students' potential is critical to quality teaching. Overseas evidence supports the conclusion that some of the most successful disadvantaged schools are ones where staff set high expectations for the performance of their students (Henchey et al. 2001).

Teachers' motivation and commitment to improve the outcomes of their students, however, can start to wane when they are working in difficult conditions or placed in schools with a reputation for underachievement. In these circumstances, there is a risk that students with characteristics associated with disadvantage can be improperly cast as low achievers in the eyes of their teachers and other school staff, and that these expectations will be self-fulfilling (Maher 2011). The practice of setting high expectations can be shaped by teachers' training experiences. It is also a product of the wider school culture, as influenced by school leaders and other staff members.

Logistical impediments and resourcing

Several logistical impediments arise for many schools with disadvantaged students, affecting their efficiency of operation, the effectiveness of their workforce, and their funding needs.

Such constraints obviously apply to rural and remote schools where geographical isolation and low population density make the delivery of education more costly per student, where access to resources (including opportunities for professional development) is limited, and where there are generally fewer amenities in the community to supplement students' learning needs (Independent Education Union of Australia, sub. 8; National Catholic Education Commission, sub. 7).

Schools in some rural and remote areas report logistical difficulties in providing adequate standards of infrastructure and quality housing for staff, where this is part of the education authorities' or school operators' policy.

Some schools with disadvantaged students face the challenge of operating at a very small scale. This occurs not just in isolated regions with small populations, but also in some metropolitan areas where student enrolments have been falling due to such factors as the poor reputation of the school, the declining local economy or the ageing of the local population.

Although funding considerations are outside the scope of this study, these logistical impediments highlight the need for adequate funding allocation mechanisms to

complement schools workforce policy. The effectiveness of even the best quality teachers will be compromised without necessary resources to support their teaching practices, and inadequate resourcing can also deter teachers from working in disadvantaged schools.

The need to take into account sources of educational disadvantage was a key issue examined in the Review of Funding for Schooling. Among its recommendations, the review advised that reducing educational disadvantage should be made 'a high priority in a new funding model' (Gonski et al. 2011, p. 27). It recommended that additional funding be provided to schools with relatively larger shares of students who are from low-SES backgrounds, are Indigenous, have limited English proficiency, or have a disability, and to schools in remote locations, especially those of small scale. The review noted that a nationally consistent method is needed for collecting data on the educational performance of students with disability, in order to identify their resourcing requirements.

9.3   Recent policy responses

The goal of reducing the level of educational disadvantage in Australia has been a policy focus for a considerable time. Consequently, an extensive array of policies aimed at promoting equality of educational opportunity have been, and continue to be, implemented across both the government and private school sectors. While much policy activity continues to happen at the jurisdictional and more localised levels, the COAG reform agenda has recently strengthened the national focus via the National Education Agreement (NEA) (chapter 3).

State and territory governments, as well as non-government education authorities and schools, have an extensive array of policy initiatives in place that directly contribute to, or complement, the COAG goals. There are also many specific programs in place at the classroom, school or community level. Some programs are operating in partnership with other parts of the community (such as youth centres) or research bodies (such as university departments). Several not-for-profit organisations and private sector companies outside of the education industry are also collaborating in research and policy work.

Approaches of current initiatives

Within the range of policy initiatives currently in use across various jurisdictions and school sectors, there are programs and policy arrangements designed to:

- attract teachers to hard-to-staff schools in rural and remote locations via

financial allowances, subsidised housing, and guaranteed permanent teaching positions in their preferred locations following their rural or remote placements

- attract high quality candidates to the teaching profession who would otherwise be unlikely to join, via specialised selection and training programs, with a view to placing them in hard-to-staff schools

- attract people from disadvantaged backgrounds or locations to the schools workforce through tuition subsidies and specialised support programs, in anticipation that they will be more willing to take up jobs in disadvantaged schools

- facilitate more suitable job-matching in hard-to-staff schools, with the aim of reducing turnover, by screening applicants more rigorously to select those with the personal attributes that will help in a challenging work environment (noting the necessity for there to be a sufficient number of quality applicants)

- help trainee teachers become more familiar with disadvantaged communities, in anticipation that this will heighten their interest in teaching in these locations, by offering more incentives and opportunities to train in rural, remote or low-SES areas, and by including specialist curriculum in their training

- lift the employment of the Indigenous schools workforce via specialised training programs and designated job roles for Indigenous workers in schools

- create a schools workforce mix that better caters to the learning needs of the student population, and helps ease the workload placed on teachers in hard-to-staff schools, through the deployment of more specialist and support staff.

Though far from exhaustive, box 9.2 presents some specific examples of the range of strategies being applied.

National education reforms

Underpinning the COAG national education reforms is the Melbourne Declaration on Education Goals for Young Australians (2008) (chapter 3). Among its multiple goals, the Melbourne Declaration specifies a need to focus on improving the educational outcomes of students from low socioeconomic backgrounds, Indigenous students, and other students experiencing disadvantage. Building on these goals, the NEA articulates that schooling should aim to promote social inclusion and reduce existing educational disadvantage among children, especially Indigenous children.

Box 9.2   **Examples of policies in action**

An array of specific policy initiatives are in place aiming to lift the supply and skills of teachers in schools with disadvantaged students.

- State and territory education departments, as well as non-government education employers, offer financial allowances to teachers in rural and remote schools. If teachers are not residents of the local area or jurisdiction, housing can be provided or subsidised. Other benefits, such as utility payments, travel allowances and accelerated rates of leave entitlement, can also be offered. Following their employment in rural and remote schools, teachers can be rewarded with fast-tracked opportunities to work at a school location of their preference or be awarded permanent employment.

- Several education departments offer scholarships and other support programs to Year 12 students from rural and remote communities or from Indigenous backgrounds. An example is the 'Make A Difference: Teach' campaign by the Queensland Department of Education and Training.

- The newly created Teach Remote scheme, run by the National Alliance for Remote Indigenous Schools, attempts to broaden the recruitment drive for school staff across state and territory borders. The jurisdictions involved (New South Wales, Queensland, South Australia, Western Australia and the Northern Territory), with support from the Australian Government, share processes and resources for staff recruitment, induction, networking and professional development.

- The WA Department of Education's Remote Teaching Service works with universities to identify quality pre-service students who are suitable candidates for remote teaching, and suitable mentors to support their practicum placements.

- The NT Department of Education and Training has applied a more rigorous assessment of applicants' motivation for teaching in its screening process for employment. This aims to better ensure that teachers have the personal attributes to cope with the challenges of rural and remote locations, and match the school's culture and student profile.

- Teach for Australia and Teach Next offer accelerated training for prospective teachers who are able to work in hard-to-staff subject areas, including special needs and languages other than English. In most cases, trainees must be willing to teach in rural, remote, or low-SES schools.

- The Queensland Department of Education and Training facilitates a community-based training program for Indigenous teachers, called the Remote Area Teacher Education Program. Training is delivered via distance education with the support of on-site coordinators at the placement schools, and in collaboration with vocational and tertiary education institutions. A similar program, called Growing Our Own, is run by the Catholic Education Office in the Northern Territory.

Box 9.2 (continued)

- The Stronger Smarter Institute, run out of the Queensland University of Technology, guides school and community leaders towards lifting their expectations of Indigenous students and fostering a more positive sense of Indigenous cultural identity, via its leadership and community learning programs.

- The Cape York Aboriginal Australian Academy, run by the Cape York Partnerships, incorporates Indigenous culture and language programs in its curriculum, alongside mainstream curriculum in English literacy and numeracy, as a way of supporting Indigenous students' bicultural identity.

- Several education departments have appointed regional Aboriginal Education Coordinators and established consultative groups comprising members of the local Indigenous community. The NSW Aboriginal Consultative Group runs a Connecting to Country cultural-immersion program to improve teachers' and principals' understanding of Indigenous culture.

- The Priority Schools Program, run by the NSW Department of Education and Communities, provides additional funding and resources for schools serving the highest densities of low-SES families in the state. The program supports supplementary staffing and innovative approaches to staffing arrangements.

- The Positive Behaviour for Learning program has been implemented in several schools in the Western Sydney region where classroom management has proved challenging. It provides resources to staff to teach students socially acceptable behaviour, intended to reduce the need for suspensions and other disciplinary action.

- The Exceptional Teachers for Disadvantaged Schools program, at Queensland University of Technology, offers a specialised curriculum and placement opportunities to prepare pre-service teachers to work in disadvantaged schools. The program aims to steer the highest quality teachers towards schools where they are needed most by selecting the highest-achieving trainee teachers, based on their performance in the first two years of the degree.

- The Linking to Learn And Learning to Link program is a collaborative project between Griffith University and Mission Australia that provides professional development for teachers to help them engage parents more effectively in their children's education.

- Several universities offer community service placements as part of their teaching degrees to help teachers better understand the communities they could be working in. Placement settings include Indigenous communities (both remote and urban), rural schools, after-school homework centres and refugee support programs.

- The Australian Government's Positive Partnership initiative has provided 2250 teachers with additional training in how to support students with autism.

- The Northern Territory Emergency Response initiative funded the training and retention of extra teachers in Indigenous communities, as well as the construction of additional teacher housing and professional development opportunities for teaching staff, including scholarships, mentoring, on-the-job training and workshops.

The NEA has set specific targets to improve the outcomes of disadvantaged students, and made additional Commonwealth funding available to the states and territories to achieve these goals. The specific performance targets set by the NEA, as well as some of the National Partnership Agreements (NPAs) and various high-level initiatives designed to support these targets, are summarised in box 9.3.

Box 9.3   Addressing educational disadvantage in the National Education Agreement

The COAG National Education Agreement (NEA) proposed the following performance indicators to measure the progress of reforms aimed at addressing educational disadvantage:

- school enrolment and attendance rates of Indigenous children and children from low socioeconomic status (SES) communities

- literacy and numeracy outcomes of Indigenous children and children from low-SES communities, based on national testing of students in Years 3, 5, 7 and 9

- the share of the Indigenous and low-SES populations who have attained at least a Year 12 Certificate (or equivalent) or Australian Qualifications Framework Certificate II by 19 years of age

- the share of Indigenous students completing Year 10.

Specific targets have been set for the Indigenous student population, to be facilitated through the Aboriginal and Torres Strait Islander Education Action Plan 2012-2014:

- to halve the gap for Indigenous students in reading, writing and numeracy within a decade

- to at least halve the gap for Indigenous students in Year 12 or equivalent attainment rates by 2020.

These specific targets will contribute towards the broader target of lifting the total population's rate of Year 12 (or equivalent) attainment to 90 per cent by 2020.

The NEA is supported by National Partnership Agreements (NPAs) on: Low Socio-Economic Status School Communities; Literacy and Numeracy; Improving Teacher Quality; and More Support for Students with Disabilities.

These agreements have generated several National Key Reform Projects focusing on educational disadvantage, including the Innovative Strategies for Small and Remote Schools Project and the Parental Engagement in Schooling in Low SES Communities Project.

Also part of COAG's reform agenda — and encompassing education-related initiatives — are the National Disability Agreement, the National Indigenous Reform (Closing the Gap) Agreement, the Closing the Gap in the Northern Territory NPA, and the Indigenous Clearinghouse NPA.

Alongside the COAG reform agenda, broad funding arrangements have recently been examined in the Review of Funding for Schooling (Gonski et al. 2011). Improving equity of access to education, by way of funding allocations, was a key objective of the review.

The National Professional Standards for Teachers, newly developed by the Australian Institute for Teaching and School Leadership (AITSL), require teachers to have a knowledge and understanding of the learning needs of students from a range of diverse circumstances that can be associated with disadvantage (box 9.4). To gain accreditation, teacher education programs must demonstrate that graduate teachers are being equipped with this knowledge. Although these standards tend to reflect the requirements that are largely already in place in each jurisdiction, they provide a platform for a nationally cohesive approach to policy development that can be applied to addressing educational disadvantage.

Box 9.4   Addressing educational disadvantage in the National Professional Standards for Teachers

The National Professional Standards for Teachers require initial teacher education programs to provide their graduates with a demonstrated knowledge and understanding of:

- teaching strategies that are responsive to the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds

- strategies for differentiating teaching to meet the specific learning needs of students across the full range of abilities

- strategies for setting learning goals that provide achievable challenges for students of varying abilities and characteristics

- the impact of culture, cultural identity and linguistic background on the education of students from Aboriginal and Torres Strait Islander backgrounds, and an understanding and respect for Aboriginal and Torres Strait Islander histories, cultures and languages

- legislative requirements and teaching strategies that support the participation and learning of students with disability

- practical approaches to manage challenging behaviour

- strategies for involving parents and carers in their children's education, and for working effectively, sensitively and confidentially with them

- teaching strategies for using information and communications technology to expand curriculum learning opportunities for students.

Source: AITSL (2011c).

The Australian Curriculum, Assessment and Reporting Authority (ACARA) is in the process of developing nationally-consistent curriculum and assessment programs, and data collection and reporting systems for schools. To help take account of the learning needs of disadvantaged students throughout these developments, ACARA has established a range of advisory groups — including groups to advise on students with disability, equity and diversity, English as an additional language or dialect, Aboriginal and Torres Strait Islander students, and Aboriginal and Torres Strait Islander languages.

A number of other national-level initiatives will contribute to the objective of equal educational opportunity. One example is the National Disability Strategy (COAG 2011) which highlights the important role of teacher training in ensuring that education is equally accessible to all students. Although this strategy is focused on students with disability, its policy principles can be applied to all types of students who encounter educational disadvantage:

> An inclusive and accessible educational culture based on the principle of universality will assist students of all abilities. Teacher training and development is critical to ensure that teachers can meet the diverse educational needs of all students. Many people with disability cite low expectations from those around them as a major reason for not reaching their full potential. It is vital that education providers have the same expectations of students with disability as of others, and collaborate with and support families in their aspirations for family members with disability. (COAG 2011, p. 54)

As part of the National Disability Strategy, the More Support for Students with Disabilities initiative is designed to facilitate more teacher training in this area, and the Schools Disability Advisory Council has been established to advise the Australian Government on how to provide better services to students with disability. Furthermore, work is underway to develop a nationally-consistent model for identifying students with disability and collecting data on their educational performance, in order to better understand their learning needs and resource requirements. The recent Review of Funding for Schooling reiterated the importance of this data development (Gonski et al. 2011).

Another example of a national-level initiative is the Aboriginal and Torres Strait Islander Education Action Plan (MCEECDYA 2011a, 2011b). The action plan highlights the need for teachers to have a strong understanding of students' cultural and linguistic backgrounds. As part of the action plan, AITSL and state education departments are developing material for universities to use in their teacher training programs, as well as strategies to lift the number of hours of professional development in Indigenous education undertaken by teachers who have already undergone their training. The action plan also aims to improve the representativeness of the Indigenous population in the schools workforce through

the use of scholarships. A large number of other policies and programs (including several cited earlier in box 9.2) fall within the scope of the action plan.

Recognising the extent of educational disadvantage experienced in many communities in the Northern Territory, the Australian Government's Stronger Futures policy package is designed to facilitate investment across a range of areas which will lift teaching quality and assist with recruitment in schools. These include: boosting the supply of housing for teachers in remote communities; equipping all remote teachers with the specific skills needed to support disadvantaged students; and investing in the professional development of Indigenous school staff as a way to lift their representation within the schools workforce (Macklin et al. 2012). The SEAM program targeted at lifting attendance of Indigenous students (box 9.1) is a component of this policy package.

9.4 What could be done differently to reduce educational disadvantage?

In examining what could be done to improve the schools workforce's capacity to reduce educational disadvantage, the Commission acknowledges that Australia already has a long history of policy efforts to address this goal, and that an extensive range of initiatives is currently in place. Yet, the fact that these efforts have, so far, had limited success in improving the outcomes for disadvantaged students attests to the complexities and difficulties of addressing this goal.

When it comes to enhancing the schools workforce's capacity to address educational disadvantage, a combination of initiatives is necessary. While strategies to improve the overall effectiveness of the schools workforce will assist, initiatives that are targeted to the needs of disadvantaged students are also required. The need for a multi-faceted approach is reflected in the OECD's recent examination of policies designed to achieve equity in education:

> The key to the success of some countries … which combine equity and high performance, resides in ensuring excellent teachers for all students. It is therefore fundamental to design mechanisms to attract competent and qualified teachers to disadvantaged schools. This issue is both complex and multi-dimensional, as it reflects several challenges: how to expand the pool of qualified teacher candidates, recruit teachers to the places they are most needed, distribute teachers in equitable and efficient ways, and retain qualified teachers over time. Therefore, the appropriate solution to these teacher staffing concerns must be multi-dimensional. (OECD 2012a, p. 130)

The need for a combination of strategies was highlighted in several submissions to this study. For example, the Australian College of Educators observed that, in trying to attract high quality teachers to disadvantaged schools:

> Reliance on the traditional economic tools used to influence demand and supply may not be enough … While pay differentials may play a role in addressing hard to staff areas of teaching, in relation to hard to staff schools specifically there are a number of other aspects about the quality of a school experience that could be addressed to improve the attractiveness of hard to staff schools to high quality teachers. (sub. DR93, p. 17)

Likewise, the Review of Funding for Schooling recommended that the additional funding provided to schools to overcome disadvantage should be invested across a variety of policies, including strategies that:

> … improve practices for teaching disadvantaged students; strengthen leadership to drive school improvement; focus on early intervention for students at risk of underperformance; are flexibly implemented to address local needs, [and] encourage parent and community engagement. (Gonski et al. 2011, p. 145)

The way in which various policies complement each other is another important consideration. For example, there is limited use in offering higher remuneration to try to attract teachers to disadvantaged schools without simultaneously equipping them with the necessary skills and support they need to be prepared to work in these challenging conditions. The maintenance of standards for high-quality teaching, and a professional environment which is attractive to high-calibre staff, are also fundamental.

This section discusses the ways in which mainstream policies to improve the schools workforce's overall effectiveness (as canvassed throughout this report) will contribute to addressing educational disadvantage. It also examines the numerous targeted initiatives which are likely to play an important role in the package of policies that are required.

However, as noted in section 9.3, the lack of rigorous evaluation of policies for cost-effectiveness means that it is difficult reach a conclusion about exactly what combination of mainstream and targeted strategies should be pursued. While this section discusses the potential gains of various policy approaches, the Commission emphasises that a more rigorous analysis of their effectiveness is imperative for improving the outcomes of disadvantaged students in Australia.

Measures to improve the schools workforce's overall effectiveness

To address educational disadvantage, overall it is important that all teachers have the capacity to identify and respond to the needs of every student, recognise and act on underperformance early on in a student's learning, and maintain high aspirations for all students. Strategies that aim to enhance the overall quality and effectiveness of the schools workforce — as discussed in earlier chapters of this report — are highly relevant for improving the outcomes of disadvantaged students, especially when it comes to ensuring that school staff are being deployed where they are most needed. These strategies, in many respects, can therefore offer the prospect of the largest gains to disadvantaged students.

Workforce innovation

As discussed in chapter 7, promoting more flexibility and innovation in staffing arrangements can enable schools to meet the particular needs of their students more effectively. Given the important role of specialist and non-teaching support staff in addressing the needs of disadvantaged students, the capacity for schools to recruit staff with the skills to match the needs of their students matters greatly. Indeed, overseas evidence shows that the schools which most successfully overcome disadvantage are those that have the flexibility to select and assign their teachers, which allows them to operate more innovatively (Henchey et al. 2001; Wendel 2000). Several policies are already in place to support more innovative and flexible staffing arrangements targeted to the needs of disadvantaged students. For example, the NSW Department of Education and Communities' Priority Schools Program (PSP) encourages principals to customise their workforce mix.

A mixed workforce composition means that promoting professional collaborations among the various types of staff — teachers, specialists, school leaders, non-teaching support staff and community workers — is vital, so that all staff are working towards the same shared goals for their students. Schools which successfully address disadvantage are also characterised by leaders who foster a highly collegial spirit among all staff (DEECD 2009d; Henchey et al. 2001; Wendel 2000).

Enhancing school leadership and expanding school autonomy

Being able to pursue many of the policy directions that will support disadvantaged students requires some level of school autonomy, accompanied by quality school leadership. As discussed in chapter 8, states and territories are moving towards

more autonomous arrangements for school governance, facilitated by the Empowering Local Schools NPA.

Greater autonomy can provide schools with more discretion over their workforce mix, allowing principals to recruit the types of teachers, specialist and support staff that match their students' needs. There is also evidence that a more autonomous environment can attract better quality teachers, because they place a higher value on this aspect of their work (Australian College of Educators, sub. DR93).

However, increased autonomy could, in several respects, work against the interests of disadvantaged students. For one, it could become more difficult for disadvantaged schools to compete for high-quality staff in school-level negotiations. Complementary strategies to steer high-quality teachers and leaders to disadvantaged schools, and appropriate resourcing, are therefore also necessary. Secondly, a more devolved system of school governance requires school leaders to make the goal of reducing educational disadvantage a priority for their own school. Otherwise, as noted by some study participants, greater autonomy could result in schools becoming more selective in the types of students they accommodate (Ian Keese, sub. DR77).

To be effective, greater autonomy needs to be matched with systems for accountability. In the context of educational disadvantage, this would imply that school leaders need to set goals for their school, measure and assess their progress, and be held accountable for outcomes (United Care Children, Young People and Families, sub. 8). As an example of how this could be facilitated, the PSP in NSW requires principals of participating schools to submit a formal plan explaining their progress indicators at a school level. In addition to academic outcomes and attendance rates, other indicators to measure a school's progress towards overcoming educational disadvantage could be used, including whether students have a positive attitude towards school, how strongly students feel connected to their school, and the strength of their parents' involvement. These types of measures have been proposed in Victoria's School and Network Accountability and Improvement Framework (DEECD 2011a).

Parental involvement and community collaboration

Parental engagement has been identified as a significant factor in overcoming educational disadvantage. As found by US research (Shannon and Bylsma 2007), special effort may be needed to involve the parents of disadvantaged students, who are generally under-represented in school activities. This can involve schools offering alternative ways for parents to communicate with school staff, devising activities that enable parents find a worthwhile place in the daily rhythm of the

school, and helping parents feel comfortable in approaching teachers and principals. Parents and citizens groups have traditionally played a helpful role in this regard.

Building community links is also very relevant for schools with disadvantaged students, especially given the significant role that a school tends to play in the economic and social life of many small communities. In this respect, it is valuable for school staff to develop a good understanding of the characteristics of the local community, including the social and cultural norms. Schools' collaboration with local businesses and community services can be helpful in rural and remote areas, where it can be cost-effective to share limited resources, and where the building of support networks for school staff can involve members and leaders of the community. Links with local community services can also be valuable for providing relevant and timely responses to the welfare needs of students. Furthermore, schools' efforts to build ties to businesses in their local communities can be useful for helping disadvantaged students make a successful transition from school to work or further study. These types of initiatives can involve the joint efforts of schools and community welfare groups (Black, Lemon and Walsh 2010).

Strategies for building these types of links can be incorporated into teacher training and professional development programs, as well as into school leadership development.

Mentoring and networks

The value of mentoring and networks can be especially significant for teachers and other school staff working in disadvantaged school communities. Staff who are likely to benefit include those in rural and remote schools who have to cope with isolation and limited resources (NCEC, sub. 7), in low-SES schools where they are more likely to encounter difficult classroom behaviour and dysfunctional behaviour within the community, and in Indigenous communities where they need to develop an understanding of cultural practices. Case studies of rural schools which report strong retention rates point to the benefit of mentoring programs (White et al. 2009). Moreover, study participants noted that hearing stories of other teachers' success and fulfilment working with disadvantaged students is one of the most motivating factors influencing teachers' choices to work in this field (Catholic Education Office — Diocese of Toowoomba, sub. 11).

The Commission heard from some study participants that school staff in isolated locations tend to establish informal mentoring arrangements fairly naturally, while the systemic arrangements of some education departments and organisations also help facilitate this. For example, the recently-established National Alliance for Remote Indigenous Schools (NARIS) aims to promote networking across

jurisdictional borders (box 9.2). Again, quality school leadership helps to facilitate such developments.

Targeted policies to address educational disadvantage

A range of measures are also needed that are more closely targeted to the objective of delivering equal educational opportunities to disadvantaged students. This is already occurring to some extent, as evident from recent initiatives (section 9.3), but more needs to be done. Importantly, as noted above, each of these policy directions should be seen as a complementary component of the total package of policies that are needed, since they are likely to have limited value on their own.

Improve all teachers' understanding of disadvantaged students' learning needs

A large number of submissions to this study expressed the view that the standard training system is not placing sufficient focus on disadvantaged students. Many commented that this should become a mandatory part of all teachers' training, especially with respect to improving all teachers' capacity to understand the needs of students with learning difficulties (Ann Williams, sub. 43, sub. DR50, sub. DR59; Carolyn Cullin, sub. DR56; Dyslexia Support Group, sub. DR62; Gift of Dyslexia Society, sub. DR54; Karen Starkiss, sub. DR49; National Disability Services, sub. DR78; Nola Firth, sub. 44, sub. DR47; Specific Learning Difficulties Association of NSW, sub. DR57; United Care Children, Young People and Families, sub. 8). The need for all teachers to be trained in understanding the needs of gifted and talented students was also highlighted (Tasmanian Association for the Gifted, sub. DR65). Additionally, study participants voiced a need for more funding to be allocated for trainee teachers to undertake their practicum placements in disadvantaged school communities, including rural and remote schools (Flinders University — School of Education, sub. DR55).

Based on the newly-introduced National Professional Standards for Teachers (box 9.4), the national system of Accreditation of Initial Teacher Education Programs in Australia — due to take effect in 2013 — will require training programs to equip all teachers with a range of skills and knowledge that apply to teaching disadvantaged students. To the extent that jurisdictions' course accreditation requirements currently fall short of these new criteria, the new system may raise the scope and quality of relevant training that teachers receive in the future. Yet, as noted in chapter 5, to ensure that training courses are delivering the prescribed standards, it will be essential that appropriate processes are developed to assess courses for accreditation (recommendation 5.1). Assessments of the accreditation arrangements will need to pay close attention to the adequacy with

which pre-service training courses deliver the standards relevant to the learning needs of disadvantaged students.

While these accreditation reforms apply to pre-service training arrangements, consideration must also be given to the capabilities of existing teachers, many of whom undertook their training many years ago. Opportunities for teachers to refresh or improve their knowledge and skills relevant to educational disadvantage — via professional development opportunities — are therefore important. However, there is also a need to be cognisant of the difficulties involved in giving staff time off from teaching to undertake professional development in many disadvantaged schools, where finding sufficient numbers of teachers for all classes is already a challenge.

To help inform policy directions in this area, more data on graduate teachers' training experiences, and consequential career decisions, are required. As detailed in chapter 5, the national Longitudinal Teacher Workforce Study (LTWS) would be one means for collecting such data (recommendation 5.3). It would be valuable for the LTWS to collect information on the factors that encourage graduate teachers to take a teaching position in a disadvantaged school — including the adequacy of their pre-service training and practicum experiences. These data, in combination with other research and evaluation, may help to identify what type of training best prepares and motivates teachers to meet the learning needs of disadvantaged students and whether any aspects of existing training arrangements are contributing to recruitment problems in disadvantaged schools.

Placing trainee teachers in disadvantaged schools as part of their practicum experiences can be helpful, yet requires careful consideration. Ideally, trainees need to be given adequate support, such as quality mentoring. Additional resources might be required to finance the costs for trainee teachers to temporarily relocate to disadvantaged schools to undertake their practicum.

Strengthen support for teachers to work in disadvantaged school communities

Alongside having an understanding of disadvantaged student needs, many teachers need to be given added support to be able to manage working in — and, in some cases, living in — disadvantaged communities. As noted earlier, the availability of these support resources is likely to be a factor influencing teachers' willingness to apply to work in disadvantaged schools.

Strategies for coping with the challenges encountered in disadvantaged communities should be a component of teacher training courses. This includes strategies to cope with, for example, the isolation and logistical challenges

encountered in remote locations; cultural differences in Indigenous communities; and the higher threat of crime and violence in some low-SES communities. Supporting teachers to work in disadvantaged school communities also entails providing them with ongoing professional and logistical support once they are employed, which can be facilitated via induction, mentoring, and professional development opportunities.

Another relevant consideration for policymakers is the need to also have suitable housing and other community amenities to attract school workers (and, where applicable, their spouses and families) to disadvantaged communities. This highlights the need for schools workforce policies to be coordinated with other arms of government policy.

Higher remuneration for staff in disadvantaged schools

The Commission sees merit in offering higher remuneration for hard-to-staff positions as a way of signalling vacancies of the highest priority across the schools workforce.

When it comes to the goal of reducing educational disadvantage, remuneration differentials recognise that teaching disadvantaged students requires a particular set of skills and attributes — including the willingness and resilience to work in challenging conditions — that are in short supply among the current workforce. Offering higher remuneration to attract a higher supply of teachers with these skills is similar to the rationale applied to addressing shortages of mathematics and science teachers (chapter 4). Furthermore, differentiated remuneration recognises that teachers are not all working in the same conditions, and there are certain job characteristics that they might need to be compensated for if they to be expected to switch from more favourable environments.

Allowances in some hard-to-staff schools are already on offer, most commonly for rural and remote locations (box 9.2). There is evidence that such allowances can make a difference, but this depends on the individual characteristics of the teacher (Bradley, Green and Leeves 2006). An assessment undertaken by ACER in 2003 on the effectiveness of recruitment initiatives concluded that 'financial incentives and permanency have been among the most effective strategies for encouraging teachers [to] particular … locations' (Lonsdale and Invargson 2003, p. 38).

However, as noted in chapter 4, such allowances are already offered with varying degrees of transparency and yet vacancies persist. This suggests that current levels of allowances might be insufficient, not publicised widely enough, or need to be better complemented by other supportive resources.

As per recommendation 4.3 (chapter 4), the Commission considers that there is scope to investigate the use of more explicit, and possibly larger, differentials in remuneration for teachers, principals and support staff in low-SES, rural, remote and Indigenous communities and for specialist staff to support disadvantaged students, where these positions prove to be genuinely hard to fill. At the same time, the Commission acknowledges that implementing a differentiated remuneration scheme would be complex, and that such an initiative would need to be accompanied by other supportive strategies in order to make a difference. Furthermore, as per recommendation 10.3 (chapter 10), it will be critical to assess the effectiveness with which remuneration differentials help to address recruitment difficulties in disadvantaged schools.

Scholarships and other training subsidies

An array of scholarships, bursaries and other types of financial assistance (such as student loan repayments) are already available to university students to undertake their teaching qualifications (box 9.2). These arrangements often require teachers to undertake their placements or employment in disadvantaged schools settings, and are commonly offered to prospective teachers who are from disadvantaged backgrounds themselves.

'Grow-your-own' staffing initiatives

Programs to encourage people from disadvantaged backgrounds to enter the teaching profession can help strengthen the supply of teachers willing to work in disadvantaged schools, by tapping into the benefits of the 'localisation effect' discussed earlier (section 9.2). Such a pool of prospective school staff are more likely be familiar with the community conditions, motivated by a desire to make a difference to their own community, and remain at the school over the long-term (ACER 2011b). Studies of 'grow-your-own' programs observe that 'frequently, Indigenous staff members are the only long-term employees of remote schools' (Giles 2010, p. 63). A survey of secondary school students found that those from low-SES, rural or remote areas were more attracted to teaching as a career — compared with students from mid- or high-SES or metropolitan areas — because teaching allows them to stay in their region and serve a rewarding role in their community (DEST 2006). Similarly, Indigenous students were found to have a stronger cultural attachment and incentive to return to their community after study than other population groups (DEST 2006).

In addition to scholarships and other types of financial support, some grow-your-own programs enable trainees from disadvantaged backgrounds to undertake their

teacher training in their community. This helps overcome the barrier of distance, and the unfamiliarity of tertiary education institutions, that many people from disadvantaged background encounter. Two such programs (mentioned in box 9.2) include:

- The Remote Area Teacher Education Program (RATEP) in Queensland offers off-campus training to Indigenous teachers, accompanied by intensive on-location support at placement schools and a modified program of coursework that is more relevant to Indigenous culture. Since starting in 1990, RATEP has produced 146 university graduates, 90 of whom are employed in Queensland government schools, and another 65 trainees were enrolled in teaching courses in 2011. This is a small number relative to the total size of Queensland's schools workforce. Nonetheless, an evaluation of RATEP by ACER in 2003 concluded that 'while costly, [RATEP] has been worth it to be able to increase the pool of Indigenous teachers' (Lonsdale and Invargson 2003, p. 29).

- A similar program for Indigenous teachers operates in the Northern Territory, called Growing Our Own. Early evaluation studies acknowledged that the program was resource intensive (Giles 2010), but that students' attendance rates had improved in schools where Indigenous graduates of the program were employed (Maher 2011).

It should also be noted that many of the grow-your-own programs have dual purposes — to help fill staff vacancies in disadvantaged schools and to provide employment pathways for people from disadvantaged backgrounds (which can, in turn, contribute toward improving the demographic representativeness of the teaching workforce, and the cultural relevance of teaching, in these schools). There are, consequently, multiple dimensions by which to evaluate these programs' success.

Flexible delivery using interactive communications technology

Where it is difficult for teachers to relocate or travel over long distances, necessity has given rise to some innovative alternative modes of delivery. While 'virtual classrooms' are not a perfect substitute for face-to-face learning, the use of interactive communications technology — such as video- and web-conferencing — is being used as a way to deliver education services. Various Schools of the Air and Schools of Distance Education operate across Australia. To supplement their online contact, teachers generally visit each of their students in person at intervals throughout the teaching year.

Flexible modes of delivery can also help to facilitate grow-your-own teacher training programs and provide professional development opportunities to school

staff in locations where access is limited. The Western Australian Government (sub. DR90) emphasised that the use of communications technology as a tool in education access, delivery, learning and professional support cannot be underestimated.

9.5 Gathering evidence on 'what works' and using it

Identifying the most effective combination of initiatives needed to address educational disadvantage requires examining evidence of program and policy cost-effectiveness. The recent Review of Funding for Schooling similarly emphasised that funding for disadvantaged students must be allocated towards strategies that are 'based on robust data and evidence that can inform decisions about educational effectiveness and student outcomes' (Gonski et al. 2011, p. 145).

Examining such evidence, however, presents a challenge in itself. The Commission has observed a lack of rigorous and comprehensive evaluation of policies in this area. Even where programs targeting educational disadvantage are evaluated, the results are not always made public, which reduces the scope for knowledge sharing and wider learning. As APPA (sub. 41, p. 9) noted, one of the most important requirements for developing policies to address educational disadvantage is 'a candid sharing of what is working and what is problematic'. A lack of transparency also does little to assure the wider community that funds are being used in the most cost-effective way.

Similar conclusions about the lack of evaluation have been reiterated by others, including ACER in a comprehensive review of policies targeting disadvantaged students (box 9.5). Although deficiencies in evaluation are encountered in other aspects of schools workforce policy (as noted throughout the report and examined further in chapter 10), it appears to be more serious when it comes to identifying what can be done to reduce educational disadvantage.

A number of other deficiencies and impediments are also apparent with respect to gathering evidence on the effectiveness of policies targeting educational disadvantage.

- The volume, and possible overlapping effects, of different policy initiatives could be detracting from their potential effectiveness, or at least from the capacity to isolate and quantify their effects.

- Policy settings to address educational disadvantage are often in a state of flux, with new policies frequently being introduced to reframe previous approaches, making it difficult to conduct quality evaluations.

- Published performance indicators are generally reported at a highly aggregated level or focus on what is conventionally or easily measurable (such as academic achievement and attendance rates), whereas alternative or supplementary indicators might be more appropriate for reflecting how progress is being made in reducing educational disadvantage.

Box 9.5   **The lack of sound evidence on programs targeting educational disadvantage**

The Australian Council for Educational Research (ACER) recently prepared a detailed report on the processes used to target funding towards disadvantaged students. This was commissioned by the Review of Funding for Schooling. As part of its analysis, ACER reviewed the evidence on how effective policies had been at addressing educational disadvantage. It concluded that:

> There are insufficient data available to establish to what extent existing programs are effective because few have been evaluated, and fewer still have been evaluated with student outcomes as a focus. (Rorris et al. 2011, p. 87)

This conclusion was informed by detailed information that governments had provided to ACER on major targeted programs. Of these programs, fewer than 30 per cent had evaluation measures in place to assess the impact on student learning.

Despite the lack of robust evidence, stakeholder interviews conducted by ACER as part of its study revealed a consistent opinion that existing programs were having positive effects and that the situation would be worse in their absence. This suggests that programs often gain support on the basis of anecdotal measures of success, rather than rigorous evaluation of their effectiveness or wider applicability.

This conclusion was confirmed by several other studies that have focused on areas of disadvantage. The Review of Funding for Schooling concluded that:

> The lack of robust nationally comparable data on funding for disadvantaged students and its impact on improving educational outcomes is a significant concern. If Australia is to achieve greater equity in educational outcomes across its schooling system, these data will be paramount in ensuring funding is directed to where it is needed most, and improvements can be measured and strengthened over time. (Gonski et al. 2011, p. 136)

Similarly, an examination of the Australian Government's schools-related policies targeting Indigenous students concluded that:

> Program effectiveness … is often questionable, with evaluation studies highlighting weaknesses in the evidence base and the difficulty of establishing any clear relationship between program inputs and outcomes achieved. (Department of Finance and Regulation 2009, p. 107)

Another example is a current review of NSW Government programs to improve the literacy and numeracy of underperforming students. The NSW Minister for Education recently stated that the review has already concluded that little is known about which policies work or not (Patty 2012).

- Existing methods for measuring student outcomes (such as National Assessment Program — Literacy and Numeracy (NAPLAN) tests) might not be considered appropriate or relevant for some students who are at risk of disadvantage, including students with disability (Children with Disability Australia, sub. DR69). Moreover, there is no system for collating data on the educational outcomes of student with disability.

- Disadvantaged students may be less likely than other students to participate in the standard assessment processes (such as NAPLAN) because, for instance, they are more likely to be absent from school on any given day, they are unable to undertake the tests, or because schools request them not to participate in the tests if they are expected to perform poorly (Karen Starkiss, Dyslexia Assessment and Support Services, sub. DR49).

There is not a lack of research on educational disadvantage per se. As referred to in section 9.1, extensive analytical work has been conducted that pinpoints the sources of educational disadvantage and attempts to quantify their impact on student outcomes. This has been accompanied by many documented syntheses of what policy action has been, or is being, taken. However, this research work has not yet been matched by the same intensity of focus on assessing the cost-effectiveness of these policies in improving student outcomes.

With respect to improving arrangements for evaluation, the current national reform agenda led by COAG is establishing systematic frameworks for performance reporting and evaluation, as elaborated upon in chapter 10. Aspects of the forthcoming evaluation arrangements which are of particular relevance to disadvantaged students are outlined in box 9.6.

In addition, a number of promising developments suggest that greater effort is being made to undertake evaluations and make the results available to inform future policy making, especially with respect to Indigenous disadvantage. For example:

- The 'What Works' educational website, managed by DEEWR, provides a hub for schools to share their experiences about successful programs targeting educational disadvantage among Indigenous students. The website also includes resources that can be included in pre-service teacher education programs (Price and Hughes 2009).

- The 'Closing the Gap' Clearinghouse collates an extensive number of evaluations of education and other programs targeting Indigenous disadvantage. However, many of the programs documented by the Clearinghouse are identified as lacking arrangements for evaluating cost-effectiveness (Al-Yaman and Higgins 2011).

- An evaluation was recently conducted to assess the impact of the Northern Territory Emergency Response initiative, relative to the goals of the Closing the Gap NPA. ACER (2011b) was commissioned to evaluate the effectiveness of school-based programs. While some programs were found to be effective in lifting student outcomes, others demonstrated no observable impact in improving student outcomes or teacher retention, or it was still too early to determine.

Box 9.6   Forthcoming national evaluation arrangements

The COAG national education reform agenda is establishing processes for better evaluation of policies and programs that have the potential to improve the outcomes of disadvantaged students.

- The National Evaluation Strategy for the Smarter Schools National Partnerships requires jurisdictions to report on their policy activity towards the National Partnerships and evaluation efforts.
  - This will include evaluation of jurisdictional activity pertaining to the Low-SES National Partnership and the Closing The Gap initiative.
  - The Australian Government has indicated that, in its analytical overview of jurisdictional activity and evaluation efforts, focus will be placed on: strategies to improve student attendance and engagement with their school; teachers' use of in-class support; outcomes of Indigenous students; and the use of data to inform policy development.
  - The initial phase of these reporting and evaluation processes has already commenced, and subsequent phases are due to continue up to 2015. The Australian Government is due to publish its first analytical overview of jurisdictional activity and evaluation efforts in 2012.

- The evaluation plan for the Aboriginal and Torres Strait Islander (ATSI) Education Action Plan has been developed and is in the early stages of implementation.
  - The evaluation is based on a sample of the ATSI Focus Schools (including Catholic and non-government schools).
  - It will use cohort analysis of student outcomes, as well as information drawn from case studies and interviews with focus groups (including the experiences of school staff and members of the community).
  - The evaluation findings, as they become available, will be included in the annual reports of the Action Plan, with a view to producing a more comprehensive assessment by 2014.

- An evaluation of the More Support for Students with Disabilities initiative, due to commence in 2012, will publicly disseminate information about practices that support this initiative.

The evaluation arrangements under the national reform agenda have some limitations (chapter 10). For example, they are linked to the NPAs which have a limited life span and are dependent on funding from the Australian Government. As a result, the arrangements may not instil an ongoing culture of evaluation in all jurisdictions.

The Commission considers that taking action to further improve the rigor and transparency of program and policy evaluation, and using this evidence to inform policy making, are among the most important steps that can be taken to better address educational disadvantage in Australia at this point in time. Given the limitations of the national reform agenda's evaluation arrangements, a systematic assessment of the effectiveness of schools workforce initiatives to address educational disadvantage should be a priority component of the wider arrangements for policy evaluation that the Commission is recommending (recommendations 10.2 and 10.3).

Many participants in this study acknowledged a need for a comprehensive evaluation. For example, the NSW Department of Education and Communities (sub. DR84) expressed support for a comprehensive evaluation of initiatives supporting the preparation of teachers for low-SES and Indigenous students. In a similar vein, Children with Disability (the national peak body representing children and young people with disability and their families) commented that:

> The Australian education system is failing to meet the needs of student with disability and a review of the system to identify the most effective and efficient way to meet the needs of students with disability is long overdue. (sub. DR69, p. 6)

Moreover, while it is critical to gather evidence on 'what works', it is equally essential to use it. Yet, as noted by Uniting Care Children, Young People and Families (sub. 8), in the field of educational disadvantage policies, it is unclear how much attention is paid to evaluations in policy-making decisions. Hence, the Commission also emphasises the need to build a culture of ongoing evaluation and evidence-based policy formulation. Other critical steps to facilitate quality evaluation and contribute to effective policy making — including the need to build productive links between researchers and policymakers — are elaborated upon in chapter 10.

FINDING 9.1

Reducing the adverse effects of individual, economic and social factors on student outcomes must be a high priority for schools workforce policy — especially for students from low socioeconomic backgrounds, students living in rural or remote areas, Indigenous students, and students with disabilities or other special needs. However, progress is being impeded by a lack of concerted effort to systematically

gather, publish and use evidence on the cost-effectiveness of measures (and how they can be best combined) when developing policies to address educational disadvantage. While recent reforms have added impetus for action, there is an urgent need for a more robust and transparent approach by all governments to the ongoing evaluation of initiatives targeting educational disadvantage, alongside a coordinated national review of existing evidence (recommendations 10.2 and 10.3).

FINDING 9.2

Policies that enhance the overall effectiveness of the schools workforce will assist in overcoming educational disadvantage. However, they will need to be accompanied by a combination of more targeted initiatives which provide the means to:

- *increase the emphasis on the learning needs of educationally disadvantaged students in pre-service teacher training, drawing on a range of evidence including an expanded Longitudinal Teacher Workforce Study and research on different models of practicum*

- *provide additional support for teachers working in disadvantaged communities, including enhanced induction, mentoring and professional development*

- *explore greater use of pay differentials to attract teachers to specific hard-to-staff schools*

- *introduce additional workforce innovations at the school level which are tailored to the needs of disadvantaged students, and enabled by strengthened school leadership and increased school autonomy.*

There could also be a role for expanding the use of targeted initiatives that:

- *engage the parents of disadvantaged students and their broader community*

- *increase the share of teachers from disadvantaged and under-represented backgrounds through 'grow-your-own' programs*

- *use communications technology more effectively where opportunities for face-to-face teaching and professional development are limited.*

10 Policy evaluation and research

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Key points

- Good research and evaluation protocols are integral to delivering good policy outcomes.
  - An Australian research base can help to identify issues and opportunities relevant to schools workforce policy development and implementation.
  - Evaluation processes are necessary to improve policy and program effectiveness and to ensure accountability for outcomes.

- There appear to be some gaps in the Australian education research base, although these may (to varying degrees) be covered by recently introduced data- and research-related structures.
  - Broadening the relationships between policymakers and researchers would help to improve the quality and relevance of information and research, as well as its dissemination across the policy-making community.
  - However, introducing further bodies would unnecessarily add to the institutional mix at this time, may do little to improve Australia's educational research capacity, and needs to await the consolidation and review of recent changes.

- Schools workforce policy evaluation, as a key subset of the education research base, also exhibits notable deficiencies. In particular, evaluation processes are inconsistent and generally opaque.
  - The high level evaluation processes contained within the education-related National Partnership Agreements (NPAs) may increase awareness of the need for, and improve the conduct of, policy evaluation.
  - But the NPAs will not by themselves indicate which workforce and other policies are the most effective at delivering better student outcomes due to limitations in scope, transparency and timing.

- All governments should review and strengthen (as appropriate) how they use policy evaluation and research to inform policy development.

- The Commission has identified some evaluations that should be initial priorities in a process of embedding robust evaluation across the full spectrum of schools workforce policies. In particular, the Standing Council on School Education and Early Childhood should oversee evaluations of:
  - the comparative effectiveness of various workforce-related initiatives to ameliorate educational disadvantage
  - the effectiveness of remuneration-based incentives, and other measures to encourage graduates to enter teaching, as a means of addressing shortages.

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The need for high quality research on, and evaluation of, the effectiveness of schools workforce policies is a key theme throughout many aspects of this report. Indeed, it is one matter on which there is almost total agreement across the various stakeholder interests. But the Commission heard from many study participants that policymakers do not fully use the available expertise in education-related research when formulating and evaluating policies. It is also evident that the limited policy evaluations that have been conducted are not made as transparent and accessible as they could be.

To a significant extent, the impetus for addressing these issues must come from the entities responsible for policy development and implementation. Given the current and prospective workforce challenges affecting all school sectors, the fiscal pressures on governments, the scope for improving the outcomes delivered by Australia's schooling system, and the wide-ranging nature of the benefits that may be attained, a serious commitment by policymakers to better use of research and evaluation processes is required.

This chapter outlines the role of research and policy evaluation, the key deficiencies in existing and recent arrangements for both these areas, and what further actions are required.

10.1 The role of research and policy evaluation

Research is a key tool for informing education policymakers about issues and opportunities relevant to workforce policy, including variations in supply and demand and the range of practices and innovations within different schools, sectors and jurisdictions, as well as overseas. Research is central to efforts to understand which factors are the most cost-effective in achieving high level student outcomes. Research can also provide the inspiration for advances in such domains as pedagogy, content knowledge, school operation and management, training and development needs, workforce deployment, and staff engagement with students, parents and the wider community.

Insofar as there are similarities in the objectives and characteristics of school education across different countries, Australia is well placed to take advantage of the research conducted overseas. Drawing on such resources, where available, can be considerably more cost-effective than duplicating such efforts locally.

However, international research is not always readily available. In an analysis of global trends, the OECD (2012b, p. 47) identified that there is 'generally little public funding for educational research' and that 'businesses do not seem to invest

heavily in knowledge that can be applied to the formal education sector'. As one common comparison, far less public funding is directed to education research compared to health research. On average, OECD governments spent 1.2 times more on their education systems than their health systems in 2008. But in terms of research specifically, 15.5 times more public funding went to health research than education research (OECD 2012b).

Furthermore, given the differences that exist in the structure of school systems, the availability of resources, the pre-service training and professional development of the workforce and the profiles of the students (among other things), Australia could not rely solely on overseas research. A local research base — generating both quantitative and qualitative evidence and analysis — is necessary for interpreting and applying results for local conditions, particularly to ensure that the policies adopted within the various Australian school systems are suitable for their intended purpose.

Evaluation

One subset of research that has specific (although not exclusive) relevance to policymakers is evaluation. As demonstrated by the large number of different policy approaches employed in the schools workforce area, there are typically multiple options available to deal with any particular issue. Prior to any new policy being implemented, it should be incumbent on the responsible entity — whether government or non-government — to conduct ex ante evaluations of the merits of the different options.

For policies involving new or amended regulation, such an assessment will generally be mandated under requirements for a regulatory impact statement. The same principles are equally relevant for non-regulatory initiatives intended to deliver better outcomes for students.

Following implementation, robust evaluation processes are necessary to enable evidence-based ex post assessments of how well policies have actually worked, and whether modifications to programs and initiatives are required. But as such assessments will not always provide categorical or immediate answers (section 10.3), ex post policy evaluation should not be a one-off event (unless, of course, it quickly becomes apparent that a particular policy should be abandoned).

Periodic evaluations provide a means to build the evidence base — including of initiatives that have not worked, so that they are not later repeated. Moreover, evaluation over time can ensure that even meritorious policies retain their currency if circumstances change. This is conducive to continuous, incremental improvement

of policies and programs — an approach that is the hallmark of other high-performing countries, such as Finland (OECD 2011d) — rather than sudden changes in direction, which can be a source of instability for school workers, students and communities.

Evidence of 'what works' is not the sole reason for evaluation. Alongside the benefits of different programs and initiatives, policymakers must also be mindful of the associated costs. Evaluations should pay particular regard to the relative cost-effectiveness of alternative approaches. Robust evaluation requirements can also play an important role in helping to hold those who are developing and implementing policies accountable for their actions.

10.2   Education-related research and data

Research and data relating to Australia's schools workforce are currently generated through a range of channels. Organisations within Australia that contribute towards conducting, commissioning or collating research that can inform schools workforce policy include:

- state and territory education departments and non-government school operators, which generate a range of schools workforce data both for formal reporting requirements and to inform their own policy directions (including through the Council of Australian Governments (COAG))

- professional bodies, such as the Australian Teacher Education Association and various sector or subject-specific teacher associations throughout Australia

- industrial bodies within the professions, such as the Australian Education Union and its jurisdictional arms

- statistical bodies — chiefly the Australian Bureau of Statistics — which collect data on the schools workforce drawn from the population census and other survey collections

- the Australian Council for Education Research (ACER) — the peak body in Australia responsible for undertaking research into educational issues, providing educational and assessment resources, and conducting evaluation of educational programs. ACER also houses an extensive information repository of research work, and has been commissioned by the Australian Government to conduct and publish the results of the Staff in Australia's Schools survey. ACER is an independent, not-for-profit entity, and key stakeholders in the schools area are among its clients. Its research was widely referred to in submissions to this study

- the Australian Association for Research in Education, a national association that facilitates contact between educational researchers, and fosters research projects

- academics within universities, whose research work not only informs their own education training programs, but can often also be the product of partnerships with policymakers and school operators. Several universities have dedicated research centres that focus on education-related issues. Many state and territory education departments have established collaborative partnerships with university researchers

- independent research-based think tanks, such as the Grattan Institute

- community or other not-for-profit welfare groups with research programs, such as the Foundation for Young Australians, and UnitingCare Burnside's Social Justice division

- independent or private consultants with expertise in educational issues, many of which are commissioned by education departments or school operators to undertake research projects.

Additionally, as noted above, policymakers and school operators can also draw on international research and analysis, including that produced by the OECD through its substantial school education research program.

Recent initiatives to strengthen this research and data base have also seen new institutional structures established. Chief among these in a schools workforce context is the Australian Institute for Teaching and School Leadership (AITSL), which has commissioned a significant body of research in support of its efforts to boost teacher quality through professional standards, course accreditation and the registration and certification of teachers. As AITSL itself stated:

> … it is reasonable to expect that AITSL's focus on research, evaluation and innovation will increase in the future, as reforms such as the National Professional Standards for Teachers are rolled out and the focus shifts to implementation and what works at the local level. (sub. DR81, p. 8)

To supplement data on the schools workforce, investments have been made in the collection and publication of nation-wide data on student outcomes. In particular, the Australian Curriculum, Assessment and Reporting Authority (ACARA) manages the National Assessment Program, including annual national assessments for literacy and numeracy (commonly known as NAPLAN) and three-yearly 'sample assessments' in science, civics and citizenship, and information and communications technology. The National Assessment Program also covers Australia's participation in various international tests, including the Program for International Student Assessment, although these are not overseen by ACARA.

Mind the gaps

Despite these various initiatives, several participants outlined perceived gaps or areas where better research would be helpful. For instance:

- The Australian Mathematical Sciences Institute (sub. 31) referred to the lack of national data on the qualifications, age profile and length of service of mathematics teachers, arguing that this hampers assessment of the full extent of current shortages.

- UnitingCare Children, Young People and Families (sub. 8) pointed to deficiencies in information on the distribution of school welfare personnel and Indigenous support staff, and on rates of student attendance, suspension and inclusion.

- The Grattan Institute (sub. 30) contended that lack of information on teachers' skills and their effectiveness within schools and classrooms restricts labour market flexibility by making it more difficult to recognise good performance and deal with underperformance.

- The Australian College of Educators (sub. DR93) argued that further research about the effectiveness of different regulatory models for teacher education, including certification, accreditation and registration, was required. It also suggested more research on the benefits of practicum.

- The Community and Public Sector Union — State Public Services Federation (sub. 6) called for more comprehensive research into the non-teaching workforce.

- The New South Wales Department of Education and Communities (sub. 14) proposed a comprehensive study to gauge how current school resources achieve improvements in student and school outcomes.

The Review of Funding for Schooling (Gonski et al. 2011) noted the complexity of determining how much is spent on students from educationally disadvantaged backgrounds. The review also observed significant variation at the state and territory level in the sophistication of data on student performance. In a similar vein, Deakin University's School of Education identified that some types of disadvantage are 'sometimes lost in statistical measures due to the aggregation of data' (sub. DR85, p. 1). The consequence of these factors is that efforts to identify how the needs of disadvantaged students would be better met can be initially hamstrung.

However, data collection is not a costless exercise. Aside from any financial impact, a burden may be imposed on those from whom the data are being collected. In the context of schools, a particular concern is that administrative loads may be increased on teachers in order to fulfil data requests. While good design can lessen

such costs, this will not be enough to make data exercises worthwhile if the data to be collected will have only limited use either for research or in policy application. More specific data are not always required to progress worthwhile reforms.

Furthermore, new data collection initiatives are unlikely to be cost-effective where there are already existing processes in place that, with perhaps only modest improvements, could substantially address deficiencies. For example, some states are already collecting data and undertaking research into the use of the non-teaching workforce (chapter 7), while the consultation processes being undertaken by AITSL in relation to professional standards and course accreditation appear to draw on the efforts of the educational research community (chapter 5).

Aside from its proposed adjustments to the Longitudinal Teacher Workforce Study (chapter 5), the Commission is not proposing any specific new data collection measures. Recent and anticipated improvements in the research and evidence base may substantially cover some of the identified gaps, and it would be prudent to see how these progress. Nevertheless, policymakers and researchers should remain aware of shortcomings in their knowledge, and be open to any cost-effective opportunities that emerge for these to be addressed.

Of greater policy urgency is the extent to which the available research capacity and data are fully harnessed in the policymaking process and directed towards conducting comprehensive and rigorous evaluation of the programs in place. These interrelated problems are discussed below.

10.3   Education-related policy evaluation

As the main providers of education services (through the government school system), much of the scope for policy evaluation rests with state and territory governments. For example, Victoria's Department of Education and Early Childhood Development has partnered with the Melbourne Institute to establish a new research stream on literacy and numeracy to inform educational policy making, including in relation to schools workforce issues. Victoria is also conducting evaluations of state-level initiatives such as the Rewarding Teaching Excellence performance pay trials (chapter 6). And the NSW Government (sub. DR84) highlighted its interest in using evaluations to identify the 'sustainability' (long-term effectiveness) of its initiatives.

Nevertheless, there are widely acknowledged deficiencies in the quality of school policy evaluation. This may be due to a reluctance to evaluate (and risk receiving 'bad' news), to publish the evaluation, or to bear the costs and resolve the

complexities of conducting good evaluation. A series of education-related National Partnership Agreements (NPAs) holds some promise in terms of promoting policy evaluation — although here too, there are limitations. These factors are discussed below.

Broader deficiencies in evaluation

Under current arrangements, it is at the discretion of each jurisdiction — as well as school operators, individual researchers, and other institutions operating at a more localised level — as to whether program-specific evaluations are undertaken. This leads to significant variation in the quality and coverage of policy evaluation. Indeed, sometimes evaluation is not undertaken at all. As the Grattan Institute remarked:

> Unfortunately, very little rigorous evaluation of programs and cost-effectiveness analysis is done within the Australian school system. Decisions are made without the best possible understanding of what works in different contexts, or — critically — which programs achieve results at the lowest cost. (sub. 30, p. 8)

Deakin University's School of Education (which houses the Centre for Research in Educational Futures and Innovation) commented on the myopic perspectives and cost considerations that can impede proper evaluation:

> Rigorous, careful evaluations that examine the long term impact of initiatives – for example with respect to impact on social indicators, transition to further education and employment — are costly and time-consuming and tend to be neglected in favour of faster, more inexpensive approaches. (sub. 24, p. 39)

Deakin University also expressed concern about the limited availability of evaluations, raising doubts about the objectivity of current policymaking systems:

> [F]unders, including government agencies … are disinclined to subject educational initiatives to scrupulous, independent evaluation studies or to hear the 'bad news' that a policy initiative that has involved a considerable financial investment has limited or no efficacy. (sub. 24, p. 39)

Implicit in this is the risk that, in order to 'save face', policymakers may continue with programs that are demonstrably poor investments rather than abandoning underperforming policies because — in acknowledging the results of any evaluation — they might be accused of 'failure'. This highlights the benefit of pilot studies, which can be appropriately flagged as trials and subject to a range of caveats, with full roll-out contingent on the results of rigorous ex post evaluation.

Not all initiatives will be subject to this disincentive effect, particularly those that are of lower profile (but may nevertheless offer the prospect of appreciable gains in student outcomes). The inherent complexities of conducting robust evaluation is

another factor that may lead to many educational policies and programs not being rigorously examined.

- The effects of programs and policies once in place might not be readily measurable or might only emerge over time. The OECD (2012a) reported evidence that it can take three to five years before sustained changes in student outcomes can be observed from new schooling policies and initiatives.

- It can be difficult to isolate the impact of particular programs on student outcomes given the potential influence of many other factors, such as students' household characteristics, community environment, and prior educational experiences.

- It can sometimes be hard to source a sufficiently large sample of students needed to produce robust evaluation results. This is likely to be an impediment to programs targeting disadvantaged students where the number of participants in new programs may be small.

- Policy settings in education — including funding models for schooling — appear to be in a continual state of flux. Consequently, many assessments of performance can only provide a snapshot of what is happening at a point in time, rather than assess which policy settings work best over time.

On this last point, Deakin University's School of Education described the 'revolving door' phenomenon that appears to characterise schools policy:

> … new programs in a given area (e.g. literacy and numeracy) are often introduced to replace 'old' programs before the latter have been thoroughly evaluated. This is frequently a consequence of policy changes at the department or government level which emphasise 'new' agendas and therefore encourage the introduction of 'new' programs. (sub. 24, p. 39)

Understandably, perceptions that aspects of the education system are in 'crisis' lead many well-intentioned policymakers to conclude that there is an imperative to act without delay. Good evaluation takes time, during which many students may continue to suffer poor educational outcomes.

However, changing policies without the benefit of evidence offers no assurance that outcomes will improve. In fact, a cycle of constantly changing policies can be potentially destructive where it fosters instability and reduces confidence (particularly within disadvantaged communities) in the education system. Evaluation is the first step towards greater continuity in the policy and institutional landscape — a necessary, although not sufficient, condition for achieving sustained advances in education outcomes. As such, it is essential that policymakers subject their initiatives to proper analysis, and do not move on to another policy idea before evaluations can be conducted.

Evaluation under the National Partnership Agreements

As outlined in chapter 3, the Australian Government will provide around $2.5 billion of additional funding over the next four to seven years under the Smarter Schools NPAs. These three agreements seek to improve student literacy and numeracy, enhance teacher quality, and address educational disadvantage in low socioeconomic communities. In addition, new NPAs have been negotiated in relation to school autonomy (Empowering Local Schools) and special needs students (More Support for Students with Disabilities), which will take effect during the course of 2012. These will see the Australian Government contribute a further $480.5 million (over seven years) and $200 million (over three years) respectively.

Although NPAs are contracts between the Australian Government and the states and territories, these programs cover all school sectors. Under the Smarter Schools NPAs, Commonwealth funding for non-government schools is channelled through the states and territories. By contrast, the Empowering Local Schools and More Support for Students with Disabilities NPAs will be supplemented by separate funding agreements between the Australian Government and the non-government school sectors.

A key feature of these arrangements is that the Australian Government will fund evaluations of the NPAs, including analyses of the various state and territory-level initiatives encompassed within these agreements. Furthermore, as a deliverable of the Literacy and Numeracy NPA, the Department of Education, Employment and Workplace Relations (DEEWR) has commissioned a national evidence base on improving literacy and numeracy — the Teach, Learn, Share Database.

As these are new initiatives, it is too soon to comment on the evaluation protocols under the Empowering Local Schools and More Support for Students with Disabilities NPAs. The evaluation report for phase one of the Empowering Local Schools initiative will not be finalised until June 2014. Meanwhile, the first of four reports under the More Support for Students with Disabilities initiative is scheduled to be delivered by June 2012, with the major reporting milestone (the third report) not due until June 2013. But the fact that the reports under these initiatives will be both independently conducted and publicly released is encouraging.

The Smarter Schools NPAs are also at a preliminary stage, and therefore cannot be fully assessed either. But as these evaluation processes are currently in train, there is capacity to observe how their early stages are being implemented. These three NPAs require jurisdictions to regularly and comprehensively report on their student outcomes and policy activity. This enables policymakers to monitor the success with which the schooling system is moving closer to the agreed performance targets.

Initial reports produced by the jurisdictions have been informative in identifying some of the problems that they are experiencing in implementing their NPA strategies, as well as some of the challenges for improving the effectiveness of the schools workforce. In fact, some of the findings of the initial reports reinforced the need for better processes for evaluation and information-sharing. For example, in its report on the initial implementation of the Smarter Schools NPAs, the NSW Department of Education and Training found that many school principals and staff faced a challenge in 'knowing what program will work for the target students' (ARTD Consultants 2010, p. 17).

At a national level, DEEWR has commissioned an analytical overview of each jurisdictions' policy activity and evaluation efforts — the first phase of the national evaluation strategy for the Smarter Schools NPAs. The Commission understands that DEEWR expects to see jurisdictions invest in rigorous qualitative and quantitative analysis where data are available, but monitoring the quality of evaluation generated by this strategy will be important. Subsequent national reporting phases will be tied to the end of each of the NPAs (2012 for the Literacy and Numeracy NPA, 2013 for the Improving Teacher Quality NPA and 2015 for the Low Socioeconomic Status School Communities NPA).

Limitations of National Partnership Agreements

There is much to be commended in the evaluation processes established under the various schools-related NPAs. An ex post focus on the costs and benefits of different initiatives may encourage reflection on what measures will deliver the greatest returns to students, workers and the community.

Nevertheless, it is unlikely that National Partnerships will, on their own, provide sufficient impetus for enduring improvements in policy and teaching practice. Various participants expressed concerns about different aspects of the NPA regime, with claimed deficiencies including:

- the administratively cumbersome and costly nature of the arrangements for schools (Queensland Catholic Education Commission, sub. 20, p. 1)

- the ways in which initiatives are funded, such as:

  – the tops-down approach to funding allocation that limits the capacity for teachers and schools to respond to local imperatives (Deakin University — School of Education, sub. 24, p. 12)

  – the provision of funding to schools most easily able to improve their performance — and thereby to contribute most to meeting a jurisdiction's

reward targets — rather than to those schools with the most urgent need for additional support (Australian Primary Principals Association, sub. 41, p. 9)

- a lack of ambition in the performance targets that jurisdictions must meet to secure the additional funding (Australian Parents Council, sub. 19, p. 11)
- the short-term nature of the funding involved (Catholic Education Office — Diocese of Toowoomba, sub. 11, pp. 4–5).

As a performance-linked mechanism for distributing public funds, the NPA regime imposes accountability processes and other administrative obligations on funding recipients. These serve to support ex ante justification for the funding or contribute to ex post evaluation of outcomes. Although rigorous evaluation can be costly — with some of the costs being borne by funding recipients — it is not of itself a problem if it ensures a commensurately greater payoff to the community in terms of directing resources to the most cost-effective avenues for raising student outcomes.

Concerns about the schools and types of initiatives that receive support or not will often be a consequence of legitimately different priorities (whether between different jurisdictions or between school communities and their state or territory education department) and are not a problem per se. But to the extent that funding allocations may at times be distorted for reasons other than good public policy, this again underscores the need for transparency and rigour in the evaluation processes.

The limited ambitiousness of the NPA performance targets is of more material concern. If program evaluations only measure outcomes against low hurdles, misleading conclusions may be drawn about the efficacy of the programs being assessed. A related concern, noted in commentary by the COAG Reform Council (CRC) in its assessment of the NPA on Literacy and Numeracy (box 10.1), is that inconsistent target setting across jurisdictions will reduce comparability — and therefore the transparency — of results. This further weakens the quality of evaluation.

The short-term nature of national partnership arrangements will also limit the capacity of evaluations to assess the longer-term benefits of changes, as funding for evaluation may expire before a complete picture has emerged as to the efficacy of the initiatives pursued under each NPA. A further complication in this sense is that the national-level evaluation strategy is only designed to assess the effectiveness of jurisdictions' broad strategic directions. That is, the framework does not necessarily yield insight into which specific programs work or not — it is still up to the individual jurisdictions to undertake the necessary program-level evaluations. Consequently, deeper efforts to entrench a system-wide culture of evaluation are still required.

> **Box 10.1   Performance of the Literacy and Numeracy NPA**
>
> The Literacy and Numeracy NPA (L&N–NPA) commenced in January 2009 and will expire at the end of 2012. The L&N–NPA provides reward funding, contingent on performance targets being achieved. To this end, jurisdictional performance under the L&N–NPA is reviewed by the CRC. The short cycle of the L&N–NPA means that the CRC will produce just two performance reports: the first was released in April 2011, the second is due to be released in June 2012. (The Improving Teacher Quality NPA contains reward funding as well, with the CRC's initial report on this NPA also to be released in June 2012.)
>
> In its first report into the performance outcomes of the L&N–NPA, the CRC:
>
> - noted that, while a degree of jurisdictional variation is required for successful implementation, differences in measurement approaches across jurisdictions have served to reduce transparency
>
> - observed that the process of negotiating bilateral implementation plans (the individual agreements between the Australian Government and each state and territory) had provided 'no opportunity for collaboration and scrutiny' (p. 90)
>
> - was concerned that the 'strong references to ambition' (p. 89) in the NPA were not always realised, with apparent variation in the ambitiousness of reform targets agreed with individual states and territories.
>
> The variability and lack of transparency in the setting of reward targets contributes to an environment where jurisdictions may successfully push for lax targets. If these are agreed to in the bilateral implementation plans, reward payments may become little different from an 'untied' education contribution from the Australian Government to the states and territories, and not a genuine catalyst for change as intended.
>
> To mitigate this possibility, the Australian Government — given its funding role — has an incentive to reject any low targets that might be proposed. Given variation in the starting points and capacities of different jurisdictions, judgements about what the 'right' target is can usefully be informed by research and expert advice. Also supporting this, the CRC has recommended a series of measures to improve accountability for outcomes under the L&N–NPA including greater transparency, simplicity and comparability in each jurisdiction's reporting, and improved sharing of reward frameworks across states and territories.
>
> *Source*: CRC (2011).

10.4   Strengthening research and evaluation capacity

Research funding and structures

As detailed in section 10.2, there are many players in the education research space. The capacity of researchers in this field to produce high-quality innovative research will depend on the availability of funding resources for such research.

For Australia's higher education institutions, most of the funding on education research comes from general university funds. Other funding — including to non-university research bodies — is available from the Australian Government and Australian Competitive Research Grants (through the Australian Research Council).

Some participants in the roundtables for this study regarded these channels as insufficient. Instead, they supported a more direct, dedicated approach for funding education research. Two models were noted as useful examples: the Australian Housing and Urban Research Institute, which is focused on research into housing and urban development issues; and the National Health and Medical Research Council, which is responsible for allocating funds for health and medical research. Dedicated institutions such as these can help to promote greater consistency and policy relevance in research than work that is commissioned on an ad hoc basis according to what funding is available and when.

Recognising the need for an Australian research capacity (section 10.1), a more reliable and dedicated funding stream for education research may contribute to a higher quality knowledge base about 'what works' in both a teaching context and in relation to schools workforce policy. Greater security in research funding would enable longer-term projects to be pursued without fear of any public investment being withdrawn.

However, while there may be a case for examining the adequacy of funding for school-related research, it is not clear that new institutional structures are necessary at this time. The recent establishment of national structures (such as ACARA and AITSL) and processes (through various NPAs), along with various initiatives within individual states and territories, may allow any deficiencies in the research base to be filled more cost-effectively than by tasking a new body with these responsibilities. This will only be evident with suitable evaluation and time for the new arrangements to become established.

The Commission considers that the institutional structures in this area should be the subject of periodic evaluation to monitor their efficacy and ensure their continuing relevance. Under the *Australian Curriculum, Assessment and Reporting Authority Act 2008* (Cwlth), ACARA will already be the subject of a performance review, which must commence no later than 8 December 2014. But while AITSL must review its major initiatives every four years (chapter 5), there is currently no requirement for a full review of the institute's structure and operations. Many participants endorsed such a review in response to the Commission's draft report, including DEEWR, which noted that:

> AITSL currently reports regularly on progress against its work program to Ministers through the Standing Council for School Education and Early Childhood … A formal

review of AITSL's performance against its objectives, and of the organisation's effectiveness in the context of the Council of Australian Governments' reform agenda, would provide Ministers with important additional information to ensure the organisation is relevant in the future. (sub. DR94, pp. 12–3)

This would also accord with AITSL's own commentary (noted earlier) that its research and evaluation role would likely increase (sub. DR81). The degree to which AITSL is effectively meeting the research and evaluation needs of the schools workforce should therefore be a key consideration of an independent performance review. Related to this, the review should assess how well the needs of different stakeholders within the schools sector are represented by AITSL.

RECOMMENDATION 10.1

The Standing Council on School Education and Early Childhood should initiate and oversee an independent performance review of the Australian Institute for Teaching and School Leadership (AITSL). This review would supplement the planned internal evaluations of AITSL's individual initiatives, including in relation to the national professional standards and the accreditation of initial teacher education courses. Among other things, this performance review should:

- *consider whether AITSL is appropriately representative of the various jurisdictions and other parties in the schools workforce*
- *advise on a long-term work agenda for AITSL, including its capacity to improve access to data and research on the schools workforce and foster a culture of policy evaluation across jurisdictions.*

The independent performance review of AITSL should be conducted concurrently with the equivalent review for the Australian Curriculum, Assessment and Reporting Authority as prescribed by the Australian Curriculum, Assessment and Reporting Authority Act 2008 (Cwlth).

Fostering links between policymakers and researchers

The nature and quality of the engagement between policymakers and researchers may routinely be regarded as disappointing by both sides. As Edwards (2004) summarised, policymakers commonly regard researchers as out of touch with contemporary policy priorities, while researchers consider policymakers to be disinterested in (or even hostile to) research, or are too absorbed in bureaucratic processes to be able to support researchers' endeavours.

To the extent that researchers may be commissioned to evaluate policies and programs, this provides a basis from which a greater relationship between

researchers and policymakers can be developed. But such opportunities do not appear to have been fully seized in schools workforce policy (or education policy more widely).

A concern expressed by some participants is that collaborations between researchers and policymakers tend to be one-off or 'one-to-one' in nature rather than coordinated or systematic arrangements. As noted by Deakin University's School of Education:

> There are no forums in which researchers can meet with policymakers on a regular basis … There needs to be regular ongoing dialogue between researchers, policymakers and practitioners to inform policy and practice … For researchers, policy often seems to emerge out of a vacuum suggesting that there is currently scope for a strong link between policy formation and education research. (sub. 24, p. 39)

Similarly, in its review of Australia's evaluation and assessment framework for education, the OECD observed a need for improved connections between assessments of the performance of the schooling system, policy-making decisions and classroom practices (Santiago et al. 2011). As a point of comparison between Australia and another high-performing country, all experimental projects conducted within the Finnish education system are monitored by university researchers (Aho, Pitkänen and Sahlberg 2006).

That said, it is not necessary for all research to be conducted outside policy-making entities. Some state and territory education departments have specialist innovation and research divisions, while others contain research units within broader planning functions — researchers and analysts based in these teams can contribute much valuable policy-relevant research. Moreover, an internal research capacity is necessary for education departments and agencies to be able to effectively interpret and apply the results of research conducted externally. But different jurisdictions appear to place a greater emphasis on high quality research — and to the extent that internal research capacity may be relatively weak in some jurisdictions, a greater reliance on external researchers could be useful in promoting better education outcomes.

Increasing the opportunities for policymakers to work with researchers would do more than just provide a knowledge source for policymakers. Stronger collaborations can also help to better align the relevance and applicability of research to the objectives of policymakers, and improve the success with which policymakers interpret and translate research findings into appropriate policy actions. In commenting on how to strengthen these links, Orland (2009) noted that researchers need to produce 'useable knowledge', meaning that they need to undertake policy-relevant research, communicate their findings in a way that policymakers can understand, and, in discussing policy implementations, take into account the constraints faced by policymakers. The other side of this is that, as

Hartnell-Young and Vacirca (2010) observed, if policymakers fail to provide researchers with access to evaluation data, researchers' capacity to provide policy-relevant advice will inevitably be curtailed.

Hartnell-Young and Vacirca (2010) proposed some broad strategies for strengthening the policymaker–researcher relationship, such as cross-attendance at research seminars and policy forums, and establishing formal networks of policymakers and researchers that can concentrate on specific interests and policy challenges. Edwards (2004) listed a range of suggestions for governments, including by:

- building internal capacity, such as peer review processes and secondment of researchers into departments

- encouraging external capacity, through such measures as sharing government data more openly with researchers, permitting departmental staff to undertake research sabbaticals, and sponsoring policy-focused research positions within universities

- gaining committed leadership, by promoting research not only within departments but also among ministers and other parliamentarians.

As Edwards (2004, p. 13) also noted:

> … specific and practical measures designed to link policy and research … will not necessarily deliver the desired result of better research–policy relationships unless there is a climate to permit learning to take place within organisations.

Put another way, without a meaningful commitment to research — and especially evaluation — policy development processes will be unable to draw on the most relevant and up-to-date evidence.

Entrenching a culture of informed policy development and evaluation

As discussed in section 10.3, despite a renewed emphasis on evaluation through the various education-related NPAs, there remain concerns about the quality and consistency of policy development processes. In particular, many initiatives do not appear to be thoroughly evaluated, and those evaluations that take place are not always made publicly available. It is also unclear to what extent evaluation processes (and research, as discussed above) are considered during policy development.

While there is variability across all jurisdictions, with some doing better than others, all states and territories could do more to develop and adopt high-quality research and evaluation processes. To this end, the Commission sees merit in each state and territory — as well as the Australian Government, in recognition of its role in many

aspects of education policy — undertaking a full review of their use of research and evaluation. The reviews should also consider what improvements could and should be made to enhance policy development processes.

The capacity for governments to make available research and evaluation results should also be a key aspect of any review. Mechanisms to enhance the flow of data and information between education departments and schools can underpin school-level initiatives (for example, in terms of workforce innovation — chapter 7). And the same data and information could provide new resources for research and encourage further improvements in policy and practice. While there are many options for how such communications can take place, perhaps the most important is the quality of face-to-face contact between policymakers, practitioners and researchers.

Although these reviews should be conducted independently by each jurisdiction, a degree of national consistency and collaboration would also be warranted to promote best practice. Options for this should be canvassed by the Standing Council on School Education and Early Childhood, particularly in establishing benchmarks for assessing each jurisdiction's performance in improving their use of evaluation and research.

RECOMMENDATION 10.2

The Australian, state and territory governments should individually review, and strengthen as appropriate, how they use policy evaluations and research to inform the design and management of schools workforce initiatives. This should include consideration of improvements to ensure that:

- *evaluation of schools workforce initiatives, particularly those targeted at educational disadvantage, are systematic, robust and ongoing*
- *evaluation results are transparent and accessible*
- *research and evaluation is central to the design and management of schools workforce initiatives.*

Related to these, jurisdictions should also reflect on the adequacy of the evaluation protocols established by the education-related National Partnerships, and the extent to which these are maintained once the funding lifecycles of the relevant agreements have expired.

Each government should publicly report the findings of its review and any resulting reforms. The governments should also collectively monitor — through the Standing Council on School Education and Early Childhood — the effectiveness of their reforms, so that lessons are shared and there is an improved evidence base for future consideration of new policy approaches.

Priority areas for evaluation

General improvements in the quality of evaluation would have wide benefits for schools workforce policy formulation. But given their capacity to directly support or improve student outcomes, some areas of workforce policy require more urgent attention than others.

Building on some processes already in progress, the Commission has in earlier chapters identified the importance of research and evaluation initiatives with respect to the relative effectiveness of pre-service training, induction and professional development of teachers (chapter 5); and the opportunities for workforce innovation within schools (chapter 7).

The Commission has also outlined specific program evaluation exercises in earlier chapters of this report that should be afforded a high priority. These relate to:

- the comparative effectiveness of workforce-related policies and initiatives aimed at ameliorating educational disadvantage (chapter 9)

- the effectiveness of remuneration-based incentives and other measures (including retraining incentives and scholarship programs) as a means to address shortages of teachers and other school workers (chapter 4).

Ideally, these priority evaluations should be designed to identify which specific policies and programs are most effective in addressing the relevant challenges. The Commission considers that responsibility for initiating and overseeing evaluation in these areas would best lie with the Standing Council on School Education and Early Childhood, given the central involvement of its predecessor (the Ministerial Council for Education, Early Childhood Development and Youth Affairs) in developing the overarching targets for the Australian education system. However, given that this task calls for program-level evaluation, collaboration will also be required with the different jurisdictions, sectors, and even individual schools that are implementing the various initiatives.

To emphasise, the particular evaluation tasks identified above should not be seen as an end point for evaluation. Rather, they should be regarded as 'first steps' in a process of embedding robust evaluation across the full spectrum of schools workforce policies.

RECOMMENDATION 10.3

The Standing Council on School Education and Early Childhood should, as a priority, initiate and oversee:

- *a coordinated national review of existing evidence on the effectiveness of*

programs and policies to help ameliorate educational disadvantage

- *evaluations of the effectiveness of remuneration-based and other incentives to encourage graduates to enter teaching in order to address specific teacher shortages.*

11 Some broader framework issues

Key points

- While existing institutional structures do not guarantee effective policy coordination, it would be premature to introduce new coordination mechanisms.
  - The effects of recent reforms to the national-level reporting and assessment framework — such as the Smarter Schools National Partnership Agreements, and the establishment of both the Australian Curriculum, Assessment and Reporting Authority and the Australian Institute for Teaching and School Leadership — cannot yet be fully identified.
  - Instead, the success of these mechanisms should be revisited as part of the future evaluation of the current reforms.

- More should be done to ensure that the interests of non-government schools, the non-teaching workforce, students and parents are appropriately represented in high level policy-making processes in the schools area.

- Improved public reporting on how schools and students are performing can support schools' endeavours in engaging with parents and the community. The quality of this relationship may also be enhanced by targeted training for teachers and school leaders.
  - Parents and the wider community can also enhance their engagement, through improved feedback to principals and teachers, and participation on school boards.

- The process of establishing pay and conditions for teachers and other school workers is, for the most part, heavily centralised. This can reduce the scope for individual schools, operators of school systems and policymakers to respond to changing imperatives and pressures.
  - There should be a particular focus on ensuring that awards and agreements are more accommodative of school-level variation in workplace arrangements, and that they support governance and other changes that could improve the management of poor workplace performance.
  - Ultimately, any long-term improvement in this area can only be achieved by the parties themselves through constructive negotiation.

As the current schools workforce reforms recognise, it is important to examine not only options for improving specific aspects of workforce policy, but also the efficacy of the broader institutional framework within which policy is developed, implemented and evaluated. Consequent on the new national-level reporting and assessment initiatives, and the associated schools workforce-related national partnership arrangements, this framework is undergoing considerable change (chapter 3).

In keeping with a concern to avoid adding unduly to the already busy and active policy landscape, the Commission is not proposing major changes to this framework. However, as well as initiatives to help embed robust evaluation as an integral part of the framework (chapter 10), the Commission does see the need to ensure that all key stakeholders are appropriately represented in high level policy-making processes. In addition, and though not putting forward specific proposals, it has commented on a number of other framework issues germane to the future efficiency and effectiveness of the schools workforce — including in the areas of policy coordination, parental and community engagement, and industrial relations.

11.1   Policy coordination and stakeholder representation

As outlined in chapter 3, responsibility for schools policy has historically resided with state and territory governments. More recently, there has been a trend towards national consistency in some policy areas — for example, curriculum, accreditation of teacher training courses, and professional standards. At the same time, there has also been a push (sometimes within state and territory education departments, and in other cases initiated by the Australian Government) to devolve decision making down to the school level. A consequence of this is that there is a multitude of education policymakers in various jurisdictions and sectors with different levels of involvement and authority.

An increasing number of government entities have policy responsibilities that directly or indirectly affect the schools workforce. As well as state and territory education departments and the Australian Government's Department of Education, Employment and Workplace Relations (DEEWR), these entities include housing, health and community services departments at both levels of government. With governments meeting a major part of the cost of school education and of training teachers and school workers, treasury and finance departments are also influential players. The Australian Institute for Teaching and School Leadership (AITSL) and the Australian Curriculum, Assessment and Reporting Authority (ACARA) — bodies recently established by governments, and that have significant government representation on their boards — likewise have major policy development roles.

Governments might also establish further institutional structures in the near term. For example, the Review of Funding for Schooling (Gonski et al. 2011) recommended a new national body to independently govern school funding (which would also be supported by an advisory panel), and new state and territory-based 'planning authorities' to manage the development of new schools and the closure or expansion of existing schools.

There are also various non-government entities that are involved in developing and implementing schools workforce policy at different levels. In particular, non-government school operators are both the conduit for government-initiated workforce policies into the Catholic and independent schools systems, and a source of advice and evidence to assist government in its policy-making role. Parents (including legal guardians and carers) and the multiplicity of bodies representing the schools workforce, or parts of it, are further key stakeholders in the process.

Within such an institutional environment, effective policy coordination will be crucial for good outcomes.

- As discussed in chapter 9, addressing educational disadvantage will require a package of measures encompassing workforce-related policies, more general school policies, and policies outside the education arena in areas such as health and housing. One of the likely benefits of the Commission's proposed national review of the effectiveness of the programs and policies in place to address educational disadvantage (recommendation 10.3) should be to shed light on situations where inconsistency in detailed policy settings or policy-making processes is impeding progress.

- The new university funding model has the potential to exacerbate the current surplus of general teachers. If dialogue between governments and the universities is unsuccessful in preventing this, the use of other available policy levers may be required (chapter 4).

- As the Commission has emphasised in several places in this report, without appropriate synchronisation between different workforce policies, some potentially useful initiatives may fail to deliver.

  – Without conducive remuneration structures, reinforced by transparent merit selection processes for career positions, the incentives for teachers to invest in the skills necessary to meet the new higher level national teaching standards are likely to be muted (chapters 4–6).

  – Without strong leadership skills at the school level, the devolution of decision-making responsibilities for hiring, staff deployment, performance management and day-to-day school operation will not achieve its full potential (chapter 8).

– Teacher registration processes may also hinder labour mobility between the schooling, early childhood development (ECD) and vocational education and training (VET) sectors, impeding efforts to address workforce imbalances (see below).

Through the Council of Australian Governments (COAG) and the Standing Council on School Education and Early Childhood (SCSEEC), increased attention is now being given to high level policy coordination. As well as the guidance provided through the Melbourne Declaration on Educational Goals for Young Australians and the National Education Agreement (NEA) (chapter 3), the new national-level reporting and assessment framework is intended to provide an overarching picture of how student outcomes are influenced by current policy approaches. In addition, AITSL has been given responsibilities that bridge a number of specific areas of workforce policy, including training, professional development and remuneration. Such institutional structures do not, of course, guarantee effective policy coordination. But especially given the new national-level reporting and assessment framework (chapter 3), and the roles of COAG and SCSEEC within that framework, the Commission considers that it would be premature to introduce further coordination mechanisms. A preferable approach would be to revisit the alternative structural options for improving policy coordination once the current reforms and processes are properly bedded down and sufficient time has elapsed to properly assess their impacts.

Improving stakeholder representation

Efforts to improve policy coordination need not rely on fundamental institutional changes. One element of best-practice policy formulation is broad consultation, allowing key stakeholder groups the opportunity to offer their input.

As is evident from the submissions to this study, schools workforce policy continues to focus very heavily on teachers and principals. Hence, teachers' unions and other professional bodies are routinely included in policy development processes. But many other parties also have a stake in the proper functioning of Australia's schools. In its draft report, the Commission identified three particular groups with whom education policymakers were not always effectively engaging:

- non-government schools
- parents
- non-teaching school workers.

Many participants broadly supported the Commission's assessment in this regard (box 11.1), while some also highlighted other groups whose representation could be improved. Of particular note is the suggestion by one roundtable discussant that student bodies could be better involved in the policy consultation process.

In many contexts, parental interests may act as an appropriate proxy for student interests. However, the Commission agrees that there may be significant benefits from directly soliciting the input of students in policy processes. Each student will have their own perspectives on schooling and their interactions with the schools workforce. Collectively, these student experiences can provide a helpful insight into the diversity of outcomes in different schools, sectors and jurisdictions.

In light of the above, the Commission is proposing that SCSEEC take steps to ensure that the interests of non-government schools, the non-teaching workforce, students and parents are appropriately represented on high level policy forums in the schools area — in addition to those groups for whom representation is already commonplace, such as the teaching workforce.

Not all of these groups will need to be represented in all forums. Moreover, the ways in which each group should engage with policymakers will likely vary depending on their interests and expertise. While there should be a general disposition towards wide consultation, judgements about where and how different stakeholders are represented will need to be tailored to their circumstances and interests. Consequently, the Commission recommends that SCSEEC establish a working group to consult with relevant stakeholders and advise on specific options to address the current representation gaps.

RECOMMENDATION 11.1

The Standing Council on School Education and Early Childhood should ensure that non-government schools, the non-teaching workforce, students and parents are appropriately represented in high level policy-making processes in the schools area. To this end, the Standing Council should establish a working group to consult with the relevant stakeholders and advise on specific options for improving their representation in high level policy forums.

Box 11.1   Participants views on stakeholder representation

In commenting on the interaction between policymakers and the non-government schools sector, the Independent Schools Council of Australia argued that:

> Decisions concerning the implementation of policies made at a national level are often determined without the input of representatives from the independent sector, despite those implementation decisions having a direct impact on school communities, school leaders, and teachers in the sector. … [This] is not conducive to maximising the efficiency and effectiveness of the schools workforce. (sub. 18, p. 22)

Similarly, in putting a parental perspective, the Australian Parents Council (APC) contended that:

> Parental engagement is evident in some worthwhile individual programs and projects throughout Australia but APC proposes that Australia should aspire to the systematic and sustainable integration of parental engagement into all aspects of the reform agenda.
>
> Policies and practices that enable this strategic approach to parental engagement must be a part of schools workforce reforms. (sub. 19, p. 4)

And in talking about the consequences of putting parents at the periphery of policy discussions, the APC said that a 'pivotal plank in effective teaching and learning and effective schools is ignored' (sub. 19, p. 2).

Groups representing aspects of the non-teaching workforce also endorsed suggestions that they could be better incorporated in policy consultation processes. For example, the Victorian School Nurses Special Interest Group emphasised that:

> The non-teaching workforce brings skills, knowledge and capabilities to work collaboratively with students, families and staff to reduce the negative effects of disadvantage and to identify and enhance strengths. … As school nurses play an important role in promoting the health and wellbeing of students, staff, families and school communities, school nurses should be represented in high level policy making in the schools area. (sub. DR52, p. 10)

Current parties to policy processes also endorsed the merits of a wider mix of stakeholders being consulted. For example, the WA Department of Education observed:

> Achieving workforce agility will not be possible without support from the non-government sector, the non-teaching workforce and broader community engagement. Therefore, the Western Australian Government welcomes representation from these stakeholders and colleagues on appropriate high level policy forums. (sub. DR90, p. 10)

Although it did not necessarily disagree with the sentiments expressed above, the Department of Education, Employment and Workplace Relations (sub. DR94) noted that various channels already exist through which different stakeholders are consulted. In particular, it highlighted the role of the Strategic Policy Working Group (reporting to SCSEEC), which includes representatives from the non-government school sectors. It also noted consultation requirements imposed on AITSL:

> AITSL is charged by ministers under its Letter of Expectation to consult extensively with stakeholders during the development, testing, implementation and evaluation phases of its work. AITSL must ensure stakeholder engagement is appropriate, regular and can be obtained through a variety of modes. (sub. DR94, p. 14)

Structural separation of education provision and regulation

Some participants were concerned that state and territory education departments can face a conflict of interest between their funding, operational and regulatory roles. Of particular concern was the distribution of funding under the three Smarter Schools national partnership agreements (NPAs). As discussed in chapter 10, responsibility for directing funding to non-government schools under the Smarter Schools NPAs rests with state and territory governments.

The National Catholic Education Commission said that 'the implementation of the cross-sectoral schooling [national partnerships] has been bedevilled by the lack of capacity in many State Government bureaucracies to abide by the principle of competitive neutrality' (sub. 7, p. 3). Even more forcefully, the Australian Parents Council (APC) claimed that:

> Often State and Territory Ministers for Education perceive themselves to be ministers for public schools. There have been instances where they have determined the proportional allocation of national partnerships funding between the government and non-government school sectors from the perspective of 'competitor' with the non-government sector. (sub. 19, p. 10)

Ensuring appropriate representation of non-government schools (see above) should help to guard against any biases in the distribution of national partnership funding by state and territory governments in favour of government schools. To provide further reinforcement, the Commission also gave consideration to whether a formal separation of education-related functions — as practised by some jurisdictions — would also be warranted.

- In Western Australia, the Department of Education has responsibility for the establishment and administration of public schools, while the Department of Education Services registers and funds non-government schools, and regulates the entire sector. (Both departments, however, report to the same Minister.)

- In Victoria, registration and regulation of schools by the Victorian Registration and Qualifications Authority is separate from the provision of public school services by the Department of Education and Early Childhood Development.

- In South Australia, the Office of Non-Government Schools and Services has been established to administer all public funding for non-government schools and to provide policy advice to the Minister for Education on the government's responsibilities to independent and Catholic schools. The office operates independently from the Department of Education and Child Development, which operates SA government schools.

In any sector where there are both government and non-government service providers, the separation of the public sector's service provision and regulatory roles is intrinsically desirable to promote competitive neutrality.

Nevertheless, the separation of functions along the lines of the Victorian, South Australian and Western Australian models would not necessarily address the particular competitive neutrality issue raised in this study relating to the distribution of national partnership agreement funding across government and non-government schools. Even where there is structural separation, concerns would still arise if there were an imbalance in how NPA funds were initially allocated between different agencies for government and non-government schools. Structural separation — while potentially useful — is not a substitute in its own right for transparent criteria to determine how funding should be distributed, reinforced by procedural checks and balances. Along these lines, the Review of Funding for Schooling emphasised the need for state and territory governments to support 'greater transparency of funding allocation and the methodology used to allocate funding to schools' (Gonski et al. 2011, p. 194).

Furthermore, NPA funding for non-government schools need not be directed through state and territory governments. Under the Empowering Local Schools and More Support for Students with Disabilities initiatives (which are separate from the Smarter Schools NPAs), the Australian Government is responsible for negotiating separate funding agreements with education authorities in the Catholic and independent schools sectors. As the Australian Government is not responsible for operating any schools itself, violations of competitive neutrality seem unlikely to emerge in the case of these two initiatives — though this does not diminish the need for a transparent methodology to determine the initial distribution of funds.

In light of these considerations, and the potential costs of structural separation initiatives, the Commission is not making any formal recommendations on this matter. But it should be kept under review at the COAG and Standing Council levels — both in a general institutional sense, and specific to evaluating the outcomes from the expenditure of NPA funds.

Labour mobility across the education and training workforces

In educational terms, the schooling system does not operate in isolation. Most children starting primary school have received some instructional education in the ECD sector. At the other end of the process, many high school students will seek to pursue tertiary studies in universities or in the VET sector in their transition to paid employment. Importantly, recent initiatives to better integrate the different

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educational sectors have increased the premium on cross-sectoral policy and program coordination.

Early childhood development

As outlined in the Commission's report on the ECD workforce (PC 2011a), Australian governments have committed to an increase in the instructional component of early childhood education. In the short term, the surplus of primary teachers may provide one means to accommodate the consequent growth in demand for teaching resources in the ECD sector. However, strong growth in school enrolments (chapter 4) and the expected general age-related tightening in labour markets mean that, over the medium to longer term, workforce planning in each of the two sectors will need to be cognisant of the other.

The overlaps in teaching requirements may also necessitate changes in teacher registration and accreditation processes. As participants to the Commission's study on the ECD workforce (PC 2011a) identified, qualified school teachers who are employed in ECD teaching positions are not always able to maintain their school-based registration, in large part because the National Professional Standards for Teachers are not applied to ECD teachers. Different course requirements across the sectors present a further complication. As the Victorian Department of Education and Early Childhood Development (sub. DR95) observed, school teachers must have completed four years of tertiary study to be registered, while most teachers working in the ECD sector have only completed a three-year qualification.

In its ECD workforce study, the Commission recommended that all state and territory governments should allow teachers in the ECD sector to obtain professional registration on the same basis as those working in primary schools (PC 2011a, recommendation 10.9). As the Commission also noted, ECD teacher registration would need to be supported by other processes equivalent to those for the schools workforce, including accreditation of initial teacher education programs, professional development, mentoring and induction.

Vocational education and training

The provision of VET in schools, as part of efforts to boost Year 12 retention rates, raises its own suite of standards, qualification and teaching issues. For example, both the Catholic Education Commission of Victoria (sub. 13) and the Australian Education Union (sub. 28) raised concerns about inadequacies in the education and training provided to those delivering school-based VET. The Victorian Department of Education and Early Childhood Development (sub. DR95) noted inconsistencies

in the registration and training requirements for school-based VET teachers and TAFE-based VET practitioners, even where the programs in question (and the skills required to deliver them) are similar.

While the Commission concluded in its report on the VET workforce (2011b) that there should continue to be specific vocational-related qualifications for those teaching VET in schools, it also pointed to the need for appropriate recognition of prior learning. Moreover, as the relationship between the schooling and VET sectors continues to evolve — and particularly as school-based VET programs continue to grow as a share of the overall VET sector — the balance of the influences on appropriate qualification requirements will not necessarily remain the same.

Universities

There is less evidence of the potential for workforce mobility between schools and universities — in large part because the role of lecturers and other academics is not exclusively teaching, but involves research as well. Nevertheless, as chapter 5 outlines, there are areas where the two sectors can intersect. In particular, practicum placements for trainee teachers rely on a degree of coordination between universities as trainers and schools (and education systems) as prospective employers. The recent emergence of university–school partnerships is one signal that there is scope to improve the quality of the engagement between the two sides. The University of Canberra's partnerships may be particularly instructive in this regard, given their expanded scope to foster relationships between university researchers and students (not just within the education faculty) with school teachers and students (box 5.5).

Broader impediments to mobility?

Initiatives to better integrate the respective education workforces could have significant benefits in terms of promoting a more learner-focused approach, achieving better individual outcomes and increasing the efficiency of workforce development and planning (objectives enunciated in the terms of reference for the Commission's three education and training workforce studies for the VET, ECD and schools workforces). However, the Commission does not see a need at this stage for additional institutional or procedural initiatives to give further impetus to cross-sectoral workforce policy.

Indeed, in some ways, the institutional landscape is already well placed to consider the interactions between the various education sectors. Departmental and portfolio responsibilities often span more than one of the policy areas relevant to promoting

efficient and effective workforce arrangements. For example, policy responsibility for school and early childhood education in a number of the states and territories is combined in single departments. The two are also encompassed in SCSEEC's remit.

That said, the prospects for integration — and the risk of new barriers emerging if policy development across the sectors is insufficiently harmonised — should remain a matter for constant review by education policymakers. An openness to different ways of doing things, an accommodative regulatory structure, and a broad commitment to evaluation will be no less relevant here than for other components of workforce policy.

11.2 Parental and community engagement

Schools are both an integral part of the community and one of the biggest influences on most students' upbringing and development beyond their parents and immediate family. Hence, schools must engage effectively with parents, carers and legal guardians, as well as the wider community.

Drawing more heavily on the knowledge and perspectives of parental interests in the policy-making process (section 11.1) is one means to achieve this. Engagement at the grassroots level must also be encouraged and supported. In the words of the APC:

> Meaningful engagement between parents and the teachers and school leaders in whose hands they entrust their children to be schooled is a critical element of school reform. (sub. 19, p. 12)

And putting a student perspective, the Victorian Student Representative Council said:

> The relationship between teachers and parents is an area about which the [Council] is receiving a growing amount of feedback. While some students are quite happy to maintain the status quo of minimal interaction between parents and school, much of the feedback the [Council] receives is from students who would like their parents to be more engaged in their school life. This is consistent with students seeing their school life as being embedded within their wider life journey … In most cases this requires an improved relationship between teachers and parents with more regular communication. (sub. 34, p. 3)

The benefits of effective engagement have been the subject of much research, which was extensively referenced in the APC's submission. Reporting on its own recent research, the APC commented that parental engagement programs:

> … are not only effective in terms of student outcomes, but … have wider and lasting benefits for parents, teachers and the community which feed directly into improvements in the life quality and economic wellbeing of individuals, the social capital of communities and the fortunes of the economy generally. (sub. 19, p. 12)

The importance of parental engagement is explicitly recognised in the Melbourne Declaration and supported through the National Family–School Partnerships Framework (box 11.2). The relevance of parental engagement in improving outcomes for students experiencing educational disadvantage is discussed in chapter 9.

There are various means for helping to facilitate effective engagement.

- As the Review of Funding for Schooling (Gonski et al. 2011) noted, providing parents with more information on how their schools and students are performing can provide a better platform for engagement. For example, the My School website (a national repository on school performance run by ACARA) provides school-level snapshots of education outcomes, and there is scope for schools to also use their own websites and other online resources to communicate with parents on a more regular and personalised basis on how their children specifically are performing. By empowering parents, such information may also increase their collective willingness and desire to engage with their schools.

- The use of targeted training modules in both undergraduate teacher courses and in professional development programs for current and future leaders is another obvious vehicle for improving how teachers and leaders relate to parents and community members — a point emphasised by some participants (most extensively by APC, sub. 19).

Box 11.2 The National Family–School Partnerships Framework

This framework was jointly prepared by a range of stakeholders, including national parent bodies, the Australian Government, state and territory governments, non-government school authorities, and school principals' associations. Its aim is to encourage sustainable and effective partnerships between all members of the school community, including teachers, families, and students.

The framework is intended for application across both school systems and within individual schools, and seeks to engage school leaders (both staff and parents), families and other interested people in the cooperative development of partnerships. To support this process, the framework contains:

- a vision for improved partnerships between Australian families and schools

- a set of principles to guide families and schools in developing partnerships

- seven key dimensions of effective family–school partnerships

- a set of strategies that provide practical guidance to school communities and school systems in implementing and fostering family–school partnerships.

Source: DEEWR (2008).

- The provision of greater autonomy for schools, coupled with robust accountability protocols (chapter 8), should also motivate leaders to enact high quality engagement processes that reflect the needs of their communities. (That said, for low-performing schools — which will often have the most to gain from effective engagement — central agencies may need to be more active in providing advice and support.)

Similar strategies will help to build engagement between schools and other elements of the community, including the business community. In particular, equipping teachers and principals with appropriate skills and giving them the scope and incentive to employ those skills, will go a considerable way to meeting the engagement goals enunciated in the recent report by the Business–School Connections Roundtable (2011). Chapter 9 identifies how engagement with different groups and services in the community can improve outcomes for students experiencing a range of disadvantages.

However, the benefits from improved efforts by principals and teachers to engage will not be realised if parents and communities fail to reciprocate. There is also a responsibility on parents and community members to respond to opportunities for the provision of effective feedback to principals and teachers, and participate in school-based activities. This is particularly relevant in the context of school autonomy and the need for strong school-level governance arrangements, including schools boards and councils (chapter 8).

11.3   Industrial relations

As acknowledged throughout this report, rigidities — whether formal (laws and regulations) or informal (such as convention and standard practice) — can impede both system-wide changes and new initiatives at the local level. One particular aspect of the institutional landscape that concerned some participants was the industrial relations regime, which permeates several key areas of workforce policy and service delivery, including workforce innovation, performance management, remuneration structures and school autonomy.

Centralisation and inflexibility

In comparison to many other occupations, the process of establishing pay and conditions for teachers (box 11.3) and other school workers is heavily centralised. ABS (2010a) data indicate that nearly 90 per cent of those employed in the

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Box 11.3   **The framework for determining teachers' pay and conditions**

In general, the conditions of teachers' employment are set through industrial awards and collective bargaining arrangements (enterprise agreements).

Prior to the establishment of the *Fair Work Act 2009* (Cwlth), separate awards existed in each jurisdiction for government school teachers, Catholic (systemic) school teachers and independent school teachers.

This award structure has now been rationalised somewhat through the *Educational Services (Teachers) Award 2010*. It covers teachers in non-government schools in all jurisdictions except Western Australia, and teachers in government schools employed in Victoria, the Northern Territory and the Australian Capital Territory. However, state-based awards continue to cover government school teachers in the majority of jurisdictions, and all teachers in Western Australia. (There has been a similar rationalisation in the award arrangements for non-teaching school workers, with the relevant federal system 'modern award' being the *Educational Services (Schools) General Staff Award 2010*.)

Awards stand on their own in the absence of an enterprise agreement. But where an enterprise agreement has been negotiated, it becomes the primary arbiter of a teacher's employment conditions. In the majority of cases, agreements are 'multi-enterprise' and apply across a jurisdiction's government or Catholic school system. And though most independent schools negotiate single-enterprise agreements directly with staff, these agreements can draw from a model agreement for the sector.

In terms of their content, awards and agreements for teachers may include provisions governing class size and teacher workloads; professional development; the use of temporary teachers (see below); school management, including the level of oversight by school councils; and employer consultation with teachers over workforce changes. (Awards and agreements for non-teaching school workers are typically more generic, partly due to the variety of different workers that they cover.) As discussed in the text, such requirements can constrain changes to job design and workforce composition — not only in individual schools, but also across school sectors and jurisdictions.

Contract employment

The pay and conditions under which temporary (or contract) teachers are employed are broadly consistent with those for permanent staff — including in regard to leave entitlements (which are generally pro-rated, with varying provisions to deal with pay during school holidays), and access to professional development. But temporary teachers are employed on a fixed-term basis in one school for no more than 12 months (other than in exceptional circumstances), and they have no guarantee of a new appointment in another school at the end of their contract. (Tasmanian teachers must be granted a permanent position after six consecutive school terms on contracts.)

Separate from these arrangements, many government school principals in Victoria and the Northern Territory, and non-government school principals in general, are employed under individual contracts for periods of up to five years. Contract employment of principals is discussed further in chapter 8.

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education and training sector — of which school workers comprise a sizeable proportion — are remunerated through awards or enterprise agreements. Across the economy as a whole, the comparable share is less than 60 per cent. In various ways, centralisation can reduce the capacity for individual schools, education authorities, and policymakers to respond to changing imperatives and pressures.

- At a broad level, the Grattan Institute commented that centralised agreements 'fail to recognise that there are numerous labour markets for school teachers, with differences stemming from subject and year level taught. Treating these labour markets as homogeneous creates both surpluses and shortages in particular areas' (sub. 30, p. 3).

- 'One-size-fits-all' targets for maximum class sizes, where stringently applied, can impede changes in workforce composition (collectively or in individual schools), thereby limiting the scope for better value to be obtained from the funding available to employ teachers and other school workers. Moreover, the reductions in average class sizes that have been promoted through enterprise agreements and other staffing-related protocols do not appear to have been an especially cost-effective policy measure for improving student outcomes (chapter 7).

- The South Australian Government referred to award-related impediments to the employment of para-professionals.

  The 'Scope and Persons Bound' clauses of the safety net award for school support staff has resulted in a very narrow range of employees, and subsequently services, in school sites. For example, schools are currently unable to employ social workers, psychologists or nurses as members of staff to provide direct services to students. Such employees must be employed centrally or through a regional office, and provide services to the school rather than be an integral part of that school's staffing. (sub. 35, p. 10)

- Centralised restrictions on the employment of temporary (contract) workers can similarly reduce the scope for schools to deploy staff and organise their workplaces in ways most suited to their particular circumstances. So too can any conditions in awards and agreements that make it difficult to dismiss poorly performing tenured school workers.

- Despite some rationalisation of award structures (box 11.3), the process of negotiating changes to remuneration and working conditions remains time-consuming. In discussing these processes in Western Australia, the WA Department of Education said that:

  Within the public sector industrial agreements are negotiated on average every three years. Achievement of workforce flexibility requires a long lead time and is likely to only be achieved over several enterprise bargaining agreement cycles. Employers must also balance tensions that may arise as the pace of change will differ between workforce cohorts and new roles may cross over more than one industrial agreement. For example, workforce reform identified in 2009 may only be feasible to implement in 2015.

> … There is a real need to change industrial instruments to enable greater agility within the school workforce. (sub. 45, p. 14)

As the list above demonstrates, the industrial relations regime can be a key source of systemic inflexibility, although the extent of this inflexibility varies across jurisdictions and sectors. Amid efforts to decentralise education systems and devolve more decision-making authority to individual school leaders in a number of jurisdictions, the tensions arising from the industrial relations system may further increase. As the WA Department of Education emphasised, 'autonomous schools require not only flexibility but the ability to respond quickly to the dynamic needs of their school community' (sub. 45, p. 13). Industrial relations structures that are too rigid may be an obstacle to such agility.

Providing a contrary view, United Voice observed that:

> … the phrase 'workforce flexibility' is synonymous with the phrase 'workforce destabilisation'. Experiments, trials and flexibility within any workforce don't necessarily lead to increased productivity through innovation. They do however lead to the subversion of worker's rights … (sub. DR66, p. 9)

Issues of remuneration, employment conditions and job security have a direct bearing on job satisfaction and the willingness of teachers and non-teaching staff to work in Australia's schools. That these matters should be front-of-mind considerations for employees is to be expected. While the appropriate nature and level of overarching employee protections can be debated, the need for some such protections is not in dispute.

The Commission also recognises that a completely decentralised wage and condition-setting process would bring with it sizeable costs. Especially for smaller schools, regular negotiation of all aspects of their staffing arrangements would most likely be administratively onerous and a drain on leadership and teaching resources. This is why independent schools often draw on model agreements. Further, as the provision of autonomy to government schools in Victoria and Western Australia illustrates, with sufficient effort and time, flexibility can be improved under system-wide arrangements.

Taking these various considerations into account, the emphasis for policymakers should be on achieving an industrial relations regime that is more accommodating of the directions in which other aspects of schools and schools workforce policy are evolving, and that, in particular, gives individual schools more scope to tailor workplace arrangements to their particular circumstances. In the words of the (then) SA Department of Education and Children's Services:

> Historically the level of award based regulation in the schooling sector has been an influencing factor on flexibility of the education labour market. A key challenge in all

jurisdictions is striking the balance between regulation and appropriate employment conditions, with the necessary flexibility to respond to the rapidly changing 21st century educational context. (sub. 35, p. 9)

Where to from here?

Participants agreed — broadly speaking — that provisions in awards and enterprise agreements should not obstruct or unduly slow the implementation of agreed reforms, or impede school-based trialling of approaches that might have application across a wider range of schools. But the specifics of what this might mean can be more contentious. Some relevant areas include:

- the devolution of decision-making responsibilities to the school level — including potentially over the hiring, and firing, of staff (chapter 8)

- improved performance management strategies — including how to support the exit of perennially and demonstrably poor performers from the workforce (chapter 6)

- changes to remuneration structures, whether in relation to the use of incentives to address a range of workforce shortages (chapter 4) or measures to recognise higher performance (chapter 6)

- job design and workforce composition, including the use of the non-teaching workforce to assume some of the current responsibilities of teachers (chapter 7)

- teaching loads, and the availability of resources to allow school staff to pursue training and professional development opportunities away from the classroom.

These reforms may also motivate further contemplation of long-standing sticking points in industrial relations negotiations. For example, the use of short-term contracts to employ some teachers may become less attractive for employers were they to have greater confidence in their capacity to redeploy staff and remove underperformers. Differentiated responsibilities (and conceivably pay) for teachers based on their competencies would influence how and where staff are deployed, as too will the degree to which support staff and para-professionals can provide assistance to teachers. And to the extent that overall class size reductions remain on the agenda, the parties should recognise that it will be difficult for schools to also grant teachers more time away from the classroom to augment and improve their skills, given the limited availability of teaching resources.

Of course, changes that increase the flexibility and responsiveness of the industrial relations regime cannot be unilaterally imposed, and will require negotiation. As the Australian Education Union observed, 'reform will only ever be effective where it has … the support of those who will ultimately be tasked to implement it, the

workforce' (sub. 28, p. 2). In building on this theme, the union referred to the conclusions of an assessment of past education reform, which commented that:

> Far too many education reforms … have seen teachers as the equivalent of assembly line workers whose job is simply to follow instructions or, in some cases, as an opposition to be controlled through policy. This cannot work … Motivated and committed people are by far the most important resource any human organisation has to dispose, so engagement must be a high priority. (Levin 2010, p. 742)

Indeed, many of the changes that could ensue from a more flexible and responsive industrial relations regime would have benefits for some or all school workers. For example, there is an intrinsic case for remunerating high-performing teachers more appropriately than at present. In this respect, more flexible industrial relations arrangements could also help to facilitate the provision of a more rewarding set of responsibilities for quality teachers and other talented school workers.

It is clear that industrial relations is central to many aspects of the schools workforce policy agenda. The challenge is to develop an industrial relations environment that is more open to reforms. This is best progressed through constructive negotiation by the parties involved.

FINDING 11.1

Centralised industrial relations arrangements, which apply to the schools workforce to varying degrees across different jurisdictions and sectors, can be a source of inflexibility that hinders efforts to respond to changing imperatives and impedes a range of beneficial reforms. Awards and enterprise agreements need to be structured to:

- *accommodate school-level variation in workplace arrangements, including in relation to remuneration, conditions and job design*

- *support changes in governance, procedure and organisational culture to promote quality teaching and related schools workforce support, and to improve the management of poor workplace performance.*

A   Public consultation

On 22 April 2010, the Productivity Commission was asked by the Australian Government to undertake a study of the education and training workforce. The Commission was directed to provide separate reports on the workforces involved in providing:

- vocational education and training (VET) (to be provided within 12 months of receiving the terms of reference)

- early childhood development (ECD) (to be provided within 18 months of receiving the terms of reference)

- schooling (to be provided within 24 months of receiving the terms of reference).

This is the third and final phase of the study, which examines the workforce of the schools sector.

In keeping with its standard practice, the Commission has actively encouraged public participation in this study.

Following commencement of this study on the schools workforce on 22 April 2011, an advertisement was placed in newspapers and a circular was sent to likely interested parties.

In early June 2011, an issues paper was released to assist those wishing to make written submissions. Some 46 written submissions were received prior to the release of the Draft Report (table A.1).

In November 2011 a Draft Report was released. Subsequently a further 49 submissions were received (table A.1). All submissions are available online at: www.pc.gov.au/projects/study/education-workforce/schools.

As detailed in table A.2, the Commission met with a wide range of stakeholders across Australia. These included education authorities across all jurisdictions and school sectors, unions and professional organisations representing different members of the schools workforce, education faculties, researchers, parent and student groups and individual schools.

Three roundtables were held in early December 2011 to discuss the Draft Report. Details of these roundtables and the participants are listed in table A.3.

Table A.1   **Submissions**

Participant	Submission no.
ACT Council of Parents and Citizens Associations	17; DR73
Appleton, Julie	46
Association of Heads of Independent Schools of Australia	2
Australian Association of Mathematics Teachers Inc.	10
Australian College of Educators	DR93
Australian Education Union (AEU)	28; DR82
Australian Institute for Teaching and School Leadership (AITSL)	39; DR81
Australian Mathematical Sciences Institute	31; DR83
Australian Nursing Federation (Victorian Branch)	DR68
Australian Parents Council (APC)	19; DR80
Australian Primary Principals Association	41
Australian School Library Association	DR87
Bonnor, Chris	9
Burnett Youth Learning Centre	4
Business SA	DR74
Career Industry Council of Australia	29
Catholic Education Commission of Victoria	13
Catholic Education Office — Diocese of Toowoomba	11
Children with Disability Australia	DR69
Community and Public Sector Union/Civil Service Association (CPSU/CSA)	16
Community and Public Sector Union/State Public Services Federation Group (CPSU/SPSF)	6
Cullin, Carolyn	DR56
Darby, Dr Linda	32
Deakin University — School of Education	24; DR85
Department of Education — Tasmania	33
Department of Education — Western Australia	45; DR90
Department of Education and Children's Services — South Australia (DECS)	35
Department of Education and Communities — New South Wales (DEC)	14; DR84
Department of Education and Training — Queensland (DET)	40
Department of Education, Employment and Workplace Relations (DEEWR)	42; DR94
Dyslexia Assessment and Support Services	DR49
Dyslexia Support Group West	DR62
Educational Transformations	22
Firth, Dr Nola	44; DR47
Flinders University, School of Education	DR53; DR55
The Gift of Dyslexia Society	DR54
Grattan Institute	30
The Hub: Campaign for Quality School Libraries in Australia	DR61
Independent Education Union of Australia (IEUA)	12; DR92
Independent Schools Council of Australia	18
Independent Schools Association of Australia	DR58
Ingvarson, Prof Lawrence	DR67

Table A.1 (continued)

Participant	Submission no.
Jenkins, Nicola	DR64
Keese, Ian	DR77
LD Network	DR72
Learning Difficulties Australia	DR71
Lewis & Lewis	DR48
Meyer, Denny	15
Meyer, Yvonne, NITL Committee Member/Parent	DR75
Music Council of Australia	DR70
National Association of Field Experience Administrators	1
National Catholic Education Commission	7
National Disability Services	21; DR78
NIFTeY NSW	DR63
Principals Australia Institute	37; DR91
Queensland Catholic Education Commission	20
Queensland College of Teachers	DR79
Queensland Commission for Children and Young People and Child Guardian	DR88
Queensland Council of Parents and Citizens' Associations	5; DR60
Rawolle, Shaun and Hodge, Steven	25
Smith, Paul	DR51
The Specific Learning Difficulties Association of NSW Inc. (SPELD NSW)	DR57
Steele, Thomas	26
Tasmanian Association for the Gifted Inc.	DR65
Teach for Australia	27; DR89
Teachers Registration Board of Tasmania	23
Thomas, Jan	3
United Voice	DR66
Uniting Care Children Young People and Families	8
University of Melbourne — Melbourne Graduate School of Education (MGSE)	38
University of Tasmania, Faculty of Education	DR86
Victorian Government	DR95
Victorian Institute of Teaching	36
Victorian School Nurses Special Interest Group, ANF (Victorian Branch)	DR52
Victorian Student Representative Council (VicSRC)	34
Williams, Ann	43; DR50; DR59
Woodward, Jo-Anne	DR76

Table A.2 **Visits**

Participant and location

Adelaide
Australian Association of Mathematics Teachers
Department of Education and Children's Services — South Australia
Flinders Park Primary School
Underdale High School

Alice Springs
Alice Springs School of the Air
Department of Education and Training — Northern Territory (Central Region Office)
Yipirinya School

Brisbane
Department of Education and Training — Queensland
Independent Schools Queensland
Queensland College of Teachers
Queensland Teachers' Union
Stronger Smarter Institute (via videoconference)

Cairns (and surrounds)
Cairns West State School
Cape York Aboriginal Australian Academy
Department of Education and Training — Queensland (Far North Qld Regional Office)
James Cook University — School of Education
Remote Area Teacher Education Program
Tropical North Queensland TAFE
Yarrabah State School

Canberra
ACT Teacher Quality Institute
Association of Heads of Independent Schools Australia
Australian Council for Educational Leaders
Australian Council of Deans of Education
Australian Primary Principals Association
Australian Science Teachers Association
Department of Education and Training — ACT
Department of Education, Employment and Workplace Relations — Australian Government
Independent Education Union
Independent Schools Council of Australia
Leigh, Andrew
National Catholic Education Commission

(Continued next page)

Table A.2 (continued)

Participant and location

Darwin
Association of NT School Educational Leaders
Charles Darwin University — School of Education
Department of Education and Training — Northern Territory
NT Catholic Education Office
Teacher Registration Board of the Northern Territory

Hobart
Australian Education Union — Tasmania
Department of Education — Tasmania
Teachers Registration Board of Tasmania

Kalgoorlie (and surrounds)
Eastern Goldfields College
Kalgoorlie–Boulder Community High School
O'Connor Education Support Centre
Yintarri Remote Community School (Coonana)

Melbourne
Australian Council for Educational Research
Australian Education Union
Australian Institute for Teaching and School Leadership
Business Council of Australia
Dawkins, Professor Peter
Department of Education and Early Childhood Development — Victoria
Grattan Institute
Hattie, Professor John
Mayer, Professor Diane
National Teaching Database Working Group
Pascoe, Susan
Teach for Australia
Teese, Professor Richard
University of Melbourne — Melbourne Graduate School of Education
Victorian Student Representative Council
Victorian Teacher Supply and Demand Reference Group

Perth
Department of Education — Western Australia
Paioff, Phil
Rutherford, Tony
WA Association of Independent Schools

(Continued next page)

Table A.2 (continued)

Participant and location

Sydney

Australian Council of State School Organisations

Australian Curriculum, Assessment and Reporting Authority

Department of Education and Communities — New South Wales

Faculty of Education and Social Work, University of Sydney

Marrickville West Public School

National Independent Special Schools Association

NSW Institute of Teachers

NSW Teachers Federation

Review of Funding for Schooling

Table A.3   **Roundtables**

Participant and location	*Organisation*
Canberra — 5 December 2011	
Janet Davy	Department of Education, Employment and Workplace Relations — Australian Government
Margery Evans	Australian Institute for Teaching and School Leadership
Gary Francis	Department of Education and Training — Queensland
Bill Griffiths	National Catholic Education Commission
Sue Hammond	Community and Public Sector Union
Louise Hanlon	Review of Funding for Schooling
Norm Hart	Australian Primary Principals Association
Romola Hollywood	UnitingCare
Margaret Leary	Queensland Council of Parents and Citizens' Associations
Andrew Long	Independent Schools Council of Australia
Viv Pearce	ACT Council of Parents and Citizens' Associations
Melodie Potts-Rosevear	Teach for Australia
Allan Shaw	Association of Heads of Independent Schools of Australia
Diane Wasson	Department of Education and Communities — New South Wales
Chris Watt	Independent Education Union of Australia
Jim Watterson	Department of Education and Training — ACT

(Continued next page)

Table A.3   (continued)

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—— 2011b, *Average Weekly Earnings, Australia*, Cat. no. 6302.0, Canberra.

—— 2011c, *Schools, Australia*, Cat. no. 4221.0, Canberra.

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