



OECD Economics Department Working Papers No. 678

Enhancing Educational
Performance in Australia

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<https://dx.doi.org/10.1787/226361423610>

Unclassified

ECO/WKP(2009)19

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

03-Mar-2009

English - Or. English

ECONOMICS DEPARTMENT

ECO/WKP(2009)19
Unclassified

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By Vassiliki Koutsogeorgopoulou

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JT03260473

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ABSTRACT/RÉSUMÉ

Enhancing educational performance in Australia

The Australian education system fares well in international comparison with regards to PISA test scores and the higher education system attracts an increasing number of foreign students. Vocational education and training (VET) is an important part of the post-secondary education system, equipping individuals with the skills to enter or re-enter the labour force and offering a pathway to further education. However, a number of challenges need to be addressed. Reducing complexity and fragmentation and tackling issues of under-supply and under-representation of children from disadvantaged groups in the early childhood education and care system is of major importance, given the beneficial impact of early education on outcomes later in life. A key challenge for the school sector is to reduce the achievement gaps of the lowest performing students, while improving overall literacy and numeracy outcomes. Greater autonomy at the school level and improvements in teaching quality would help in this regard. Enhancing the capacity of the VET system to address skill shortages is another key priority. The low rate of completion of training courses is an additional policy issue facing the sector. Finally, moving towards a less rigid policy framework for higher education would enhance flexibility and diversity, making the system more responsive to labour market needs and globalisation challenges. The promotion of a high-quality education system that responds swiftly to changing skill needs is a top priority of the new government. The “Education Revolution”, backed by the Council of Australian Governments (COAG), pursues reforms across all sectors of the education system, an important objective being the closing of the gap for the indigenous population.

This Working Paper relates to the 2008 Economic Survey of Australia.

(www.oecd.org/eco/surveys/Australia)

JEL classification: I20, I21, I22, I28, J24

Key words: human capital; education; PISA; early education; child care; universal access; teaching quality; autonomy; education funding; student income support

Améliorer les résultats dans le domaine de l'éducation en Australie

L'Australie est relativement bien placée dans les comparaisons internationales des systèmes d'enseignement, à en juger notamment par les notes obtenues aux épreuves du PISA, et ses établissements d'enseignement supérieur attirent un nombre croissant d'étudiants étrangers. L'enseignement et la formation professionnels jouent un rôle important dans la formation postsecondaire et les qualifications qu'ils confèrent permettent aux intéressés de s'insérer ou de se réinsérer dans l'emploi ou bien d'accéder à un autre cycle de formation. Mais un certain nombre de problèmes subsistent. Il importe au premier chef de rendre le système moins complexe et moins compartimenté et de s'attaquer à la question des carences de l'offre et de la sous-représentation des enfants issus de milieux défavorisés dans le dispositif d'éducation et d'accueil des plus jeunes, compte tenu du rôle que jouent les premières années de formation dans la suite du parcours scolaire. L'un des défis majeurs consiste à réduire le retard des élèves moins performants, tout en améliorant le niveau global de maîtrise de l'écrit et du calcul. À cet égard, une plus grande autonomie des établissements et une amélioration de la qualité pédagogique pourraient se révéler utiles. Le renforcement de la capacité du système d'enseignement et de formation professionnels de faire face au

manque de main-d'œuvre qualifiée représente un autre objectif prioritaire. Le faible taux d'achèvement des cours de formation est un autre enjeu auquel est confronté ce secteur. Enfin, l'assouplissement du cadre d'action des autorités publiques dans le domaine de l'enseignement supérieur pourrait favoriser la flexibilité et la diversité en permettant à ce système de prendre davantage en compte les besoins du marché de l'emploi et les problèmes posés par la mondialisation. Le nouveau gouvernement considère comme hautement prioritaire l'action à mener pour promouvoir un système éducatif de haut niveau, en mesure de réagir rapidement à l'évolution des besoins en matière de qualifications. La « Révolution de l'éducation », soutenu par le Conseil des gouvernements australiens (COAG), vise à introduire des réformes dans tous les secteurs du système ; elle se propose notamment de réduire la fracture scolaire dont souffre la population autochtone.

Ce document de travail se rapporte à *l'Étude économique de l'OCDE de l'Australie 2008* (www.oecd.org/eco/etudes/Australie)

Classification JEL : I20, I21, I22, I28, J24

Mots clés : capital humain ; éducation ; PISA ; éducation primaire ; crèche ; accès universel ; qualité de l'enseignement ; autonomie ; financement de l'éducation ; garantie de ressources pour les étudiants

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ENHANCING EDUCATIONAL PERFORMANCE IN AUSTRALIA

By Vassiliki Koutsogeorgopoulou¹

1. High educational standards and achievement is arguably of major importance for raising living standards in the face of increasing international competition and an ageing population. Recent Productivity Commission estimates suggest that nationally agreed human capital reforms (health, education and training initiatives), if fully implemented, have the potential to increase GDP by nearly 9% (made up of 6% in participation and 3% in productivity) over the next 25 years. The Commission indicated though that estimates should be interpreted as “exploratory” and “broadly indicative” rather than as forecasts (Productivity Commission, 2006).

2. This paper identifies areas of the education system that warrant further reform and lays out policy options for improvement. Before discussing the main challenges, the next section highlights the main structural features of the education system.

The provision of education services

3. Education is provided in a variety of settings including early education and care (child care, pre-schools) and the three sectors comprising Australia’s education and training system: school education, higher education, and vocational education and training (VET) (Figure 1) (SCRGSP, 2008).² VET programmes can be undertaken through multiple pathways connecting schools, post-secondary institutions and the workplace (AEI, 2006).

4. The basic structure of schooling (including pre-school years) differs across jurisdictions in many areas, including grade structures, commencement and minimum leaving ages, qualification certification, curricula and the autonomy of decision-making at the school level (Banks, 2005) (Table 1). Attendance was compulsory between the ages of 6 and 15 in 2005, extending to 16 years in South Australia and 5 to 16 in Tasmania. The two final years of the secondary school are generally not compulsory. In most cases students start primary school at around five years of age, usually enrolling in a preparatory year (ABS, 2007). Pre-school refers to programmes before the preparatory year and it is not necessarily connected to a particular school, depending upon jurisdiction and location. There are significant cross-state variations with respect to the age range of children attending pre-school, hours of education, location and management of programmes (Press and Hayes, 2000).

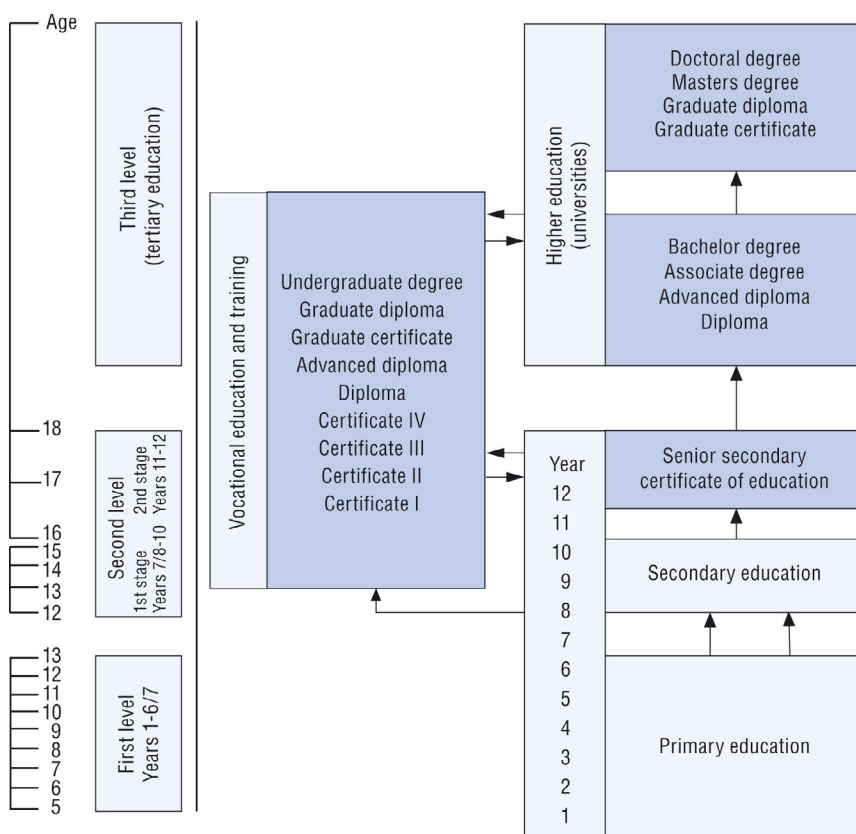
5. The Australian Qualifications Framework (AQF) provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training. AQF facilitates flexible

1. The paper was originally produced for the 2008 OECD *Economic Survey of Australia*, published in October 2008 under the authority of the Economic and Development Review Committee of the OECD. I would like to thank, without implicating, Andrew Dean, Peter Hoeller, Claude Giorno, colleagues in the Directorates of Education and of Employment and Labour and Social Affairs, and Australian government officials for valuable comments and/or discussions. I am also grateful to Desney Erb for technical assistance and to Sylvie Ricordeau and Deirdre Claassen for secretarial assistance.

2. Adult and community education constitutes a fourth, less well-defined sector with minimal regulation.

learning pathways, while also improving the visibility and comparability of qualifications in the labour market (SCRGSP, 2008). Although AQF distinguishes between qualifications accredited in the VET and higher-education sectors, the boundaries between these two sectors are blurred by the existence of “articulation” agreements, allowing credit transfer from VET programmes to specific degree-level programmes offered by universities and *vice versa*. Moreover, several tertiary institutions are established as “dual sector” institutions (DEST, 2007).

Figure 1. The Australian education and training system: an overview^{1,2}



1. In each state primary education includes an additional year prior to year 1 which is not included in this diagram.
2. Providers deliver qualifications in more than one sector. Schools, for example, are delivering certificates I–II, universities are delivering certificates II–IV, and vocational education and training (VET) providers are delivering undergraduate degrees, graduate certificates and graduate diplomas (higher education qualifications in some jurisdictions, but in others also VET), all subject to meeting the relevant quality assurance requirements.

Source: SCRGSP (2008), *Report on Government Services 2008*, Steering Committee for the Review of Government Service Provision, Productivity Commission.

Table 1. **Structure of schooling**

States and Territories	Pre-school	Preparatory year before Year 1 ¹	Primary schooling (years)	Secondary schooling (years)
Australian Capital Territory	Pre-school	Kindergarten	1–6	7–12
New South Wales	Pre-school	Kindergarten	1–6	7–12
Northern Territory	Pre-school	Transition	1–7	8–12
Queensland	..	Pre-school (until 2006) Preparatory (from 2007)	1–7	8–12
Southern Australia	Pre-school	Reception	1–7	8–12
Tasmania	Kindergarten	Preparatory	1–6	7–12
Victoria	Pre-school	Preparatory	1–6	7–12
Western Australia	Kindergarten	Pre-primary	1–7	8–12

1. First year of school.

Source: AEI (2006), *Country Education Profiles: Australia*, Australian Education International, Department of Education, Science and Training, Canberra.

6. Different levels of government share responsibility for the administration and financing of education services, which reflects Australia's federal system (Box 1). In broad terms, the states are responsible for the regulation and delivery of services, while the Commonwealth focuses on the development of national and international priorities, and policies and strategies for education.

Investment in education is at the OECD average, but pre-primary spending lags far behind

7. Total public and private education expenditure on education institutions increased by 46% between 1995 and 2005 in real terms, somewhat faster than the OECD average, and accounted for almost 6% of GDP. In 2005 it was at the area average (Figure 2, upper panel). While these figures do not take into account more recent spending initiatives, especially those included in the latest budgets, it is clear that Australia spends less than the countries that invest most in education. A distinguishing feature is the low level of expenditure on pre-primary education, which accounts for only 0.1% of GDP compared to the OECD average of around 0.5%.³ Spending on primary and lower secondary education, on the other hand, is well above the OECD average, while tertiary spending is around the area average.

8. Another specificity of funding is the relatively low share of public spending. It accounts for 73.4% of the total, compared with an OECD average of 85.5% (Figure 2, middle panel). Private financing is especially important in tertiary education, accounting for more than half of total funding – around twice the OECD average. It needs to be noted, however, that public expenditure on tertiary institutions excludes federal outlays under the Higher Education Loan Programme. The OECD classifies such advances on behalf of students as subsidies or loans to households, and the corresponding payments to institutions as private funding. Public financing is more dominant at the lower levels of education, particularly in the school sector, where it accounts for almost 84% of total expenditure.

More resources are no guarantee for better outcomes

9. Higher spending on education does not automatically improve outcomes. Empirical analysis based on the OECD PISA data (Programme for International Student Assessment) suggests only a weak

3. These figures do not include expenditure on child-care services or a significant number of students aged five years old, who are included in the primary school figures.

correlation between either spending or education input and average student performance. Australia, for example, performs significantly better than expected on the basis of spending levels alone (Figure 2, lower panel). Moreover, over the past 3–4 decades, real per-child education spending in Australia has increased substantially, while test scores have failed to increase (Leigh and Ryan, 2007). These results do not imply, of course, that spending has no bearing on outcomes. As discussed below, there is significant evidence that high-quality teachers are critical for increasing student achievement. Rather, the findings highlight the importance of effective use of resources to bolster performance (Sutherland *et al.*, 2007; OECD, 2007a).

Box 1. The division of government responsibilities in the education and training system

The roles and responsibilities of the Commonwealth and state governments include:

Early childhood education and care sector (ECEC)

At the federal level, the responsibility for ECEC has been recently transferred to the Department of Education, Employment and Workplace Relations. In particular:

- The department has policy responsibility for formal child care (long day care, family day care, outside school hours care, and some occasional care). It administers a fee subsidy (Child Care Benefit) and an out-of-pocket subsidy (Child Care Tax Rebate) for eligible families and provides some funding to Commonwealth approved services for specific purposes; it also oversees quality accreditation systems for long day care, family day care and outside school hours care. Under the previous arrangements, policy responsibility for child care belonged to the Department of Families, Community Services and Indigenous Affairs.
- In addition, the education department supports pre-school education for indigenous children.

At the state level, governments are responsible for:

- The policy and funding of pre-schools and some occasional care centres, with some governments also contributing financially to outside school hours care, long day care and other such services. Pre-school education is delivered in the majority of the states as part of the formal education system, and is the responsibility of the relevant departments of education. In New South Wales and Victoria such services come under the jurisdiction of Community Services departments and are offered in a more diverse range of settings. In Queensland pre-school is accessed through the community based and private sectors.
- Setting regulatory requirements for providers of children's services, monitoring performance and administering licenses.

The Commonwealth and state governments have jointly developed national standards for centre-based long day care, family day care and outside school hours care services, with the extent of their implementation varying across jurisdictions. The assurance systems for these services (known as Quality Improvement and Accreditation System in the case of centre-based long day care) is administered by the Commonwealth-funded Childcare National Accreditation Council and covers all states (OECD, 2001a).

10. Education and training sector

The states' responsibilities include:

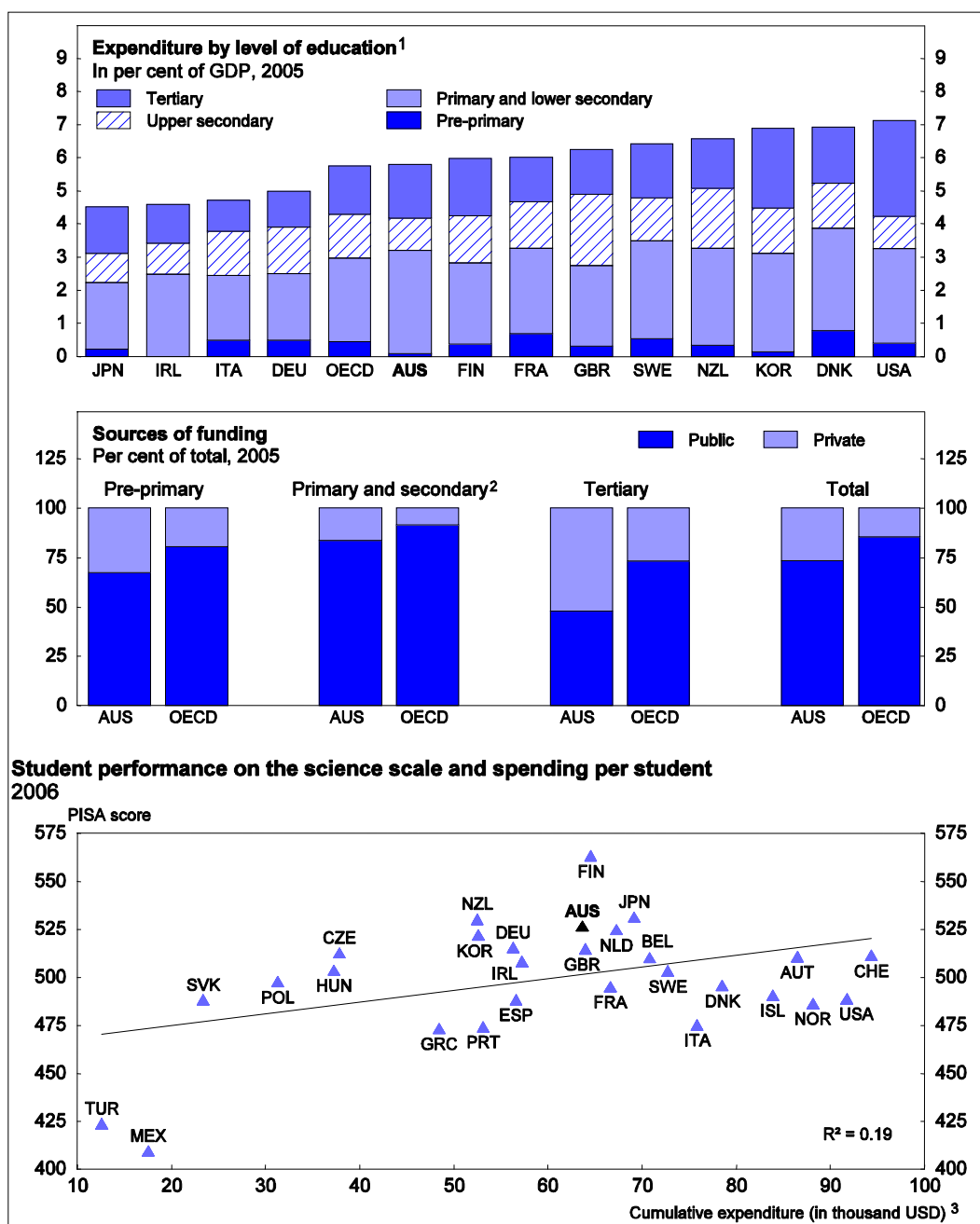
- Providing schooling to all children of school age.
- Providing major funding for government school education and contributing funds to non-government schools.
- Regulating school activities and policies, and setting curricula, course accreditation, student assessment and awards for both government and non-government schools.
- Administering and providing major funding for vocational education and training.
- Regulating and accrediting higher-education courses.

The Commonwealth's responsibilities include:

- Providing the majority of funding for non-government schools and being principally responsible for the funding of higher education institutions.
- Providing supplementary funding for government schools and VET.
- Providing financial assistance for specific educational programmes and categories of students.
- Promoting national consistency and coherence in the provision of education and training.

Both government levels are responsible for planning and monitoring the performance of education services and evaluating outcomes.

Figure 2. Resources and outcomes



1. Pre-primary covers children aged three years and older. Upper secondary includes post secondary non-tertiary education. For the United Kingdom, primary and lower secondary only covers primary education, and upper secondary covers all secondary education.
2. Primary, secondary and post-secondary non-tertiary education.
3. Cumulative expenditure on educational institutions per student between the ages of 6 and 15 years, converted into US dollars using purchasing power parities. Public expenditure only for Greece, New Zealand and Norway; public institutions only for Hungary and Portugal; public expenditure and public institutions for Italy, Poland, Switzerland and Turkey.

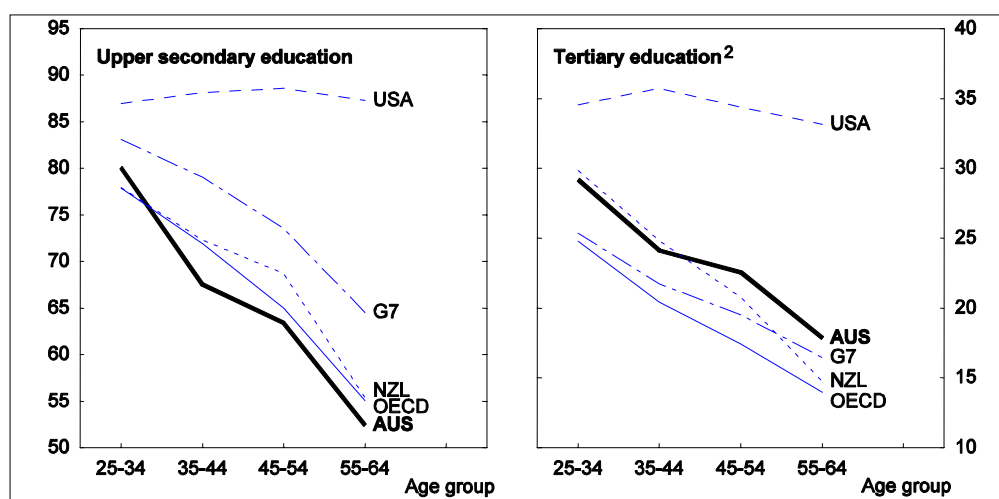
Source: OECD (2008), *Education at a Glance* and OECD (2007), *PISA 2006: Science Competencies for Tomorrow's World*, OECD Publishing.

Certain educational outcomes are good, but there is scope for improvement

11. Australia has made considerable progress in up-skilling its workforce, as indicated by the difference in educational attainment between younger and older groups (Figure 3). The school system has also achieved commendable results with regards to reading, scientific and mathematical literacy, as shown by the country's strong performance in the PISA tests (Figure 4, upper panel). In terms of the dispersion of test score results, evidence from PISA 2006 further suggests that Australia does not have an unusually long tail of underachievers (indicated by the proportion of students falling below proficiency level 2 for each of the three domains) compared with other high-achieving countries (Figure 4, lower panel) (ACER, 2007). Moreover, the impact of socioeconomic background on student performance is significantly less than the OECD average, both for the science and mathematics domains. An additional indicator of good performance of the education system is that it contributes to high social intergenerational mobility, though not as high as in some Nordic countries (Leigh, 2007).

Figure 3. Educational attainment in international comparison

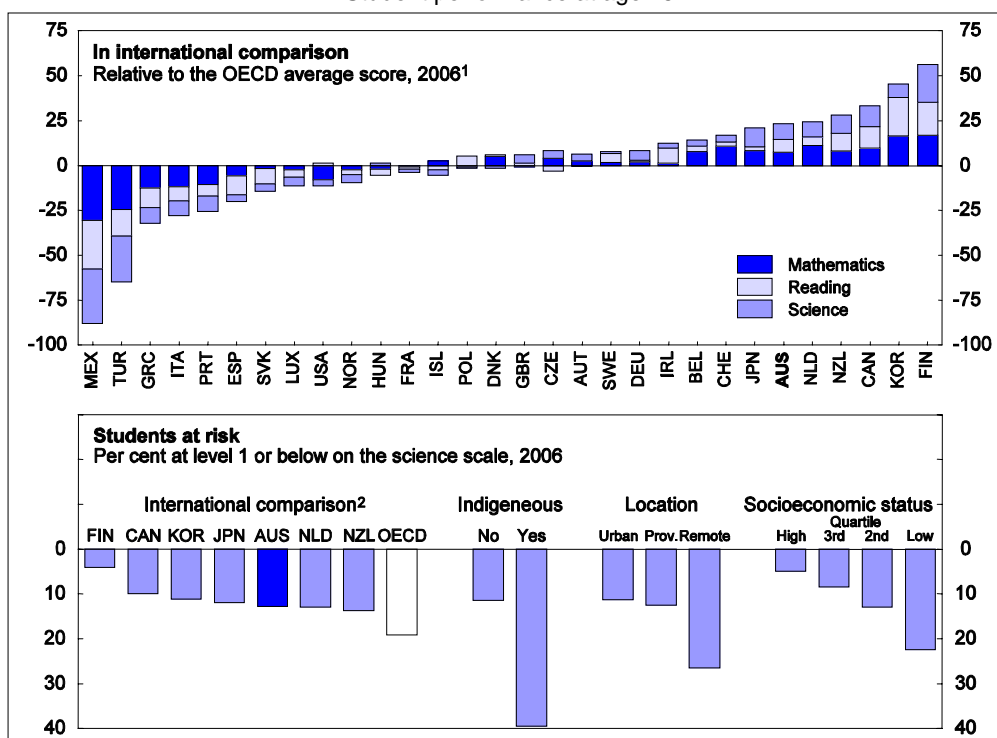
Population that has completed at least the level of education indicated, percentage by age group, 2006¹



1. 2003 for upper secondary in Japan (used in calculation of the G7 average). The aggregates for the OECD and the G7 countries are unweighted averages.
2. Tertiary type A and advanced research programmes.

Source: OECD (2008), *Education at a Glance*, OECD Publishing.

Figure 4. PISA performance
Student performance at age 15



1. The three skills are weighted equally in the total score. Data for the United States in reading proficiency is from PISA 2003.
2. Australia is compared to the six countries with the highest mean performance.

Source: OECD (2007), *PISA 2006: Science Competencies for Tomorrow's World*, OECD Publishing and ACER (2007), "At Risk Students", *PISA 2006 National Report: Fact sheets*, Australian Council for Educational Research.

12. Developments in tertiary education are similarly encouraging. Graduation rates have risen steadily over time, reflecting relatively high private returns to education, the well-designed income-contingent loan scheme for students and certain features of the institutional set-up (especially a high degree of accountability of tertiary institutions) (Oliveira Martins *et al.*, 2007). The percentage of the population that has attained tertiary education exceeds the OECD average (Figure 3). Regarding vocational education and training, around 12% of the population aged 15–64 years-old was enrolled in publicly funded institutions in 2006, although somewhat below its peak of 13½ per cent in 2000. The VET sector equips individuals with the skills to enter or re-enter the labour force, provides retraining for a new job or upgrading existing skills, and offers a pathway to further education, including entrance to higher education (SCRGSP, 2008).

13. While the Australian education system compares favourably against certain international benchmarks, there is still scope for improvement in a number of areas, including reducing the considerable variation among the states with regards to key educational outcomes.

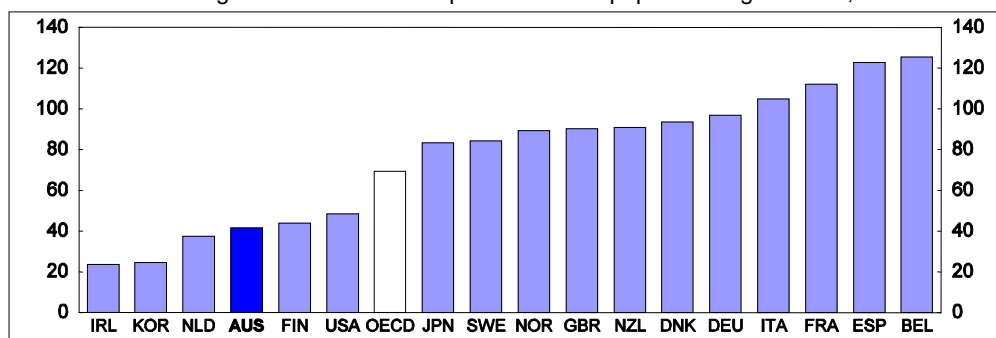
14. Participation in pre-primary programmes remains low, with concerns about disadvantaged groups.

15.

16. Only 42% of the children aged three to four were enrolled in pre-primary programmes in 2006, compared with approximately 70% in the OECD area on average and over 90% in certain countries including Belgium, France, Germany and New Zealand (Figure 5). While caution is required in

interpreting these statistics,⁴ it is clear that Australia lags behind the best performing countries in this critical area. Despite positive developments over the past decade or so, only a third of children aged 0–5 years old attended Commonwealth–approved child-care facilities (excluding pre-school) in 2006 (SCRGSP, 2008). Attendance rates for the 0–5 age bracket ranged between 43% in Queensland to less than 27% in Western Australia and the Northern Territory. Regarding pre-schools, around 13% of four year-olds miss out on early childhood education, although there is significant variation across the states.⁵ Participation rates have improved only marginally since the beginning of the decade.

Figure 5. **Enrolment rates in early childhood education¹**
Children aged 4 and under as a per cent of the population aged 3 to 4, 2006



1. Full and part-time participation in public and private institutions. For Belgium, France, Italy and Spain the rates tend to be overestimated as a significant number of children are younger than three years old; the net rates between three and five are around 100%. The OECD aggregate is an unweighted average.

Source: OECD (2008), *Education at a Glance*, OECD Publishing.

17. Important concerns arise with regards to the enrolment of children from disadvantaged backgrounds. Despite support by all government levels, children with a disability and those from non-English speaking backgrounds are significantly under-represented in both child care and pre-school services (SCRGSP, 2008).⁶ This is also the case of children from an indigenous background and those in remote areas in the case of child-care facilities. Less than half of indigenous children currently receive an early childhood education. The attendance patterns vary significantly across jurisdictions. Promoting participation and equitable access to early childhood education and care (ECEC) is of major importance. For disadvantaged children, investment in education has the highest payoff when it is made at a young age. While for all children the optimal investment profile declines with age, empirical evidence suggests that more advantaged children receive massive early investment from their parents that children from disadvantaged families do not receive (Heckman and Masterov, 2007). Apart from the beneficial impact of early education on outcomes later in life, access to ECEC is widely recognised as an important determinant of labour market participation of women (OECD, 2001b).

4. Early childhood statistics in Australia reflect enrolments in registered pre-school institutions, which overwhelmingly cater for the year prior to primary school. As the pre-school census is held in August, the students will mainly be in the four and five year age groups.

5. The data refer to government funded and/or provided pre-schools. According to SCRGSP (2008), there are issues of double-counting in several states and synchronisation of data collection times. In addition, definitions vary across states and participation rates are calculated on the basis of the four year-olds, although some children may be aged three or five years old in their pre-school year (Kronemann, 2007).

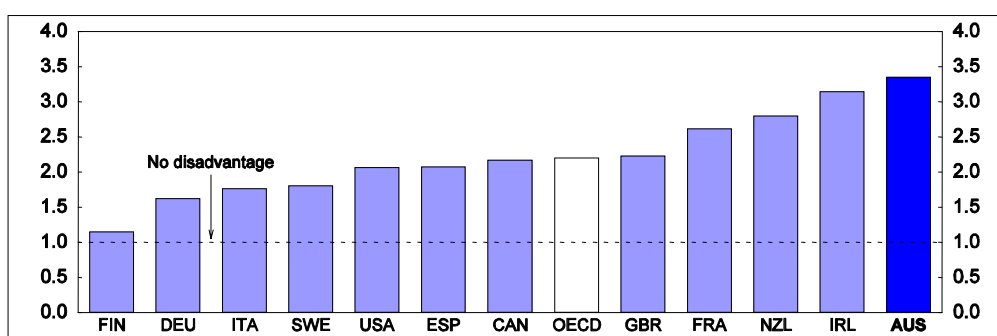
6. The relevant indicator is defined as the proportion of children using children's services who are from the targeted special needs groups, compared with the representation of these groups in the community.

Completion rates of upper secondary education should be increased

18. Upper secondary education attainment remains below the levels of the best performing countries, but the gap *vis-à-vis* the OECD average has been closed for the younger cohorts (Figure 3). The relatively low completion rates compared to the best performers raise concerns, because secondary education attainment (either through the general stream or VET programmes) is a powerful determinant of participation in the labour force (OECD, 2007a). The strong economic growth in Australia in recent years has contributed to the improved employment prospects of early school leavers. Nevertheless, the impact of educational attainment on transitions from school to work and further study should not be underestimated. Twenty to twenty-four year-olds who have not completed upper secondary education (Year 12 or its vocational equivalent) are around three and a half times more likely to be unemployed than their graduated counterparts, with the relative disadvantage being among the largest in the OECD (Figure 6). In addition to facilitating the transition from school to work or further study, improvements in educational attainment could also yield long-term economic benefits by increasing productivity and participation.⁷

Figure 6. **Relative labour market disadvantage of low-qualified young adults**

Persons aged 20–24 not in education and unemployed, 2006¹



1. Ratio of the share of persons with below an upper secondary education to the share of those having attained an upper secondary level of education. Upper secondary includes post-secondary non-tertiary education.

Source: OECD (2008), *Education at a Glance*, OECD Publishing.

19. Notwithstanding Australia's strong performance in standardised tests, the results from the PISA studies indicate that average reading scores fell significantly (in a statistical sense) between 2003 and 2006, reflecting mainly a decline in the scores of high achievers in 2006. Australia is the only country among the ones with above-average performance that experienced such a strong deterioration in students' reading performance (OECD, 2007b). The mathematical skills of Australian girls have also slipped, though the average level of performance in this domain remained statistically the same. Students "at risk" constitute another challenge to Australian schools. Evidence from the 2006 PISA study suggests that 13% of 15 year-olds perform below the OECD scientific "baseline" proficiency (Figure 4, lower panel), with similar percentages in the case of mathematical and reading skills. Although this proportion is below the OECD average (around 20%), under-achieving students are still a matter of concern. Over the longer term, data from the Longitudinal Surveys of Australian Youth indicate that literacy and numeracy scores of students aged 14 (in grade 9) have failed to rise over the period 1975–98, and international mathematics tests of 13 year-olds (in grade 8) indicate no improvement over the period 1964–2003 (Leigh and Ryan, 2007). This pattern is common to many developed countries, most of which have also seen no improvement in test scores over recent decades (Gundlach, Woessmann and Gmelin, 2001). Particular attention needs to be

7. Empirical findings by Access Economics (2005) suggest that increasing the proportion of young people who obtain Year 12 or equivalent certification by 10 percentage points could raise national income by 1.1% by 2040.

devoted to reducing the gap in performance among students from disadvantaged backgrounds and indigenous students.⁸ An important goal of the National Reform Agenda is to increase both the proportion of young people who meet basic literacy standards and the levels of overall achievement. This requires a focus on both the quality and equity of student outcomes through initiatives discussed below, with measures to address learning difficulties in early childhood playing a prominent role (COAG, 2006). A particular challenge is to attract more young people to study mathematics and science, in light of the low level of interest in learning science expressed by the Australian students in the context of the 2006 PISA study.

Tackling skill shortages is a high priority

20. Tackling skill shortages is of great importance to sustaining strong growth. The ratio of job vacancies to unemployment increased from 15% at the end of the 1990s to 36% in early 2007, providing evidence in this regard. The “availability of suitably qualified employees” is cited by employers as being the strongest constraint on investment (St. George–ACCI, 2007). At present there are skill shortages in most trades, in health care and in a number of other professional and semi–professional occupations. Population ageing is likely to worsen the problem, given evidence that the age profile of workers in occupations currently experiencing skill shortages is skewed towards mature age workers (Wong, 2006). The low share (somewhat above 50% in 2006) of persons aged 18 to 20 years-old engaged in any form of education and the relatively small size of this cohort, are cited as important reasons behind the chronic skill shortages, besides the increased demand for skilled workers in recent years (Birrell and Edwards, 2007).

21. Projections for the qualification profile of the employed population in the middle of the next decade indicate that the proportion of employed people with qualifications will rise to 71% in 2016 compared with 58% in 2005 (with increasing numbers achieving qualifications at higher levels) (Shah and Burke, 2006). This implies that four million people will have to acquire qualifications over the coming ten years. More than 60% will need a VET qualification, with the rest requiring a higher education level. A comprehensive strategy to address skill shortages should encompass measures to enhance mobility across jurisdictions, to raise immigration of skilled persons and to provide better recognition of overseas qualifications.⁹ Moreover, the capacity of the education and training system (especially VET and higher education) to meet industry needs will have to increase (Productivity Commission, 2007).

Reforms to enhance the performance of the education system

Increasing co–ordination and coherence in the early childhood education and care system

22. The early childhood education and care (ECEC) sector faces a number of challenges, arising mainly from the complex, fragmented nature of policy making and service provision.¹⁰ Fragmentation arises because of the historical “child care, early education” divide. Traditionally, child care has been viewed as a tool to foster employment and support families, rather than being part of the education system. The split has been enshrined in the administrative structure of the sector (Box 1).

8. Further to the PISA findings shown in Figure 4 (lower panel), evidence from the 2005 National Report on Schooling in Australia further indicates that 36% of indigenous children in Year 7 have failed to meet the minimum reading standards, compared with an average of 10% for all students. The corresponding results for the numeracy tests stand, respectively, at 51% and 18%.

9. For a discussion see, the 2008 OECD *Economic Survey of Australia* Chapter 2.

10. For a discussion see Press and Hayes (2000) and OECD (2001a).

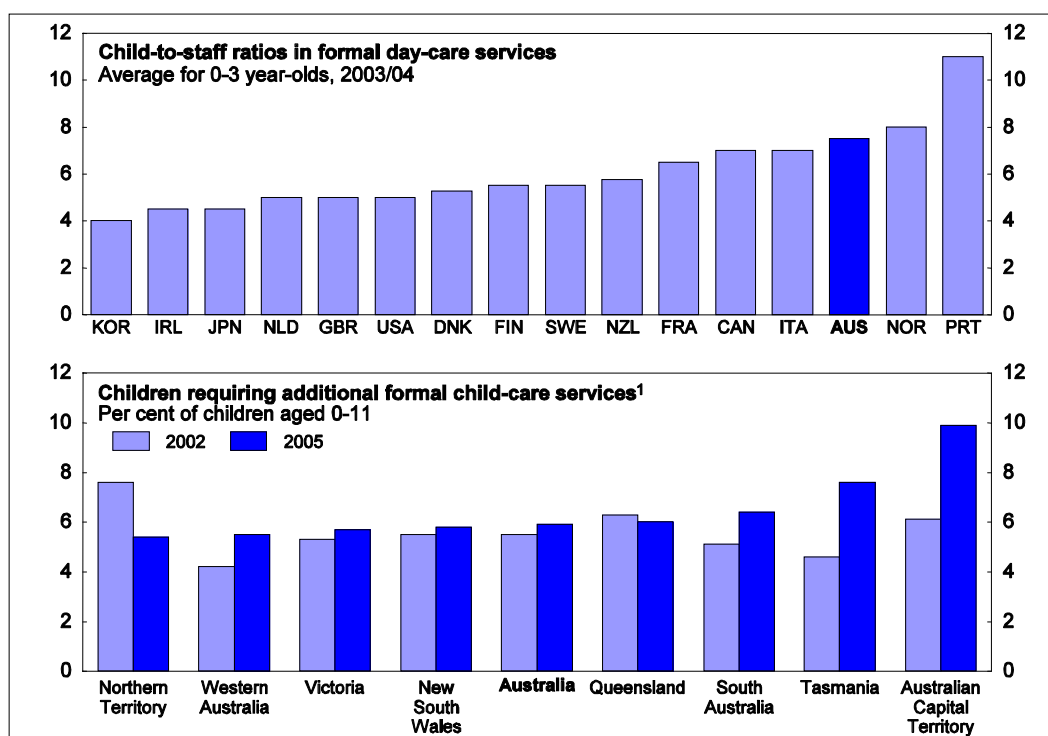
23. The government's objective to develop a high quality integrated system of ECEC is commendable. As highlighted by the thematic OECD reviews on early childhood, the complexities in a federal system and the multi-layered administration and regulation hamper co-ordination and coherence, raising concerns about variation in service quality and access (OECD, 2001b and 2006a). The complex delivery of ECEC further results in inefficiencies emerging from the duplication of funding provided by the Commonwealth and the states for the four year-olds who attend both pre-school and long day care centres, and the cost shifting to the Commonwealth government as pre-school services are being increasingly delivered in a child-care setting.

Quality considerations

24. Central to the move towards a more integrated approach is a reform of the current staffing regime. Around 60% of the employees in approved child-care services had a relevant formal qualification in 2006 (SCRGSP, 2008). Non-school services employ in general a mix of trained and untrained staff,¹¹ with the qualifications of the former provided mainly by the vocational sector. The pre-school sector, on the other hand, in keeping with its educational emphasis, typically employs fully trained teachers, although not necessarily with an early childhood degree. As a positive step, some child-care centres implement an integrated ECEC programme. There is no legal requirement for child-care centres to have targeted educational programmes with qualified early childhood teachers, even when they provide care for children before primary school (Elliott, 2006). Important issues also arise from the high child-to-staff ratios in child-care services. They are among the highest in the OECD (Figure 7, upper panel), reflecting the high turnover rates and recruitment difficulties for qualified staff because of poorer working conditions and lower remuneration compared with the employees in pre-school services.

11. Based on OECD (2006a), the percentage of the qualified staff stands at around 26% in family care, 55% in long day care, and 57% in pre-schools. Long day care centres require one qualified staff per 20-25 children (depending on the state).

Figure 7. Child-care indicators



1. Estimates for the smaller jurisdictions are based on small sample sizes, and consequently are subject to high sampling error. Data for Tasmania, the Australian Capital Territory and the Northern Territory, in particular, need to be interpreted with caution.

Source: OECD (2007), *OECD Family database*, www.oecd.org/els/social/family/database; ABS (2002, 2005), Child Care Survey (unpublished) in *Report on Government Services 2008*, Steering Committee for the Review of Government Service Provision, Productivity Commission.

25. Additional concerns include the effectiveness of the quality assurance system. Australia is unique in having a national, government-supported accreditation system for centre-based long day care, family day care and out-of-school hours care services that are directly tied to the provision of funding. However, an integrated monitoring system has yet to be fully implemented. The current accreditation system has been criticised for its complexity and duplication with regards to state licensing regulations, and the regulatory burden it imposes on child-care services. The enforcement of quality assurance has also been questioned in light of the lack of random inspections, the requirement for services to meet only around 50% of the indicators of quality to be accredited, and the lenient attitude towards centres not meeting the requirements (Rush, 2006). Cross-state disparities in regulations and the implementation of national standards for the main types of child-care services, developed jointly by the Commonwealth and state governments, also undermine the effectiveness of the accreditation system. Long day care is regulated by the states, whereas family day care and outside school care are regulated only in some. Pre-schools are either registered or licensed under state requirements, according to whether the delivery is through the state education system or community-based and independent services. There are variations across jurisdictions in service types and functions, the age of attendance of pre-schools and the hours of operation (Press, 2007). The cost to parents of child care and early education also differ across the states and with the type of services, with the cost of pre-school programmes being closely related to the type of providers in each state. Overall, in states where pre-school education is provided as an integral part of public education, services are available at low cost.

Accessibility and affordability of ECEC provision

26. The accessibility of ECEC services, and particularly child care, remains the subject of some debate in Australia. Despite claims that there is a shortage of child-care places, the available data do not provide clear evidence on the issue. The Household, Income and Labour Dynamics in Australia (HILDA) Survey indicates that around 20% of households reported problems with child-care availability (such as finding good quality child care, accessing care for the hours needed) in one of the four years from 2001 to 2004, although generally such difficulties lasted only for one or two years, probably as a result of a reduction in the mother's working hours (Heady and Warren, 2007). Analysis based on the ABS 2005 Child Care Survey also highlights accessibility issues: approximately 6% of children aged under 12 required additional child-care services in 2005 (Figure 7, lower panel) – with the proportion rising to 8.5% in the case of children aged 0–4 years (broadly unchanged since 1996). “Place unavailability” (booked out or no places) is considered by the parents the most important barrier to the use of additional child-care services required during the reference weeks of the survey. By contrast, data from the Longitudinal Survey of Australian Children (LSAC) suggest that the level of unmet demand for child care due to a lack of places was very low. Moreover, utilisation rate data from the Census of Child Care Services do not suggest that there is a large shortage of child-care places – though this does not preclude the possibility of localised shortages.

27. Access to child care is closely related to affordability. The ABS and HILDA findings highlight ongoing concerns about the costs of child care as a barrier for some families to use such facilities. However, the LSAC Survey suggests that only 3.5% of those wanting child care (either using it or not using but wanting to) gave affordability problems as the reason. The introduction of the Child Care Benefit in 2000 has improved affordability, especially for low-income households. Some of the gains were eroded by 2004, as the rise in fees outpaced average weekly earnings and government assistance to families (OECD, 2006b, Figure 6.5). However, while child-care prices have risen consistently in recent years the combination of higher incomes and greater government support, has resulted in increased affordability for the majority of families (OECD 2007c, Figure 6.5). The recent increase in the Child Care Tax Rebate (CCTR) from 30% to 50% of out-of-pocket costs for approved child-care costs (announced in the 2008/09 Budget) has further increased the affordability of child care).

28. While the evidence on unmet demand is somewhat controversial due to measurement problems,¹² quality indicators, including high child-to-staff ratios and sometimes low qualification of the staff, may point to the need for more public funding.

Recent reform initiatives in the ECEC sector

29. There has been a recent shift by state governments towards the provision of early childhood education and care in co-located settings in an effort to facilitate transition between services.¹³ Many states have also introduced early childhood curricula, but again with substantial variations in terms of age span

12. Davidoff (2007) concludes that child care remains “accessible and affordable” at the aggregate level. The Commonwealth study questions whether accessibility is a problem when consumer choice is taken into account. Assessing the share of net income spent on the child-care facilities against an estimated benchmark for low-income families, Davidoff also infers that child-care costs are affordable for most users, even though the child-care index has increased faster than the consumer price index since the beginning of the decade.

13. South Australia, for example, is implementing an integrated approach to the delivery of pre-school education and care within its schools, while in Victoria government funds early childhood teachers in child-care settings. The NSW government has also announced plans to locate early childhood education and care in schools.

and the services and staff to which they apply (Press, 2007). Alongside these efforts, steps were taken to develop a more streamlined accreditation system, with the reforms also entailing a tightening in the accreditation process. For instance, Child Care Quality Assurance Spot Checks were introduced in 2006 to help monitor and maintain the quality of child-care services across Australia.¹⁴ Growing recognition of the important role of ECEC is evident in the COAG's recent meetings, which have emphasised the need for improving early childhood development.

30. Initiatives in the 2008 budget (around AUD 2.4 billion over a five-year period) support a more integrated and comprehensive high quality ECEC. These include: *i*) the provision, by 2013, of universal access to early childhood education for all four year-olds (including indigenous children in remote areas), with the programmes (delivered by both private and public providers) being funded for 15 hours per week, a minimum of 40 weeks a year; *ii*) the development of an Early Years Learning Framework,¹⁵ aiming to provide for continuity of learning and transition across early childhood settings and the first years of school, and new quality national standards for child care and pre-schools; *iii*) more university places to train early childhood educators, along with the provision of financial incentives for graduates to work in areas of specific needs (such as rural areas and indigenous communities) and abolition of study fees for child-care trainees; and *iv*) measures to improve access to child-care facilities by helping parents meet the cost of formal care and an increase in the number of child-care places.¹⁶ The responsibility of formal child care, including the provision of financial support to parents, has been recently transferred to the Commonwealth Department of Education, Employment and Workplace Relations. An Office of Early Childhood Education and Child Care has been established in the Department to implement the reforms.

Assessment and recommendations for further action

31. The government's initiatives go in the right direction. A comprehensive reform of the ECEC is of fundamental importance, given the critical role of the early years of childhood for the development of cognitive and non-cognitive abilities (Heckman and Masterov, 2007). Moving towards a more integrated approach would help close the care and education gap, while leading to considerable advantages in terms of policy organisation, resource allocation, and enhanced consistency in regulatory, funding and staffing regimes, with positive effects on access and quality. The issue of integration unavoidably raises questions about the appropriate administrative structure required to promote coherence for ECEC services. A single administrative structure facilitates coherence in a number of ways, including allowing for common policies, more effective investment in young children and increased continuity of children's early childhood experience (OECD, 2001b and 2006a).

32. But there are also benefits from the decentralisation of ECEC powers and responsibilities, as the state/local governments are best situated to respond to local needs, although devolution may also lead to a widening in the differences of access and quality between jurisdictions, as is the case in Australia. Based on international experience, the 2006 OECD thematic review highlighted the importance for ECEC to be part of a well conceptualised national policy with, on the one hand, devolved powers to sub-national governments, and on the other, a national approach to goal setting, legislation and regulation, and financing and programme standards. The enhanced leadership and strong co-ordinating role of the Commonwealth

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14. The reforms aim at removing overlaps and duplication between state and Commonwealth regulations and reducing red tape for service providers. They also require child-care services to meet 100% of the standards, with the possibility to impose sanctions for non-compliance.
15. The Framework puts specific focus on play-based learning, communication and language (including early literacy and numeracy) as well as personal, emotional and social development.
16. For a discussion see, the 2008 OECD *Economic Survey of Australia* Chapter 2.

government is therefore welcome. Particular importance should be given to the mechanisms for collaboration between government levels and monitoring policy implementation and performance.

33. The provision of universal access to early childhood education for all four year-olds, besides facilitating a more integrated ECEC system, is a welcome step towards improving developmental outcomes, as long as the quality of access can be assured. There is scope to go further however by: extending the right to three year-olds (currently under consideration) in line with international practice; and increasing the duration of services to better accommodate children's care and education needs and limit multiple transitions, even on a daily basis, between ECEC providers. Budget initiatives to boost the affordability of child care and increase the number of child-care places are commendable and efforts in this direction need to continue. In addition to contributing significantly to children's educational outcomes, affordable quality child care is an important determinant of labour force participation for second earners (OECD, 2005a). Most importantly, the government needs to address the issue of the under-representation of children from disadvantaged groups. Closing the educational gap between indigenous and non-indigenous children is a focal point of its "Education Revolution" reform programme. The universal access initiative is a step forward in this regard. Based on a large body of empirical work, Heckman and Masterov (2007) conclude that high-quality pre-school centres available to disadvantaged children have a strong positive record in promoting achievement. Given that learning and motivation are dynamic, cumulative processes, the strengthening of cognitive and non-cognitive abilities early in life facilitates subsequent learning, resulting in very high returns for such programmes.

34. The OECD thematic reviews highlight the need for early childhood to be viewed as a "distinctive" stage of education, recognising the various needs of young children, rather than solely as a preparatory period for primary education. The government's plan to increase the learning and development content of early childhood services for the four year-olds through an age-appropriate curriculum (with specific focus on play-based learning, pre-learning and pre-numeracy skills) is a welcome step towards bridging the gap between care and learning, without an excessive emphasis on narrowly defined academic skills. The reform is expected to facilitate the transition between early childhood services and schools, without risking "schoolification" of early childhood institutions.

35. Increasing the supply of qualified early childhood teachers and child-care workers is also included in the government's reform agenda. Firmer regulations about the number of trained staff to be employed by the long day and family day centres were identified by the OECD reviews as an issue for policy attention. Enhancing the quality of services would further require introducing licensing and regulatory requirements for family day care and outside school hours care services by the states where these are not currently imposed. If the regulatory environment is to lead to quality improvements, it will be important that penalties for non-compliance are rigorously enforced.¹⁷ A national framework that ensures consistency for supply, funding and quality is needed for all ECEC services. A degree of national consistency exists only for policy and quality of child-care services falling under Commonwealth programmes, with no similar framework for pre-school education (Press and Hayes, 2000). The ongoing development of new quality national standards for child care and pre-schools, which gave rise to a discussion paper for public consultation (PAWG, 2008), is a welcome step in this direction.

Promoting high quality schooling for all students

36. At the school level, Australia needs to enhance educational attainment in order to catch up with the best performing countries. A key challenge is to address the achievement gaps of the lowest performing

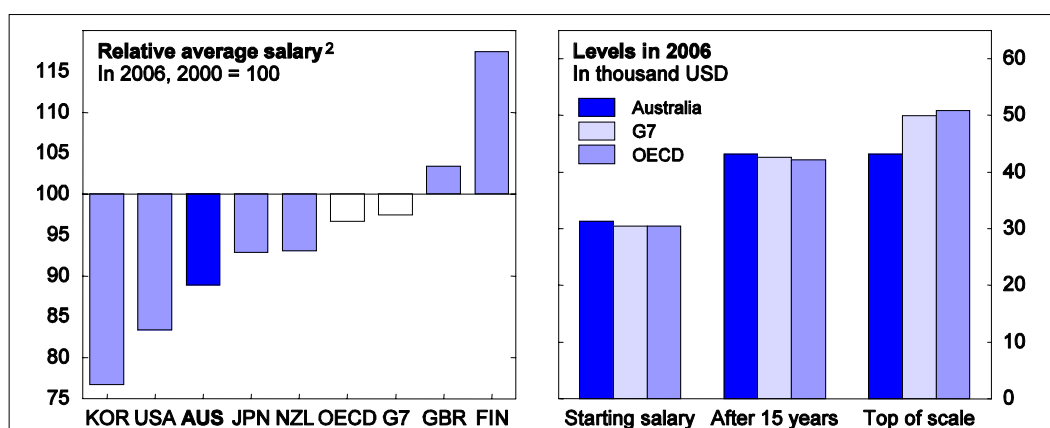
17. Rush (2006), for example, cites that only one of the 67 centres in New South Wales that were reported by the inspectors from the Department of Community Services to have breached their licence in 2005 has been successfully prosecuted.

students, while improving overall literacy and numeracy outcomes. Socioeconomic factors continue to contribute to performance inequality, and on average, indigenous students remain more than two years behind their non-indigenous counterparts. Tackling these issues requires multiple initiatives, with early childhood development being a decisive factor for later school performance.

Teaching quality

37. Teaching quality constitutes a very important determinant of the variation of student achievement. Empirical evidence of a significant decline in the academic aptitude (literacy and numeracy standards are proxies for teacher quality) of new teachers and teacher students over the past two decades is therefore a source of concern. According to Leigh and Ryan (2008), the fall in the average pay of teachers relative to non-teachers with a university degree between 1983 and 2003, and the rise over the period in pay dispersion in non-teaching occupations (implying increasing returns to aptitude in such occupations), played a significant role in the deterioration in teacher quality. Recent developments in teachers' relative salaries do not stand out in the international context (Figure 8, left panel). Cross-country comparisons however provide clear evidence on the weak dynamics of teachers' salaries in Australia by showing no rise in pay after 15 years of experience, even though the initial remuneration is somewhat above the OECD average (Figure 8, right panel). Salary progression of public school teachers reflects the length of teaching tenure, rather than performance. Teachers reach the top salary band within nine years after graduation. Subsequent promotions usually involve administrative and management roles, reducing the attractiveness of becoming a teacher. A recent survey highlights the difficulty school principals face in filling vacancies with well-qualified teachers across all areas of study, with particular challenges in foreign languages, English, mathematics and sciences (ACER, 2007). More than 40% of secondary school principals stated that, to cope with shortages, they were requiring their staff to teach in areas outside their expertise, with around a quarter of them indicating that they had to resort to the recruitment of less qualified teachers. Attracting and retaining qualified teachers poses greater difficulties for schools in remote areas.

Figure 8. **Teachers' salaries: an international comparison**¹
Average for primary, lower and upper secondary education



1. Annual statutory teachers' salaries in public institutions. Salary and wage data are in US dollars converted using purchasing power parities. The G7 (excluding Canada) and OECD aggregates (21 countries) are unweighted averages. No data is available at the top level of the scale for the United States in 2006.
2. Average of the three salary scales (starting, after 15 years and top) in per cent of annual average gross wage earnings for a single person without children.

Source: OECD (2002 and 2008), *Education at a Glance* and OECD (2008), *Taxing Wages 2006/2007*, OECD Publishing.

38. Strategies to reward and recognise quality teaching will form part of a collaborative approach to strengthen the profession. The Commonwealth is working with state and territory governments to research effective ways of rewarding teaching excellence and extending the career structures for classroom teachers.

Incentives to address the inadequate supply of teachers in specialist areas and mechanisms for attracting quality teachers to work in difficult-to-staff schools will form the core of reforms. The professional development of the teaching workforce is of crucial importance for improving quality, as is the standard of pre-service education.¹⁸ Both are key elements of the reform agenda.

School performance differs

39. According to the 2006 PISA study, there is little institutional variation in Australia: the largest part of overall variation in students' performance is due to differences in results within schools.¹⁹ For scientific literacy, however, the average socioeconomic background of a school outweighs a student's own background, with the impact of schooling being greatest for students from disadvantaged backgrounds or those attending schools with a low average socioeconomic background (Thomson and de Bortoli, 2007). In this context, the drift of students to private schools raises significant challenges with regard to the organisation of schooling, because it has led to a significant change in the average socioeconomic composition of government schools. Such schools currently have a higher share of students from lower socioeconomic backgrounds than three decades ago.

40. Funding arrangements and the perceived service quality are central to the public debate surrounding this development. Ryan and Watson (2004) conclude that increased government funding has been used to reduce student-teacher ratios significantly, with the non-government sector recording an improvement with regards to this quality indicator relative to government schools since the early 1980s. The improvement appears to have outweighed any adverse impact on private school enrolment arising from real increases in fees since the late 1970s. The current model of private school funding by the Commonwealth is based on the average cost of educating a child at a public sector school, but differentiated, taking into account the socioeconomic status of school students (determined by their home address). This implies that as the costs for government schools increase, federal funding for non-government schools also rises. Dowling (2007) considers this funding mechanism "increasingly problematic" because both government and private schools are being funded on the basis of an "average" student although the latter may be catering to a student body with below average costs. Government schools, on the other hand, have an increasingly expensive student body, as the drift to the private sector has resulted in an increasing share of students with a low socioeconomic background.

41. Differences in Year 12 participation, the last year of upper secondary school, have narrowed significantly over time between the two types of school. However, differences in tertiary entrance performance persist in favour of students attending private schools, probably reflecting greater flexibility in recruitment and budget strategies which, in combination with the availability of more financial resources, enable non-government schools to attract and retain staff with high capabilities. A shift towards greater school autonomy has occurred in Victoria and South Australia to bring government schools closer to the non-government sector in terms of operation (Marks, MacMillan and Ainley, 2004). However, no state education authority has yet fully decentralised staffing arrangements. The states remain responsible for remuneration and work conditions. Unlike the case in the private education sector, there is a lack of performance-based pay arrangements in the government sector for teachers.

18. Both the "concurrent" (combining general education in one or more subjects with theoretical and practical training) and "consecutive" (providing most of the practical training after a general education is provided) models of teacher education are available in Australia (OECD 2005b).

19. School education is delivered through both government and non-government (Catholic and independent) providers. Government schools are those operating under the direct responsibility of the relevant state department. Non-government schools are fee-paying schools and not-for-profit organisations. The term "private schools" is used in the paper to denote non-government schools.

Greater national consistency in schooling

42. Co-ordinating education policy at the national level is not a straightforward task, given the joint government involvement in the area and the significant cross-state differences in the basic structure of schooling, such as curricula, the extent of decision-making autonomy enjoyed by the schools and the form of final qualifications awarded to successful students. Diversity in schooling arrangements across jurisdictions may impose a burden on users in terms of institutional complexity and increased administrative and transaction costs, with additional adverse consequences on inter-state mobility of teachers, families and students (Banks, 2005). As a commendable step, from January 2011, all states will be required to implement (for the first time in Australia's history) a single national curriculum from kindergarten to Year 12, starting with English, mathematics, science and history. However, cross-jurisdictional variation in other areas of school education will remain. The Ministerial Council meeting in April 2007 decided not to proceed with the implementation of a "national eligible school starting age", as little evidence was found on the educational benefit of such a reform and because of the significant costs to be incurred. The issue of student inter-state mobility will instead continue to be addressed through national processes.²⁰ There was also no agreement on the adoption of an Australian Certificate of Education for Year 12, thereby perpetuating unnecessary differences across states and duplication of efforts (Business Council Australia, 2007).

Recent reforms to improve the performance of schools

43. The government's programme for schools focuses on enhancing both the performance outcomes of students and on achieving quantitative improvements, with the commitment of increasing Year 12 retention rates to 90% by 2020. The development of a National Action Plan on Literacy and Numeracy, announced in the 2008 budget, is a critical step in this regard. To reduce the "tail" of underperformance among disadvantaged students, and achieve the COAG agreed target of halving the gap for indigenous children in literacy and numeracy performance within a decade, additional resources will be available to schools most in need of help. The budget further includes expenditure of AUD 1.2 billion over five years, most of which is for computers in secondary schools. To increase the completion rates of secondary education over time, a ten-year funding plan (AUD 2.5 billion) is being implemented for the establishment of trades training centres in all secondary schools. The measure aims to provide meaningful VET streams for those students who do not wish to go on to university.

Assessment and recommendations for further action

44. The reform initiatives are welcome steps forward. Low achievement in literacy and numeracy is considered the most important factor explaining school drop-out rates, especially for boys (Rothman, 2001). Plans to introduce a school-entry evaluation, along with the provision of universal access to early childhood education for all four year-olds, are initiatives in the right direction to help weaker students meet the minimum national benchmarks. Improving vocational education and training, so that it becomes a "first choice" for students seeking a post-secondary qualification, is also important for lifting Australia's international ranking in upper secondary educational attainment. The government's programme of trades training centres in schools may contribute to this end as long as it can provide young people with the necessary skills for further learning and employment. A close monitoring and evaluation of the effectiveness of the programme is critical in this regard. To ensure that the education system provides all school leavers with a minimum educational attainment level, states could continue moving towards higher minimum school leaving ages, though the costs and benefits would need to be assessed. However, it should be ensured that all students achieve minimum core skills, before leaving school.

20. These include the Interstate Student Data Transfer Note, which provides an agreed system for the transfer of student information when a student transfers to an inter-state government or non-government school.

45. Strategies to counteract the effects of disadvantaged backgrounds on performance are of great importance in improving equity of outcomes for students. The targeted support measures to help students “at-risk” and the differentiated allocation of resources to schools and programmes could be enhanced by better taking into account the difference of socioeconomic backgrounds between students in school funding. Mechanisms to ensure that schools spend the resources on improving the outcomes for such children are indispensable.

46. Recent empirical analysis suggests that different facets of accountability, autonomy and choice are strongly associated with student achievement (Wößmann *et al.*, 2007). Moves by the government²¹ towards developing a single national school curriculum and developing a nationally-consistent testing system are welcome steps as they allow a more effective cross-state comparison of student achievements and strengthen accountability. Allowing some flexibility in schools, and in particular in teaching methods to achieve common standards might be of benefit in light of the different learning abilities of students, as long as it does not lead to lower standards for other students (Council for the Australian Federation, 2007). The study of foreign languages has an important role to play in enhancing the quality of education. Despite improvements over time, much remains to be done in this area as many students still lack language skills, reflecting to a large extent teacher shortages. Expenditure initiatives in the 2008 budget for additional Asian language classes in high schools and language-teacher training and support are therefore welcome.

47. Moving towards less centralised management is indispensable to increase school autonomy and choice. While the marked shift of enrolment from the government to the non-government school sector shows that parents and students are willing to exercise choice, competition among schools is still limited. It is constrained, among other factors, by strict regulations on setting up new schools, particularly in the case of private schools, and the exit of low performing units,²² and the significant centralised control most schools are subject to (Novak, 2006). School principals should be given autonomy in recruiting and rewarding teaching staff to attract and keep experienced teachers. Changes to the system of teacher career progression, which caps salaries nine years after graduation in the public sector, would help to keep the best teachers. Teacher remuneration systems should also create appropriate incentives to re-allocate teachers to where they are needed most.

Vocational education and training: responding to changing skill needs

48. Australia has developed a comprehensive VET system. The institutes of Technical and Further Education (TAFE), owned and administered by the states, are the main providers. A distinguishing characteristic is the central role played by employers in determining policies and priorities and developing training qualifications (ACCI, 2007). While apprentices and employers appear to be quite satisfied with the provision of services, challenges remain, most importantly to increase the VET system’s capacity to address current skill shortages and to meet skill needs over the longer term. A major policy issue facing VET is the low completion rate for apprentices, standing at just over 50%. A recent study by NCVET on “second-chance” learners²³ provides further evidence on poor completion outcomes, especially when

21. These comprise the establishment in January 2008 of a National Curriculum Board, which includes state representatives and will oversee the development of the curriculum.

22. Entry, exit and expansion of government schools are subject to approval of the state’s education minister. New schools in both the government and private sector must meet minimum entry requirements. In addition, private schools are subject to state procedures examining and assessing the potential effect of an entry or change of such schools on existing government and non-government schools within the same area. A number of states further impose minimum enrolment rates on private schools (Novak, 2006).

23. About 50% of early school leavers aged 24 years or younger and over three-quarters of adults over 25 without a post-school qualification participate in VET. Second-chance learners comprised 41% of publicly funded VET students in 2004 (Karmel and Woods, 2008).

focusing on higher level qualifications: around 10% of early school leavers (aged 24 and younger) actually complete a certificate III or higher VET qualification within four years of leaving school (Karmel and Woods, 2008). There is also scope for further improving post-study outcomes: while the completion of training certainly contributes to better employment opportunities for young people, not all graduates obtain a job directly related to their training. The highest match is observed in the case of tradepersons (Karmel, 2007).

Recent reforms of the VET sector

49. The COAG National Reform Agenda, released in February 2006, included important initiatives to tackle skill shortages and improve quality, flexibility and portability of skills and training (Box 2). Building on previous initiatives, the 2007 budget expanded opportunities for individuals to take up a vocational qualification, by offering incentive payments for apprenticeships in short supply and extending the income contingent loan scheme available in the higher education sector to Diploma and Advanced Diploma courses offered through VET. Also, funding was provided for the development and implementation of shorter apprenticeships with competency-based, rather than time-based, progression.

Box 2. A national approach to addressing skill shortages

Following the package of measures in the February 2006 meeting, aiming at a “genuinely” national approach to apprenticeships, training and skills recognition and tackling skill shortages, COAG has committed to:

- *Ensure quality of training outcomes* through the acceleration of the introduction of a national outcome-based auditing model and stronger outcome-based quality standards for registered training organisations.
- *Increase the mobility of the workforce* through full national mutual recognition of occupational licensing by December 2008 and by making it easier for immigrants with skills close to Australian standards to work as soon as they arrive.
- *Increase the flexibility and responsiveness of the training system* through the implementation of a competency-based apprenticeship system (replacing time-based approaches to the development of skills); removal of the barriers to the effective implementation of school-based apprenticeships; and recognition, as from January 2007, of existing skills (“Recognition of Prior Learning”), so that workers do not have to repeat or undertake training for skills already acquired on the job.

Source: COAG (2006), *Communiqué*, Council of Australian Governments, Canberra, 10 February.

50. The government’s agenda on vocational education and training (*Skilling Australia for the Future*) features measures to increase the skills of the workforce and to eliminate the existing skill shortage. The Productivity Places Programme, commenced in April 2008, will provide over five years up to 630 000 places (for continuing training and to facilitate re-entry of those outside of the workforce), the majority of which should lead to high-level certificates. Empirical findings confirm the growing need for skills beyond a basic qualification by suggesting that 70% of the VET qualifications needed to meet the predicted demand will be in trade and post-trade levels (certificate III level and above) (Shah and Burke, 2006). The new training places will be delivered in an industry-driven system, accompanied by an outcome-based funding. Budget initiatives further support a better resourced and strengthened Industry Skills Council and the establishment of Skills Australia. The latter is a high level advisory board to oversee performance and provide recommendations to the governments about current and future skill needs.

Assessment and recommendations for further action

51. The new government’s reform initiatives for VET are commendable in the light of evidence of fast growth in skill-intensive occupations and the potential benefits of better tailoring training to the needs of the economy and of more efficient funding. Flexible training arrangements, including the recognition of

prior learning and fast-track apprenticeships with competency-based progression are of major importance for maximising the effectiveness of a demand-led training system. However, according to the Productivity Commission (2007), there appears to be some inherent tension between flexibility in VET arrangements and assurance of quality training outcomes, with COAG having agreed to speed up the introduction of a national outcomes-based auditing model and stronger outcomes-based quality standards for registered training organisations. Moreover, concerns arise that competency-based training leads to a short-term focus on specific tasks and skills related to existing jobs, with inadequate emphasis on broader vocational education and general skills.²⁴ Ensuring that the VET system is broadly based, delivering generic skills, in addition to solid specialist skills, is of major importance for lifelong learning. The explicit inclusion of some employability skills (such as communication, teamwork, and planning and organising) in the Training Packages²⁵ is therefore a welcome policy initiative. It is also necessary to ensure that training packages can be successfully implemented in both institutional (TAFE) and industry environments and that they are sufficiently updated to meet changing demand (TDA, 2007). The increased emphasis placed by the government on accountability for quality and on lifting the completion rates of VET is a welcome step towards enhancing the efficiency of training outcomes.

52. A more responsive and better performing VET system hinges upon greater competition among providers. Under current arrangements, the skewing of government funding to providers, along with the allocation of the bulk of funding to the TAFE sector, are seen as creating a barrier to the entry of private providers (Australian Industry Group, 2006). At the same time, restrictions on the financial and administrative autonomy of government providers limit their ability to compete. It may be the case, for example, that governments set mainstream course fees which do not reflect course costs, or that TAFEs are required to operate in higher cost regional and remote areas (House of Representatives, 1998). Moving to a more commercial governance model for TAFEs would strengthen their competitive position in the training market. The need to ensure that the accountability and flexibility of publicly-funded training organisations correspond to market needs was also highlighted by a communiqué by TAFE directors and Industry Skill Councils in December 2007 (TDA 2007). The removal of federal and state inconsistencies at the policy and operational level is seen as an important priority in this context.

53. Reforming the model of funding allocation to give the consumers (employers and individuals) of training services greater flexibility is seen by employers as a way forward to a more competitive VET system. The allocation of new training places directly to industry, following a tender process guided by the federal government, is a step in this direction. Efforts could further focus on increasing the proportion of funds allocated through the User Choice scheme, enabling employers and apprentices/trainees to select their registered training organisation (whether public or private) and negotiate key aspects of their training.²⁶ The continuation of the voucher programme might also be considered by the government as an additional financial incentive mechanism. Unlike previous arrangements, however, that restrict the vouchers to low-level certificates, the programme should be targeted at high-level skills training. Given clear private benefits from training, individuals and employers should also contribute towards its costs, even though government financial support is justified as employers cannot capture all the returns from training due to transferability of skills (Australian Industry Group, 2006). A careful design of such a support is indispensable to avoid large deadweight losses (OECD, 2003).

24. For a discussion see Cornford (2006) and Australian Industry Group (2006).

25. Training packages are sets of nationally-endorsed standards and qualifications for recognising and assessing skills.

26. User Choice amounted to less than 20% of government VET funding in 2004 (Australian Industry Group, 2006).

54. Establishing more coherent links between schools, VET and higher education is a key challenge for the skill development process. The government's programme of trades training centres in schools is a welcome step forward. The extension of income-contingent loans to full-fee-paying students in Diploma and Advanced VET qualifications, announced in the 2007 budget, is a commendable initiative toward lifting the status of the VET system and reducing the likely distortions in student choices arising from different user charging arrangements in the VET and university sectors.²⁷ A more systematic approach to disseminate information on VET (including on the performance of various providers) and to provide effective career advice and counselling is essential for better understanding the patterns of required skills and the potential career paths available to school leavers.

27. For a discussion see, Productivity Commission (2005) and Chapman, Rodrigues, and Ryan (2007).

Enhancing the responsiveness of the higher education system to globalisation challenges

55. The higher education system²⁸ has a number of distinctive characteristics, including: a predominance of enrolment in public institutions, a high degree of accountability, a coherent system of quality assurance, and an income contingent loan scheme for payment of higher education tuition charges (Higher Education Loan Programme, HELP), which has enabled a rapid expansion of tertiary institutions. The share of international students in tertiary enrolments is also high. At 17.8%, it is the highest in the OECD.

56. There appears, however, to be scope for improvement in a number of areas, including moving towards more flexible regulation and funding arrangements to increase the diversity and responsiveness of higher education to changing demand conditions. The complexity of regulation for higher-education providers raises additional policy issues. On the demand side, the main challenges include raising access to higher education for disadvantaged groups, especially for students from low socioeconomic backgrounds and for indigenous students.

Supply-side barriers to flexibility and diversity

57. Higher education institutions have a considerable autonomy in terms of staffing, course profile and internal allocation of resources. They must be mindful, however, of requirements coming from both the federal and state governments. The majority of public universities are established under state legislation, which specifies their governance, purposes and powers. In addition, the Commonwealth government, as the largest source of funding, exerts a significant control on university supply, even though reform initiatives since the beginning of the decade, especially the deregulatory measures in the 2007 budget, enhanced the operational flexibility of universities. The Commonwealth Department of Education has responsibility for administering the federal funding and developing and administering higher education policy and programmes (DEST, 2007). In a recent paper, the leading universities expressed the view that the current “highly regulated” approach restrains diversity in the provision of higher education and is also inconsistent with market orientation (Group of Eight, 2007). Under present arrangements, the funding agreement between the Commonwealth and a public university specifies the number of places and the discipline mix that the federal government will support. Universities in each field of study (“cluster”) also continue to be funded at the same rate per place, irrespective of differences in operating conditions and their standards of learning and research. However, the funding rate of the clusters differs. In addition, for subsidised students (representing the largest group of domestic students), the maximum fees that universities can charge are fixed by the government. Through the funding agreements, the Commonwealth is further able to set targets for student enrolments at the national, state, institutional, campus and discipline levels (Corden, 2005). If a university exceeds the tolerance bands for over and under-enrolment it incurs a financial penalty.

58. Through its accountability framework, the Commonwealth is further able to monitor and assess universities’ performance in terms of student outcomes and financial and research performance. In addition, the *National Protocols for Higher Education Approval Processes* (agreed and given effect to by the Commonwealth and state governments) set out criteria which must be met before a new university can be established. They impose requirements in terms of teaching, scholarship and research. Concerns were raised that the National Protocols constrain diversity by preventing the establishment of institutions that only teach or only undertake research or are specialised in a narrow field of study. A side consequence might be the creation of regional universities which do not meet adequate quality standards. Such universities face increasing pressure by the regional communities to offer a broad range of courses and

28. The higher education sector comprises 39 universities (37 public and 2 private), which are self-accrediting institutions (*i.e.* authorised by the government to “accredit” or approve its own awards), and over 150 eligible non-self-accrediting providers accredited by the state authorities.

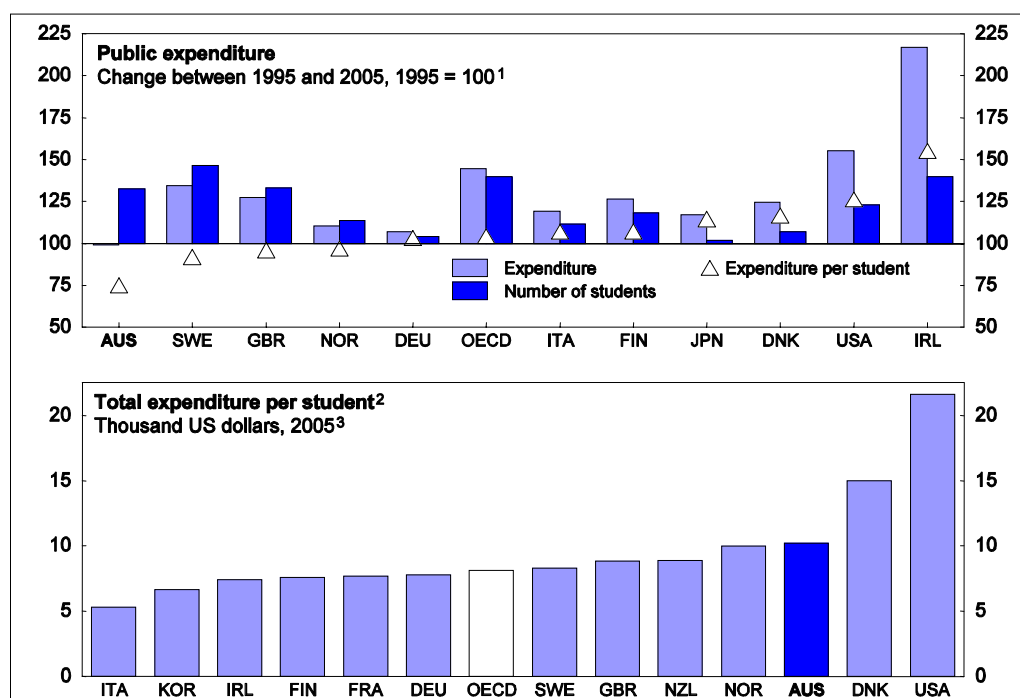
services that extend beyond those that would be considered viable for the population being served. Following public consultation, the Ministerial Council decided in November 2005 to retain the existing requirements for universities in terms of teaching, scholarship and research, with some variations in catering for the needs of new universities to build up teaching and research across at least three fields over an initial five-year period (DEST, 2007).

59. The complexity arising from the different roles of the federal and state governments with regard to the regulation of higher education providers raises additional challenges. There are significant variations between the states in terms of legal, regulatory and accountability requirements on universities (DEST, 2005). In addition to cross-jurisdictional differences, the regulatory system is made more complex by the involvement of the federal government. Current arrangements are often seen as leading to duplication and ambiguity of reporting requirements, while also raising concerns about the general level of requirements with which universities are obliged to comply. Following a public debate about the most desirable and effective balance of government responsibilities for higher education, the ministers responsible for the sector agreed in November 2005 on further work to promote national consistency and effectiveness in three major regulatory areas that are currently under the responsibility of state governments: universities' capacity to undertake commercial activities, governance and management of public universities, and recognition of universities and accreditation courses and providers. Existing arrangements in these areas are believed to impede efficiency and innovation (DEST, 2007).

Is university funding adequate?

60. Public expenditure per student on tertiary education fell between 1995 and 2005 in real terms, reflecting a trend towards a greater use of private funding (Figure 9, upper panel). The share of Commonwealth grants in the revenue of publicly funded higher education providers fell from 60% in 1995 to 45% in 2006. Student payments through fees and loans and other private sources have thus become increasingly important sources of revenue.

Figure 9. Expenditure on tertiary education



1. Expenditure on educational institutions for all services in 2000 constant prices using the GDP deflator.
2. Expenditure on tertiary educational institutions excluding research and development activities except for Denmark. Public institutions only for Italy.
3. In equivalent US dollars converted using purchasing power parities for GDP, based on full-time equivalents.

Source: OECD (2008), *Education at a Glance*, OECD Publishing.

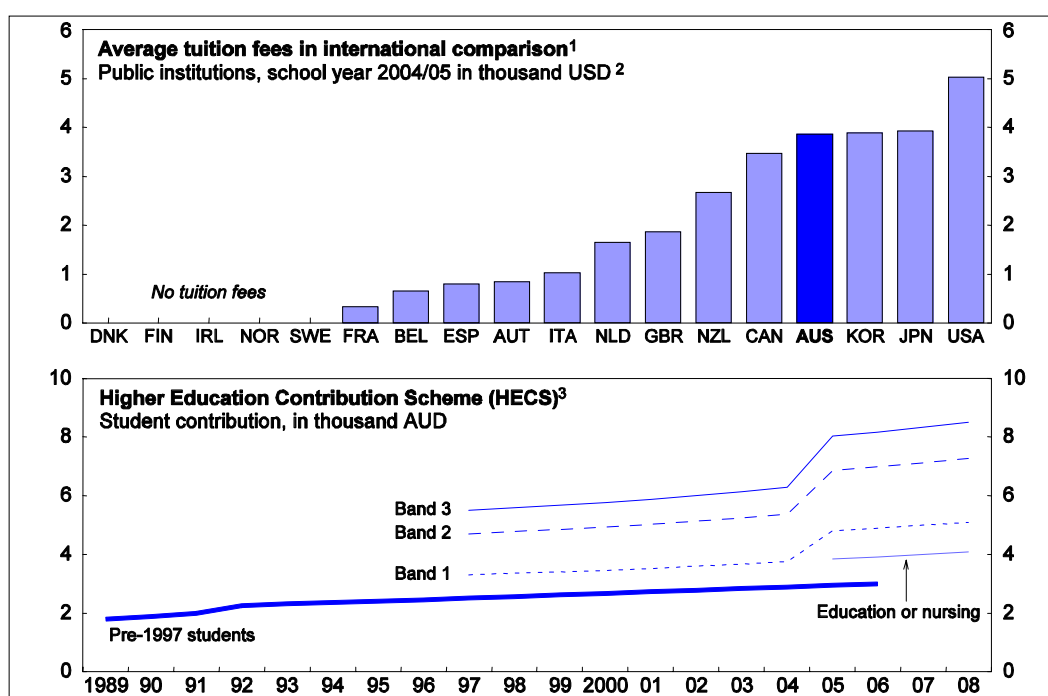
61. The level of funding and the balance between federal and student sources are central issues in the debate about higher education, especially in light of their potential impact on enrolment and the quality of teaching and learning outcomes. Financial constraints are reflected in the sharp increase in the student-staff ratio (from 9.9 in 1998 to 14.9 in 2006), the doubling of the share of student fees and charges in total revenue of publicly funded institutions between 1994 and 2005, and an increased reliance on overseas students' fees, whose share accounts for over 15% of the total compared to only 6.5% in the mid-1990s. There are also signs of supply constraints: estimates suggest that the unmet demand was 14 200 student places in 2006, though this is down from a peak of 36 100 in 2004 (DEST, 2007).

62. Many of the financial pressures facing universities are traceable to the introduction of enterprise bargaining as the industrial relations system for public universities in the 1990s. This change implied the end of automatic coverage of cost increases by the government resulting from centrally determined wage setting. Grants to universities were indexed, instead, to a combination of the cost of living and a so-called "safety net adjustment" (applied to the lowest-paid workers) (Corden, 2005). Measures taken from 2004 have helped to moderate the erosion in funding rates per student. The recent discussion paper by the eight leading universities, assesses the higher education system as "under-resourced", despite improvements, citing insufficient indexation for rises in major costs, still inadequate funding per student and limits on tuition fees as the main reasons for this under-funding (Group of Eight, 2007). Australian tertiary institutions, though, are better resourced than similar institutions in a number of OECD countries (Figure 9, lower panel).

Student participation in higher education – the impact of HECS

63. The average tuition fee for domestic students in public institutions is among the highest in the OECD, although estimates across countries are not always comparable (Figure 10, upper panel). Since 1989, when the income contingent payment scheme (Higher Education Contribution Scheme, HECS), was enacted, student fees and debt of graduates have risen considerably (Figure 10, lower panel). A number of studies have assessed the impact of the introduction and subsequent changes to the scheme, with a particular focus on students from disadvantaged backgrounds. On balance, the evidence suggests that participation increased with the introduction of tuition fees, as it has contributed to the expansion of the higher education sector, with the benefits spreading across the whole socioeconomic spectrum.²⁹ International comparisons appear to support the view that loans facilitate access to tertiary education. Countries with large student loan programmes have above-average enrolment and graduation rates (OECD, 2007d).

Figure 10. Tuition fees for higher education students



1. Data to be interpreted with caution as it results from the weighted average of the main tertiary-type A programmes (for national students) and does not cover all the educational institutions. However, the figures reported can be considered as good proxies. Government dependent private institutions for Belgium and the United Kingdom.
2. In equivalent US dollars converted using purchasing power parities.
3. The band applied depends on the discipline being studied, for example: band 1 covers law and medicine, band 2 accounting and engineering, and band 3 humanities.

Source: OECD (2008), *Education at a Glance*, OECD Publishing and Universities Australia, "History of HECS 2008" data file, available at www.universitiesaustralia.edu.

64. A source of concern is that the share of students from disadvantaged backgrounds in higher education remained broadly unchanged between 1991 and 2005, at around 15% of total domestic students, despite the increased opportunities for higher education. However, Cardak and Ryan (2006) concluded that students from low or high socioeconomic groups were equally likely to attend university, once tertiary

29. For a detailed description of the HECS system and the amendments introduced over time and a review of empirical studies on the HECS, see for example, Chapman and Ryan (2003) and Chapman (2005).

entrance scores are controlled for. The university participation rates of students from low socioeconomic families were much lower than those from the more advantaged backgrounds, because they tend to fall away academically at school so that, by Year 12, they are less likely to obtain a university entrance score, and when they do, they obtain a lower score, on average. Among students with similar literacy and numeracy skills in Year 9, those having more advantageous backgrounds are more likely to have higher university entrance scores than similar students from lower backgrounds. Overall, Chapman and Tulip (2008) conclude that the scheme did not result in a decline in higher education participation of prospective students from relatively poor backgrounds, as originally feared. But some evidence exists that the introduction of differential fees in 1997 induced a small number of males with low socioeconomic backgrounds to switch to courses with lower fees, although it did not discourage these individuals from attending university *per se* (Chapman and Ryan, 2003). This finding may be of particular importance in explaining chronic shortages in specific occupations (such as engineers and accountants).

Student income support

65. The student loan programme helps students to overcome up-front financial barriers to higher education. However, unlike other programmes that also cover living expenses (such as in New Zealand, the United Kingdom and the United States), the Australian loan scheme only covers fees. Students therefore need financial support during their years of study. In fact, many students indicated in a survey that they undertook substantial hours of work to meet basic necessities, transport, as well as study-related expenses (James *et al.*, 2007). Around 70% of full-time undergraduates were in paid employment during a semester in 2006, compared with 50% in 1984. Hours of work have also become longer. International comparisons suggest that Australian students are much more reliant on employment to support themselves through study than students in a number of European countries (Eurostudent Report, 2005).

66. The impact of paid part-time work has been the subject of considerable discussion, especially in light of its increasing trend. Whereas, on the basis of empirical evidence reasonable hours of paid work do not have, in general, adverse consequences on study, and can even be beneficial, long working hours can create difficulties for students to balance work and study responsibilities (DEST, 2007). A survey undertaken in 2006 indicates that a relatively large proportion of undergraduate students (22.7% of full-timers and 37.4% of part-timers) reported that they regularly missed classes for work-related reasons (James *et al.*, 2007). Indigenous students are at a significantly greater disadvantage than other domestic students both in terms of reliance on paid work and the proportion of students frequently missing classes.

67. Recent changes in income support arrangements include an extension of rent assistance to students over 25 years on Austudy grants, extension of payment eligibility to Master's students undertaking professional qualifications, and additional support for indigenous students. They provide greater financial assistance for many students and reduce inequalities between recipients of different payments. These measures, however, do not address the highly restrictive access to income support schemes, as a result of a combination of parental means testing and age as financial independence criteria.³⁰ The increasing number of students in 2006 whose applications for income support were rejected provides evidence for this. In addition, high benefit withdrawal rates under the current welfare arrangements imply that, for every dollar a student earns from paid work above AUD 236, the income support payment (Youth Allowance and Austudy) will be reduced by 50 to 60 cents. The structure of the main income support scheme also reduces incentives for mobility for students under 25 (the age of

30. Under existing arrangements, students' eligibility for income support (Youth Allowance) is assessed against parental income and assets, while they are considered to be financially dependent on their family. The age of independence from parental means testing is 25. Students at or above this age are eligible for means-tested Austudy grants while younger students who can demonstrate financial independence through meeting specific workforce participation requirements are eligible for Youth Allowance.

independence from parental means testing), restricting choice among universities outside their local area (although students in receipt of income support living away from home are eligible for the higher away from home payment and potentially rent assistance) (Group of Eight, 2007). Finally, despite recent improvements, inequalities between recipients remain; this is the case, for example, of different payment rates depending on whether a student has come directly from school or had a spell of unemployment.

Quality considerations

68. Australia has a comprehensive quality assurance system. It comprises the National Protocols for Higher Education Approval Processes, which focuses on institution registration and course accreditation; the national qualifications framework; and external quality audits, conducted by the Australian Universities Quality Agency in a five-year cycle. The findings are published. Concerns were raised, however, about the absence of an evaluative approach to educational outcomes of higher education, reflecting allegations of “soft-marking” of international students (James, 2003). The debate highlighted the need for improving the mechanism for assuring quality of education outcomes, with a “whole-of-institution approach” to auditing in the first cycle of audits being a focal point. Such an approach, in particular, did not explore issues of standards on a detailed discipline-by-discipline basis but focuses on quality assurance processes, auditing a university against its own plans and objectives (Macklin, 2006).

69. In late 2006, the quality agency announced that it would put greater focus on the assessment of outcomes in 2008, with emphasis on the assessment of teaching, scholarship and university research. Under the “second cycle” of audits, institutions are expected to provide an overview of benchmarking activities and outcomes undertaken since the last audit, with an emphasis on the impact of such benchmarking on the institution’s outcomes (Chalmers, 2007). The quality agency will not set standards for the universities, which are self-accrediting and autonomous institutions, but it will make recommendations on areas in need of substantial improvement, with the possibility, in extreme circumstances, to recommend that an activity or course be discontinued.

Assessment and recommendations for further action

70. The new auditing framework is an important step towards establishing cross-institutional reference points for academic standards and ensuring a reasonable level of consistency across the system, though questions remain about the choice of standards to be used and their measurement (Australian Government, 2008). An evaluative approach to educational outcomes is also required in light of the regional provision of higher education, especially because of indications of a shift in demand for higher education places in 2006 away from regional universities towards the more prestigious metropolitan universities (DEST, 2007).

71. Moving towards a less rigid policy framework for higher education would promote flexibility and diversity, making the system more responsive to changing needs and challenges. The removal in early 2008 of workplace relation (requiring an individual workplace agreement to be made for each new employee) and governance conditions attached to federal funding for universities is a step in the right direction. The government further reduced the number of funding clusters (from 12 to 7), while increasing funding for many disciplines. The government’s commitment to put an end to the current “one-size-fits-all” model of funding and to allow, through the introduction of “mission-based compacts” in 2010, funding arrangements that recognise both breadth of university activities and the difference between institutions is commendable. The new funding framework will increase the operating autonomy of universities and enhance their ability to respond to change facilitating a more diverse higher education sector. At the same time, it will include accountability measures to ensure that appropriate educational outcomes are achieved.

72. The adoption of a more demand-oriented approach should be considered. It would have potential benefits in terms of enhanced competition and efficiency, as it would increase incentives for higher education institutions to respond to student needs in the design and delivery of courses leading to a greater variety of offerings in terms of price and quality combinations (ACCI, 2007). Importantly, it has been suggested that the advantages of centralised planning have diminished, as the provision of higher education has become too complex and students are now better-informed (Barr, 2005). Empirical results suggest that changing tertiary education systems in the direction of higher supply flexibility is likely to raise graduation rates (Oliveira Martins *et al.*, 2007).

73. Shifting to a more demand-oriented approach would require that the central allocation of places be abandoned, or relaxed further, with financing following students. In order to avoid very high charges and “economic rents” accruing to highly-respected institutions, it might be necessary for the government to set an upper limit on contributions (Karmel, 2000). Indispensable for the introduction of a demand-led system is to ensure that better information is provided to applicants. This could be achieved, for example, through an easily accessible and frequently updated database for prospective students with information on wages and employment of recent graduates, accompanied by guidance and counselling in upper secondary schools (OECD, 2008). A case could be made for a supplementary funding mechanism to ensure provision of fields of knowledge that are considered to be of national or regional importance, but are neglected in a consumer-led system (Group of Eight, 2007).

74. The provision of income-contingent arrangements and improved income student support mechanisms are an essential underpinning for removing barriers to access and ensuring equity. The reduction of the age of independence from parental means testing could be considered, while raising the extent of student support for living expenses (on a means-tested basis) would be in line with international practice. In view of the skill shortages, budget initiatives (including reducing the maximum annual HECS charges and introducing strategic HECS debt remissions) to encourage the supply of graduates in occupations, such as mathematics and science, and increase the attractiveness of national priority disciplines (for example, teaching), are steps in the right direction. Reductions in the funding burden on students, however, including the phasing out from 2009 of full-fee undergraduate places in public universities, while worthwhile, would need to be matched by increases in public funding. The establishment in May 2008 of the Education Investment Fund (which absorbs and extends the AUD 5 billion Higher Education Endowment Fund) could help in this respect. The ongoing review of higher education (Bradley Review) should be a useful vehicle for monitoring the performance of the system, helping to identify potential reform areas (Australian Government, 2008).

Summary of recommendations

75. The Australian education system compares well in an international context on certain indicators, such as the PISA scores. However, important challenges remain in all education sectors, especially in the critical area of early childhood education and care where complexity and fragmentation raise important issues about variation in service quality and access. The government’s commitment, as part of its comprehensive agenda “Education Revolution”, to provide a universal access to early childhood education for all four year-olds by 2013 and to increase the supply of qualified early school educators goes in the right direction. The extension of the right to three year-olds and longer duration of the services provided are both to be recommended. A real challenge remains to tackle the problem of the under-representation of children from disadvantaged groups, ensuring that all children have equal opportunity to attend quality ECEC. At the school level, strategies to counteract the effects of disadvantaged backgrounds on performance should continue. Consideration should be given to reforming the school funding mechanisms to take into account differences in the socioeconomic backgrounds of students. Enhancing the capacity of the VET system to address skill shortages is of great importance for the sustainability of growth. Recent reform initiatives aiming to increase the skills of the workforce and eliminate the existing skill gaps are therefore welcome, as is the introduction of a more demand-driven provision of training, accompanied by

an outcomes-based funding. Finally, less rigid policy frameworks for school and higher education sectors would promote flexibility, making the education system more responsive to changing needs and challenges. Policy recommendations are presented in Box 3.

Box 3. Recommendations on education

Early childhood education and care (ECEC)

- Move towards a more integrated system of ECEC with greater consistency in policy and services across the child-care and early education sectors. Ensure appropriate mechanisms for monitoring policy implementation and performance.
- Increase spending on ECEC, with a focus on the provision of quality services for children from disadvantaged groups.
- Proceed with the provision of universal access to early childhood education for four year-olds. Consideration should be given to extending universal access to three year-olds, focusing initially on disadvantaged groups, and increasing the duration of services beyond 15 hours per week.
- Efforts towards improving affordable quality child-care facilities should continue. Ensure sufficient provision of services in rural and remote areas. Reduce the under-representation of children from disadvantaged groups.
- Reform the current staffing regime, bridging the split for pre-school teachers and staff for child care. Address the low status, pay, training levels and poor working conditions of the ECEC staff, especially in the case of personnel in the child-care sector.
- Proceed swiftly with the development of a more streamlined accreditation system, ensuring its rigorous and transparent implementation. Develop a national framework that ensures consistency of supply, funding and quality for all ECEC services, including pre-school education in addition to child-care services falling under Commonwealth programmes.

School education

- Enhance upper secondary educational attainment by improving the quality and standing of VET programmes in schools. Proceed with the implementation of Trade Training Centres in Schools programme, monitoring closely and evaluating its effectiveness.
- Ensure that the education system provides all school leavers with a minimum educational attainment level. Consider raising the compulsory school age for those students who have not already achieved a certain minimum standard of core skills by the end of their compulsory school attendance.
- Continue strategies to counteract the effects of disadvantaged backgrounds. Reform the school funding mechanisms to take better into account the different socioeconomic backgrounds of students.
- Move towards a less centralised management governance structure and less strict entry and exit regulations for schools. School principals should be given autonomy in recruiting and rewarding in order to attract and retain experienced teachers.
- Change the system of teacher career progression, which imposes an upper limit for salaries nine years after graduation, to help keep the best teachers. Teacher remuneration systems should create appropriate incentives so that teachers move to schools, where high-quality teaching is most needed.
- Ensure greater cross-state consistency of schooling through the development and implementation of a national curriculum. Adopt a common final certificate and eliminate differences in the basic structure of schools.

Vocational education and training (VET)

- Ensure that the VET system is broadly based, delivering generic skills, in addition to solid specialist skills. Training packages need to be updated regularly to meet changing skill needs. Keep the emphasis on accountability for quality and on lifting the completion rates of VET.

- Move towards a more commercial governance model for the institutes of Technical and Further Education (TAFE), by allowing, for example, course fees to reflect at least partly the cost of courses.
- Reform the funding mechanisms of VET to foster competition among providers and make these mechanisms more consumer-oriented. Assess the responsiveness of training to the industry's needs and the quality of training outcomes.
- Establish more coherent links between schools, VET and higher education. Develop a more systematic approach to disseminating information on VET and ensure the provision of effective career advice and counselling.

Higher education

- Make the higher education system more demand oriented, with financing following students. Ensure that applicants have easy access to a frequently updated database on wages and employment of recent graduates, and sufficient guidance and counselling in upper secondary schools.
- Reduce the complexity of regulation for higher-education providers arising from the shared responsibilities for the sector of the Commonwealth and state governments.
- Remove barriers to higher education for students from disadvantaged socioeconomic backgrounds. The reduction of the age of independence from parental means testing should be considered, while raising the extent of student support for living expenses (on a means-tested basis) would be in line with international practice.

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