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Educational participation and attainment

Most of Australia's population and labour force have only attained a lower secondary qualification, although the proportion of the population who have attained a university qualification is above the OECD average.

Although a large proportion of the Australian population and labour force have attained only lower secondary education (41 and 35 per cent of 25 to 64 year-olds, respectively – significantly above the corresponding OECD averages), Australia has seen an increasing proportion of its population attain a university level of education over the last two generations (see pages 53-54, Tables A3.1a-b.).

Among 55 to 64-year-olds, only 22 and 21 per cent of Australian men and women have attained a university qualification, while for the population 25 to 34 years of age, the respective proportions are 29 and 38 per cent respectively, which is above the corresponding OECD averages of 26 and 29 per cent (see page 55, Table A3.c).

In 2001, 22 per cent of the Australian labour force held tertiary type A and advanced research qualifications, placing the country amongst the highest in the OECD, after the United States, Norway, and the Netherlands (see page 54, Tables A3.1b.).

Australia has fewer graduates in engineering but more graduates in fields relating to health and welfare compared to other OECD countries.

Graduation rates at the university level in Australia, at 27 per cent, are also above the OECD average of 25 per cent (see page 169, Table C4.1). According to OECD statistics, in Australia 36 per cent of university graduates obtain qualifications in social sciences, business and law, while 25.2 per cent graduate with degrees in the arts, humanities and education. Although these percentages reflect the OECD average, only 7.9 per cent of university graduates obtain degrees in engineering-related areas, compared to the OECD average of 13.2 per cent. Conversely, the number of graduates of courses in fields relating to health and welfare is 15 per cent in Australia, compared to the OECD average of 11.5 per cent (see page 61, Table A4.1) - an above-average proportion of 76 per cent of these health and welfare graduates are women (see page 62, Table A4.2).



At the tertiary level of education, the student body is highly cosmopolitan in Australia, with a large intake of foreign students.

Australia receives a large number of foreign students, both from the perspective of sheer numbers and relative to its tertiary enrolment.

In absolute terms, Australia received 7 per cent of all foreign students enrolled in reporting OECD and non-OECD countries in 1999, placing the country at the **fifth rank among host countries**, behind the United States, the United Kingdom, Germany and France (see Chart C3.2, page 238).

Relative to total enrolments, **foreign students from all countries account for 12.5 per cent of the total tertiary student body**, the **second largest proportion in OECD countries** after Switzerland. The foreign student intake in Australia is also high by OECD standards, in comparison with an average of 4.9 per cent of foreign students in OECD tertiary institutions (see Table C3.1, page 243). Of these foreign students, those originating from Asia account for 8 per cent of tertiary enrolments (see table C3.2, page 244).

When looking at student mobility between reporting OECD and non-OECD countries, **Australia sends comparatively low proportions of its domestic tertiary students abroad for study by contrast with its high intake of foreign students from these countries**. Australian students enrolled abroad account for only 0.6 per cent of domestic enrolment, a low proportion in comparison with the 4.1 per cent average in OECD countries. As a result, Australia records a net intake equal to 5.5 per cent of its enrolment. Since the Australia has adopted a full-tuition policy for its foreign students, the high intake of overseas students translates into international trade revenues for the country as a whole (see Table C3.1, page 243).

The state of teachers in Australia compared to other OECD countries

Teachers' pay in public primary and secondary schools is high in absolute terms, and also compares well with GDP per capita.

In Australia in public primary and secondary education, starting teachers' salaries and salaries after 15 years' experience are well above the OECD average according to data reported by countries from official teachers' pay scales at starting, mid-career and top-of-the-scale points (expressed in US dollars converted using Purchasing Power Parities). Primary teachers who are new to the profession are paid a starting salary of \$US 26 887, which is well above the OECD mean of \$US 21 469. Australian primary teachers with 15 years' experience are – following Switzerland, Korea, Japan and the United States - the fifth highest paid out of all OECD countries at \$US 38 297 (OECD average \$US 29 407). **If one compares the statutory salary of a primary teacher with 15 years' experience with the average GDP per capita, the ratio at 1.43 considerably higher than the OECD average level of 1.32** (see page 339, Table D6.1).

This trend is similar in secondary education, where starting salaries of secondary teachers in Australia (\$US 26 946) exceed the OECD averages of \$US 22 727 in lower secondary and \$US 23 808 in upper secondary education. It is interesting to note that there is very little difference between mid-career (i.e., teachers with 15 years' experience) and end-of-career salaries in countries such as Australia, Denmark, England, New Zealand and Scotland, where **it takes between 8 and 11 years for lower secondary teachers to attain top salary**.



The ratio of students to teaching staff in Australia is comparable to or slightly below the OECD average for all levels of education, but is particularly low at university level.

The ratio of students to teaching staff in primary and secondary education varies widely between OECD countries – from 10 to 32 in primary education. **In Australia, the ratio of students to teaching staff in primary and secondary education is comparable to or slightly lower than the OECD average.** The average ratio of students to teaching staff in secondary education, for example, is 12.6 compared to the OECD average of 14.3.

At university level, however, Australia records the seventh lowest ratio of students to teaching staff after Iceland, Sweden, the Slovak Republic, Germany, Japan and the Czech Republic, with 14.8 students per full-time equivalent teacher (see page 293, Table D2.2).

Use of information technology in schools

Results from the Programme for International Student Assessment (PISA) show that 15-year-old students in Australia have greater access and use of computers in school compared to students in most other OECD countries.

Results from the Programme for International Student Assessment (PISA) indicate that in Australia, a typical 15-year-old attends a school in which there is **one computer for every five students, which is the lowest ratio of students to computers in all OECD countries. Importantly, this ratio varies little according to the geographical location of the school.** So students attending a school located in an area of fewer than 3 000 people have the same opportunity to access a computer as students attending a school located in a city of over one million people (see page 302, Table D3.1).

Compared to other OECD countries, **a very high percentage of 15-year-olds in Australia reported that computers are available to use in school at least a few times each week** (82 per cent) (see page 305, Table D3.4). Forty-two per cent of 15-year-olds in Australia also reported that they use computers to help them learn school material at least a few times per week, compared to the OECD average of 35 per cent (see page 306, Table D3.6).

On average in OECD countries, 15-year-old males reported a significantly greater confidence and perceived ability to use computers than females. However, gender differences are smallest in Australia, New Zealand, Scotland and the United States (see page 313, Table D4.1).

Investment in education

Overall investment in education from public and private sources is comparatively high by OECD standards, although Australia displays relative under-investment at the pre-primary and upper-secondary levels of education.

In 1999, Australia spent an equivalent of 5.8 per cent of its GDP on education, a comparatively high amount relative to the OECD benchmark, at 5.5 per cent of GDP.

Total expenditure on education is noticeably above-average for primary, lower secondary and tertiary education, while **Australia spends comparatively less than other OECD countries on pre-primary and upper-secondary education** (see page 172, Chart B2.1c).

In absolute terms, investment in education increased by 26 per cent since 1995, driven by a dramatic increase of private spending at all levels. In the meantime, public funds were re-deployed from tertiary



to primary and secondary education, resulting in a 12 per cent decrease of absolute public expenditure at the tertiary level of education.

In 15 out of 18 OECD countries, public and private investment in education increased between 1995 and 1999 by more than 5 per cent. This was the case in Australia, where there was a comparably high increase of 26 per cent in absolute public and private spending on educational institutions for all levels of education between 1995 and 1999 (see page 173, Chart B2.2).

In Australia, this high increase in overall spending resulted from a **dramatic increase of private spending between 1995 and 1999, by 37 per cent in primary to post-secondary education, and 43 per cent in tertiary education.**

Over the same period, **public spending on primary to post-secondary education increased by 36 per cent, but public expenditure decreased by 12 per cent in absolute terms at the tertiary level of education (see page 173, Table B2.2).**

Relative to GDP, total government expenditure on education is comparatively low compared to other OECD countries, and remains stable compared to 1995.

The increase in public spending on education observed in absolute terms overshadows that **public expenditure on education remained stable relative to GDP in Australia between 1995 and 1999, at 5.0 per cent.**

In 1999, OECD governments spent on average 5.2 per cent of their GDP on education. At 5.0 per cent, government **spending on education is comparatively low in Australia.** By contrast, the New Zealand government spent 6.3 per cent of GDP on education, while this ratio reached more than 7 per cent of GDP in Denmark, Norway and Sweden (see Table B3.1, page 178).

Relative to the public budget, **Australia devotes 14.6 per cent of total government expenditure to educational institutions, up from 13.4 per cent in 1995 (OECD 1999 average 12.7 per cent) (see Table B3.1, 178).**

Expenditure per student is higher than in other OECD countries in absolute terms, but in pair with the OECD average relative to GDP per capita.

Australia spends US\$ 4 858 per primary student and US\$ 6 850 per secondary student, slightly more than the corresponding OECD averages (US\$ 4 148 and US\$ 5 465 respectively).

At the university level, **Australia spends PPP US\$ 11 725 per tertiary student, which is well above the OECD average of \$US 9 210.** (see page 158, Table B1.1). At the same time, because Australia manages to keep the length of study short (2.5 years), the cumulative total cost per tertiary student is, at US\$ 29 665, below the OECD average and only around about half the level in Austria, Sweden and Switzerland (see Table B1.4, page 160).

While spending per student in Australia is slightly higher than the OECD average in absolute terms, **expenditure per student is just around the OECD average when looking at spending per student in relation to GDP per capita.** The proportion of national income spent per student is 19 per cent of GDP per capita at the primary level (OECD average 19 per cent), 27 per cent at the secondary level (OECD average 25 per cent), and 46 per cent at the tertiary level (OECD average 44 per cent) (see page 159, Table B1.2).



Australia spends large amounts of public subsidies on households and other private entities, especially so at the tertiary level. Student loans account for half of these public subsidies.

OECD countries spend, on average, 15.9 per cent of their public budgets for tertiary education on subsidies to households and other private entities. **In Australia, public subsidies account for 32.3 per cent of public spending on tertiary education, more than half of which comprises subsidies in the form of student loans**, which correspond to the Higher Education Contribution Scheme (see Chart B5.2, page 199).

At the primary and secondary level, public subsidies account for 4.3 per cent of public expenditure on education, 1 percentage point above the OECD average, but below the Danish and Swedish levels, above 13 per cent of total public expenditure on education (see page 104, Chart B5.2).

At the tertiary level, Australia reports very high levels of spending on R&D and ancillary services compared to other OECD countries.

Spending on research and development activities and ancillary services provided by tertiary institutions (e.g., student welfare services, transport, meals, housing) often comprise a large proportion of educational expenditure at the tertiary level. This is particularly marked in **Australia, which reports the fifth highest level of R&D spending in tertiary institutions in the OECD (0.43 per cent of GDP) and the fourth highest level of spending on ancillary services (0.09 per cent of GDP)** (see page 207, Table B6.1).

This in turn translates into high expenditure per student for such services – \$US 674 per student on ancillary services (OECD average \$US 247) and \$US 3 338 on R&D activities (OECD average 2 264). Discounting this amount brings the remaining teaching-related spending per university-level student in Australia down, closer to the OECD average (see page 208, Table B6.2).

A large number of Australian schools are publicly subsidised and privately managed.

In Australia, students are either enrolled in schools that are publicly financed and managed (72.8 per cent of primary students and 69.1 per cent of secondary students) or schools that are financed publicly and managed privately, which use the voucher system (27.2 and 30.9 per cent respectively). The voucher system, whereby schools are run by private entities but funded predominantly through the public purse, with the aim to reduce barriers to the participation of students from lower income groups, is also used in Belgium, Korea, the Netherlands and Spain, where enrolment in government-dependent private schools is more than 20 per cent at the primary or lower-secondary levels. (see Table C2.4, page 234).

Outcomes of education

Results from the Programme for International Student Assessment (PISA) show that the reading, mathematical and scientific literacy performance of 15-year-old students is significantly higher compared to other OECD countries, although Australia has one of the highest overall variation in reading performance.

Results from the Programme for International Student Assessment (PISA) indicate that more than **15 per cent of 15-year-old students in Australia, Canada, Finland, New Zealand and the United Kingdom reach the highest level of proficiency in reading literacy**. In Australia, almost 18 per cent of 15-year-olds achieve this level of proficiency, compared to the OECD average of 9 per cent (see Table A5.1, page 71). **Fifteen-year-old students in Australia also score significantly above the OECD**



average on the PISA mathematical and scientific literacy scales (see Tables A6.1 and A6.2, pages 80-81).

Australia has one of the highest overall variation in reading performance, but only a comparatively small proportion results from differences between schools. Most variation occurs within schools, suggesting that individual schools need to cater to a more diverse client base. In Australia, discounting differences between states and territories reduces the between-school variation in student performance from 21 to 19 per cent of the OECD average between-student variation (see Table A7.1, page 90).

Fifteen-year-olds in Australia reported receiving more support from their teachers compared to students in other OECD countries. Eighty per cent of students in Australia reported that in most or every lesson, teachers help them with their work, compared to the OECD average of 59 per cent. Similarly, 77 per cent of 15-year-olds in Australia reported that the teacher gives students an opportunity to express opinions, compared to the OECD average of 65 per cent (see Table D5.1, page 327).

Australians have similar levels of participation in the labour force and unemployment rates compared to other OECD countries, although women have comparatively greater access to employment.

Across OECD countries, **more education brings large rewards for individuals**, in terms of employment prospects and earnings. It is difficult to relate such differentials to the current output and performance of education systems, given that various demand and supply factors are at play which were shaped over many decades. **In Australia, these differentials appear to be comparable to or smaller than in the majority of OECD countries.**

For example, **labour force participation rates rise uniformly with educational attainment and are comparable to other OECD countries for men and women in the age group 25 to 64 years.** While 92 per cent of male university graduates in the 25-64 age group are in the labour force (OECD average 93 per cent), 79 per cent of those without an upper secondary qualification are in the labour force (OECD average 77 per cent). (see Table A11.1, page 117).

Similarly, while **unemployment among 25 to 64-year-old men** are broadly comparable to that in the majority of OECD countries for all levels of education (i.e., 5.2 compared to the OECD average 5.0), **for women in both the 25 to 64 and 30 to 34 age groups, unemployment rates are consistently lower compared to the OECD average** (see Table A11.2, page 118).

High employment rates among students and low ratios of unemployed non-students has helped to create a favourable labour market for young Australians.

The **high employment rates among students in such countries as Australia** (29.0 per cent of the youth population aged 15-19 years, compared to the OECD average of 12.5) and the **relatively low ratios of unemployed non-students** may reflect a generally **more favourable labour market for young people**, regardless of whether they are still in education or have already completed it. There is also a belief that early contact with the labour market may facilitate subsequent integration into the labour force, because of greater familiarity with job search and contacts with prospective employers (see Tables C5.1 and C5.2, pages 259 and 262).

While, as in other OECD countries, a greater proportion of men than women participate in work-study programmes, more young Australian women than men work while in education.

Although the employment status of men and women is broadly similar during the years spent in education, there is a greater participation by men in work-study programmes in all OECD countries. In



Australia for the age group 15 to 19 years, 10.8 per cent of men participate in work-study programmes compared to 3.7 per cent of women. Interestingly, in Australia, more women than men in the age group 15 to 24 years combine work outside school hours with education. In Australia, for the age group 15 to 19, for example, 25.2 per cent of men compared to 33.0 per cent of women work while they are studying (see Tables C5.1a and C5.1b, pages 260-261).