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TE TĀHUHU O TE MĀTAURANGA

How does New Zealand's education system compare?

OECD's Education at a Glance 2011



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INTRODUCTION

Every year, the Organisation for Economic Cooperation and Development (OECD) publishes *Education at a Glance*, a set of indicators that compares the education systems of its 34 member countries, and eight participating partner countries. These indicators give us a good opportunity to view the characteristics and performance of our system against the systems of other countries. Despite some limitations, the Education at a Glance indicators are considered to "reflect a consensus among professionals on how to measure the current state of education internationally", and probably give us the most reliable and most complete basis for comparison currently available.

Marking OECD's 50th anniversary, an editorial theme this year is on 50 years of change in education, on the growth in participation and attainment over this time, and on OECD's work in the evolving narrative of education in human capital. It also includes country case studies on how indicators are being used as a catalyst for policy change and system improvement. This year's edition contains over 220 tables; up 30% from the previous year.

A new wave of PISA results from the PISA 2009 survey feature significantly in this edition. These include indicators on how socio-economic performance affects reading performance, and on how reading enjoyment affects performance, and on equity and equality in schools.

Also new this year are indicators on:

- upper secondary completion rates,
- vocational attainment - size and labour market outcomes
- earnings premiums net of tax
- stay rates for international students
- student financial support
- an analysis of tuition-fee reforms implemented since 1995;
- additional tables on adults in non-formal learning, and on fields of study

Traditional indicators include;

- levels of educational attainment in the population,
- participation and achievement
- expenditure on education
- employment and earnings outcomes, and returns on educational investments
- international education
- staffing

This summary represents high-level highlights only. Readers are encouraged to check out the full report. The report and all tables and graphs are available online. Some tables are only available online. www.oecd.org/edu/eag2011

Most of these indicators are based on data for the year 2009. For New Zealand, this reflects a period where the effects of the current economic recession have definitely begun to be felt in terms of reduced employment and earnings and increased demand for education. These effects can be seen for New Zealand and most other OECD countries in EAG 2011, and particularly so for younger adults, and those with lower levels of education.

EAG uses the *International Standard Classification of Education* (or ISCED 97) as a common basis for classifying and comparing educational levels. Under ISCED, pre-primary relates to those aged 3 or more, in centre-based education. Pre-primary indicators in EAG, therefore tend to under-represent the full picture of ECE as it is considered in New Zealand. Under ISCED "Upper-Secondary" refers to those with at least a year 12-equivalent school qualification. Those with a year 11-equivalent qualification, such as NCEA 1 or school certificate, are counted as "below upper secondary". "Upper-Secondary" also includes Level 1-3 post-secondary study. For countries like NZ, both these points can have a reasonable impact on how results for "upper secondary" are interpreted. The term "tertiary-educated" in EAG relates just to diploma level and above. Level 1-3 certificates are classified with "upper secondary" and level 4 certificates are classified as a separate "post-secondary non-tertiary" group.

NEW ZEALAND'S EDUCATION SYSTEM AT A GLANCE

How Educated is our population?

- New Zealand has a high proportion of tertiary qualified adults – in particular, a very high proportion with diploma qualifications. With 40% of 25 to 64 year-olds with a diploma or higher, we are ranked 5th in the OECD. At 17%, we have the third highest proportion of adults with a diploma, and when this is combined with level 4 certificates we have the highest level of attainment in the OECD for these types of qualifications.
- However, with 23% of adults with a degree or higher, we rank about average only in degree-educated – and behind Australia, UK and US. The drop in this rate from 25% in last year's EAG to 23% this year reflects a revision to data, not a real decline.
- NZ has one of the highest levels of population with one-year upper secondary qualifications (at 7% of 25 to 64 year-olds. One-year upper secondary qualifications are relatively uncommon in OECD countries, with only UK and Iceland having levels at or above NZ's level.
- Despite high levels of tertiary-qualified adults, one in five adults aged 25 to 34 years does not have a year 12-equivalent school qualification or higher, a rate which is about the OECD average.
- While largely similar to last year's results, the longer-term trend continues towards a higher-educated population, consistent with many OECD countries.
- A new indicator in EAG 2011 looks at the size and labour market outcomes of vocational education and training. An estimated 23% of 25-64's have a vocational level 1-4 qualification as their highest level of education. NZ is ranked 20th in this measure, below the country average of 30%, and slightly above Australia level of 18%. This level of education is more common in Germanic countries where there is a separate vocational stream in schools. Austria and Germany, for example, have over 50% of their adult population with this as their highest level. Employment rates for vocationally-educated adults at this level is on average 5-10 percentage points higher than those with a general qualification across OECD. In NZ's case, there are similar levels of employment for both groups (82%).

Participation and achievement

- More of our three and four year-olds are in early childhood education, and more of our adults are in post-secondary education, than in other OECD countries, but fewer of our 15 to 19 year-olds are enrolled beyond the first year of upper secondary.
- However, there was a marked gain in 15 to 19 year-old participation in 2009. The percentage of 15 to 19 year-olds in education rose from 74% (4th lowest) in 2008 to 81% (and 8th lowest). This rate is now similar to that in Australia and US, but still lower than most European countries. The OECD average is 82% and the EU average is 86%.

- There have been marked increases in participation across all ages of upper secondary: 15 year-olds from 94% to 100%; 16 year-olds from 86% to 94%; 17 year-olds from 69% to 78%; 18 year-olds from 23% to 29% and 19 year-olds from 11% to 14%. But our school-based enrolment rates still lag noticeably behind the OECD average for those aged 17 and above. On the other hand, NZ has above average enrolment in post-school settings at these ages, and these rates further increased in 2009. When participation in school and tertiary settings is combined we still have rates of enrolment that are slightly below the OECD average for ages 15 to 19.
- Part of the improvement in participation is being supported by recent policy changes aimed at keeping youth in education. And in part also, the increase this year also reflects improvements to reporting for youth in low-level post-secondary education. However, the increases are likely also to be largely due to the effects of the recession, which has seen a shift from youth in employment or youth in education and employment – to more youth in education only. But also to more youth not in education or employment (NEET). NZ's rate in this latter measure increased from 8.4% of 15 to 19 year-olds in 2008 to 12.4% in 2009, and our ranking slipped to 6th worst. Increases in both enrolments rates and in NEET rates occurred across a number of OECD countries in 2009.
- Upper secondary indicators are impacted in two ways – the minimum requirement to have a 2 year qualification, and the inclusion of level 1-3 post-secondary qualifications. Both are significant enough in NZ to change results for the traditional upper secondary school-age cohort indicators reflecting many OECD systems.
- While more of our 15 to 19 year-olds leave school with less than a year 12 qualification, they are more likely to be working or enrolling in post-secondary study than counterparts overseas. Despite this, New Zealand has one of the higher proportions of 15 to 19 year-olds neither in employment nor education. Many of this group will enrol in post-secondary study later. NZ has one of the highest rates of entry to tertiary education at older ages.
- Participation of our 3 and 4 year-olds at around 91% is 10th highest in the OECD, above that of Australia, UK, US and Ireland, and well above the OECD average of 70%.
- Our education participation performance is also high at older age groups. Amongst older age groups New Zealand, along with Australia, has the highest rate of enrolment in the OECD.
- The proportion of New Zealanders attaining upper secondary level of education (the equivalent of NCEA Level 2) has increased significantly over the past four years, but remains slightly below the OECD average. However, the proportion of males attaining this level remains particularly low, while the proportion of females is above the OECD average.
- There is a significant jump in reported upper-secondary graduation rates this year, from 78% to 90%. NZ's ranking has moved from below average to 9th and well above the average of 82%. However, this is for the most part not a real increase. This indicator is confounded by the way one-year upper-secondary qualifications are treated across different indicators. While they are not considered as upper-

secondary attainment under international definitions, and are not included under any other EAG other indicators for upper-secondary achievement, they are included for the graduation rate indicator. While we have historically not included our one-year upper secondary graduates, we did start reporting them for 2009 and hence the jump in trends. NZ is one of a handful of countries along with UK and Iceland which has a significant one-year upper-secondary qualification.

- New Zealand has a high rate of entry into degree and diploma level programmes. We have the highest graduation rate for post-secondary non-tertiary qualification (level 4 certificates). The rate of graduation is considerably higher for females than for males. International students and older students are known to contribute to this result; When adjusted for international and older graduates, the rate at which the country produces tertiary-qualified graduates is about average. By age 29, New Zealanders have spent about as much time in education as the OECD average.
- For the first-time EAG 2011 contains a cohort-based measure for school-based upper secondary rate of completion. Of the 20 countries able to report this measure, NZ's has a rate of 59% of kids entering year 11 who have gained a year 12 qualification or higher after 3 years. This figure is in the bottom group of countries reporting this, and well below the country average of 68%. A further 11-12% of those entering year 11 leave with a one-year qualification only. NZ like a handful of other countries also has a significant attainment of level 1-3 qualifications in post-secondary settings, which are not included here but are classified as 'upper secondary' under international definitions.
- NZ continues to have one of the highest rates of part-time study in tertiary education. At 40% for degree and above-level students and 60% at diploma level – we are ranked 4th and 5th highest respectively.

New Zealand's investment in education

- New Zealand's investment in education is below the OECD average in per student terms, yet forms an above average share of GDP. Our relative wealth and demographic structure lie behind these apparently differing results. When compared to GDP per capita, expenditure per student it is closer to, though below average. Of government expenditure, a relatively high proportion is devoted to education. Government education spending represents an above average percentage of GDP, particularly at tertiary level where it includes a high proportion of student support.
- Expenditure per student increased across all levels of education between 2007 and 2008. At pre-primary levels, in particular, expenditure per student rose significantly, reflecting in part – effects of 20 hours ECE, and in part improvements to the reporting of private expenditure. NZ now has the seventh highest per child expenditure on pre-primary education, the only level where we are ahead of the OECD average.
- A low proportion of public funding of tertiary education is paid to tertiary institutions and a high proportion to students via student support. However, the extent of public funding going to individuals is arguably overstated as a sizable proportion of loans are for fees and paid directly to the institutions. The share of public funding

paid directly to institutions, as a percentage of GDP, is in line with the OECD average of 1%.

- Of about half of OECD countries reporting, NZ has one of the highest levels of financial support for students. An estimated 90% of students receive support via a loan or a grant, behind UK and Netherlands only. Australia's figure is 81%. In terms of student grants, NZ is about average at 10% same as Australia.

Economic benefits of education

- Continuing a change of trend in 2008, EAG results this year show more significant negative impacts of the global recession on employment rates with a worsening of rates across most countries, including New Zealand. As expected, the impact has been felt most for the youngest groups and the least-educated groups.
- As with all countries in the OECD, employment and earnings increase with level of education, but New Zealand has one of the smallest differences in earnings between adults with school and adults with tertiary qualifications, in particular diplomas. This reflects lower levels of income and fairly compressed wage differentials in New Zealand.
- It also partly reflects supply. New Zealand is in a group of countries, including Scandinavian countries and Australia, which have higher levels of tertiary qualified adults, and lower returns. This indicator is one where bigger does not necessarily mean better; large differences in earnings can reflect supply issues.
- Comparisons of returns to tertiary education are also affected by the proportion of tertiary-educated with a degree or higher. NZ has one of the lowest proportions of its tertiary-educated with a degree or higher, and this acts to lower relative earnings. Lower earnings differentials are also affected by a high proportion of our degree-educated born and educated overseas.
- The relative position for both public and private returns on education in New Zealand increased markedly in EAG 2011 (as measured by both Net Present Value and Internal Rates of Return measures. This reflects ongoing enhancements to the methodology used to calculate these indicators. Notably, the inclusion of student support into the calculations for EAG 2011.
- While traditional earnings indicators relate to gross earnings, a new indicator looks at graduate earnings, net of tax. NZ has the highest rate of net income as a percentage of labour cost. While NZ is at the bottom end of gross earnings premiums, once these are adjusted for tax – take-home earnings premiums we are ranked closer to the country averages.

Non-economic benefits of education

- New in EAG 2011 are indicators on comparing education with voting, volunteering, life satisfaction and civic engagement. Like all other countries, these measures for NZ all show a positive relationship with increased levels of education. NZ has the second highest level of volunteering (over all levels), and is the top 10 countries for all other measures.
- New Zealand health status and interest in politics in New Zealand increase with level of education, as in other OECD countries. New Zealand has one of the

highest levels of self-reported health status across any level of education, and the smallest difference between least and most educated. We also have a more uniform interest in politics; New Zealanders with low qualifications have more interest in politics than similarly-educated adults in other countries, while tertiary educated adults have less; and overall, we are about average.

New Zealander's in tertiary study overseas and overseas tertiary students in New Zealand

- New Zealand remains a net importer of tertiary students; many more come to NZ for tertiary study than leave NZ for tertiary study overseas.
- NZ has the 10th largest market in absolute market share terms (at 1.9%), up slightly from last year.
- In 2009, NZ retained its fifth ranking in terms of proportion of tertiary-level students who were international (15%). While numbers had declined between 2005 and 2008, they increased slightly in 2009. NZ ranked second highest (with 18%) at diploma level, and 5th highest (with 12%) at degree level.
- The level of international doctorate students has continued its significant rise since 2005 (since the introduction of domestic-fees status for such students). Over one in three doctorate-level students were international (the third highest level after UK and Switzerland). When NZ residents born overseas are included – nearly one in two students is a non citizen, the highest level in the OECD.
- Improved international data indicates that an estimated 13,000 NZ citizens were recorded as studying overseas – around 5,000 in OECD countries. The most common study destinations remain as Australia, United States and the United Kingdom.
- A new indicator in EAG 2011 shows than an estimated 21% of international students go on to reside in NZ after study. This puts NZs 10th out of the 14 countries for which this is reported. Rates for Canada and Australia are 33% and 30% respectively.

Staffing

- New Zealand student to teacher ratios are lower than OECD average levels at pre-primary and upper secondary levels, but are higher at other levels of education. At 1 to 10, NZ has the fifth lowest student to teacher ratio at pre-primary level (specifically ages 3 and 4). The OECD average is 1 to 14. At 1 to 16 and 1 to 14, NZ is about average at primary and secondary levels respectively. Ratios at tertiary levels are slightly larger than average at 1 to 16 for diploma and 1 to 18 for degree and above.
- Teacher salary information is not included for NZ this year, but in past years has traditionally shown below average salary rates but above average progression through salary scales. As with other measures of expenditure, when related to GDP per capita or the earnings of the tertiary qualified population, New Zealand teachers fare better than their OECD counterparts.

How background, attitudes and equity factors affect student performance at school

- In this edition, the PISA 2009 data, released in December 2010, is explored to look into how student achievement is related to a student's background and attitudes.
- The impact of socio-economic background of student achievement can be seen as a measure of the extent to which an education system tries to address the provision of equitable learning opportunities. The difference in reading performance between students from various socio-economic backgrounds is strong, particularly in France and New Zealand.
- Not only is the average difference between students from different socio-economic backgrounds higher in New Zealand (52 score points) than most other countries (OECD average: 38 score points) the strength of this relationship is also above the OECD average.
- In general, students with an immigrant background are socio-economically disadvantaged and tend to show lower levels of performance even after taking socio-economic background into account.
- When socio-economic background is taken into account the difference in performance between immigrant students and students without an immigrant background is reduced for most OECD countries but not for New Zealand.
- Unlike many other OECD countries, in New Zealand first generation immigrant students have an average reading performance similar to students without an immigrant background. Second generation immigrant students have significantly lower performance than both first generation students and those without an immigrant background.
- Despite the strong association between socio-economic status and reading performance, many students from disadvantaged backgrounds perform better than expected. In a further analysis of the relationship between socio-economic background and achievement, about 37% of disadvantaged students in New Zealand were identified as resilient meaning that they perform much better in reading than would be predicted from their socio-economic background. This is higher than the OECD average of 31%.
- PISA shows strong associations between reading enjoyment and performance in reading. Across OECD countries, the quarter of students who enjoy reading the most score about 103 score points higher in reading than the quarter that enjoy reading the least. In New Zealand this is about 127 score points.
- Across the OECD, 37% of students reported that they do not read daily for enjoyment at all. In New Zealand this proportion is lower at 31%.
- An additional new section in EAG 2011 using PISA data focuses on the prevalence of vulnerable students and the extent to which certain subpopulations are at greater risk of being vulnerable such as having low literacy levels or being disengaged from school.
- In New Zealand, the risk for having a low reading score was: about two times as large (1.98) for low socio-economic status students (higher than most OECD countries and consistent with the earlier findings reported in EAG around the effect of socio-economic status); 1.23 times as large for immigrant students (less than the

OECD average of 1.5 times); and New Zealand boys were 1.67 times more likely than girls to have a reading score below level 3 compared to 1.54 times across the OECD. New Zealand students whose parents have low levels of education have a lower level of risk (1.51 times) than the OECD average (1.72).