EDUCATION AND THE TASMANIAN ECONOMY

Talk to Tasmanian teachers

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by

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Note: The views expressed here are solely those of the author and should not be interpreted as representing those of any other entity or organization with which he is associated.

Over the Easter Break, I read a biography of Sir Douglas Copland, who, among many other things was the first Professor of Economics at the University of Tasmania in the early 1920s. This biography records that Copland once said, "not merely financially, but in the moral and social field, education is the most profitable investment a community can make"[1].

I couldn't have put it better myself.

There is now an enormous accumulated body of evidence demonstrating a strong correlation between educational attainment and economic outcomes – both for economies as a whole, and for individuals.

This research suggests, for example, that each additional year of schooling among the adult population boosts long-run economic growth by between ¼ and ¾ of one percentage point per annum – or by between 6 and 19% in the long run, after controlling for other factors that also influence long-run economic growth[2].

In May last year, when 66.3% of Australians aged 15 and over had a job, and 5.8% of them were unemployed:

- 79.8% of people with a bachelor's degree of higher (13½ percentage points more than the average) had a job, and only 3.2% of them were unemployed;
- 74.7% of people with a diploma or associate diploma had a job, and only 5.0% of them were unemployed;
- 73.3% of people with some kind of post-school certificate had a job, and 6.0% of them were unemployed;
- 65.8% of those with no qualification beyond Year 12 had a job, and 6.7% of them were unemployed;
- but of those who had left school at Year 10 or earlier, only 42.2% (24 percentage points below the national average) had a job, and 9.9% of them (more than 4 percentage points above the national average) were unemployed[3].

Not only is there a clear correlation between one's level of education and one's chance of being employed, there is also a clear correlation between one's level of education and how much he or she gets paid.

Research by Andrew Leigh – who was one of Australia's most outstanding (and prolific) academic economists before he entered the Federal Parliament at the 2010 election – shows that:

- people who complete Year 12 have lifetime earnings which are 42% higher than those who leave school at Year 10, and 64% higher than those who do not go beyond Year 9;
- the lifetime of earnings of people who complete a bachelor's degree are 45-50% higher than those whose highest educational qualification is Year 12 – while those of people with a higher

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[1] Marjorie Harper, *Douglas Copland – Scholar, Economist, Diplomat* (The Miegunyah Press, Melbourne, 2013), p. 446.

[2] See, eg, Robert Barro, 'Education and Economic Growth', *Annals of Economics and Finance*, Volume 14, No. 2 (2013), pp. 301-328 (http://down.aefweb.net/WorkingPapers/w571.pdf); Sawami Matsushita, Abu Siddique and Margaret Giles, 'Education and Economic Growth: The Case of Australia', *Review of Applied Economics*, Volume 2, No. 1 (2006), pp. 111-127.

[3] ABS, *Education and Work, Australia*, May 2014, catalogue no. 6227.0 (December 2014).

degree are 66-74% higher than those of people whose highest educational qualification is Year 12[4].

There is also a more recent body of research showing that the quality of education a person receives matters even more than the quantity of it. As a report published earlier this year by the OECD[5] notes, "there has historically been a strong and direct relationship between the cognitive skills of national populations, measured by international tests of mathematics and science achievement, and countries' long-run economic growth. Moreover this evidence provides strong reason to believe that the relationship is causal".

This report suggests that if Australia (one of 76 countries covered by the report) were able to raise its student performance by the equivalent of 25 PISA (Program for International Student Assessment) points over the next 15 years, that would add US$3.9 trillion (that's A$5.4 trillion at today's exchange rate) to Australia's GDP over the working lifetime of students starting school this year – that is, by 2095. That's equivalent to lifting the average economic growth rate over this period by 0.5 percentage points per annum

For a country like Australia whose PISA scores typically exceed the OECD average, raising the average score by 25 points is perhaps an unrealistic objective. But the same OECD report shows that raising all students to a minimum of 420 PISA points – equivalent to 'minimum basic skills' – by 2030 would boost Australia's economy by U$1.4 trillion (A$1.9 trillion) by 2095, equivalent to a 0.2 pc pt pa increase in Australia's long-run economic growth rate.

Given all of this evidence – and I have only provided a snapshot of it here – we clearly have a big problem in Tasmania:

- only 16.9% of Tasmanians aged 15-74 have a bachelor degree or higher, compared with 24.1% of all Australians in that age range;
- 34.1% of Tasmanians aged 15-74 have never progressed beyond Year 10, compared with 22.2% of all Australians in that age range[6].

And there's no reason to be confident that these gaps are narrowing.

The most recent ABS data show that Tasmania's apparent retention rate from Year 10 to Year 12 was 69.4% in 2014, more than 13 percentage points below the national average of 82.5%. This is the widest 'gap' between the Tasmanian and national figures since 1997[7].

And yet retention rates only measure those who enrol at the beginning of a school year: they say nothing about whether those students successfully complete their courses.

Calculations by Eleanor Ramsay and Michael Rowan of the University of Tasmania suggest that only 43.7% of Tasmanians who were in Year 10 in 2011 had completed their TCE by 2013. As they put it,

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[4] Andrew Leigh, 'Returns to Education in Australia', *Economic Papers*, Volume 27, No. 3 (September 2008), pp. 233-249 (www.andrewleigh.org/pdf/ReturnsEducationAustralia.pdf)

[5] Eric Hanushek and Ludger Woessman, *Universal Basic Skills – What Countries Stand to Gain*, OECD (May 2015).

[6] ABS, *Education and Work, Australia*, May 2014, catalogue no. 6227.0 (December 2014).

[7] ABS, *Schools, Australia*, 2014, catalogue no. 4221.0 (February 2015).

"less than half our youth are graduating from high school – by which we mean, as everywhere else in Australia, gaining their Year 12 certificate"[8].

The equivalent percentage of Victorian youth is over 80%.

All too often statistics like these are 'explained away' by the relatively higher proportion of Tasmanian students who come from 'low socio-economic status' (SES) backgrounds.

Of course it is true – and regrettable – that socio-economic status affects educational participation and attainment.

But even from among Tasmanian students from high SES backgrounds, only 64% completed Year 12 in 2013, compared with 79% nationally. Among Tasmanian students from low SES backgrounds, the position is far worse – with only 39% of them completing Year 12 in 2013, compared with 68% from low SES backgrounds nationally[9].

Nor can Tasmania's poor educational participation rates and levels of educational attainment be 'explained away' by our more dispersed population.

Again according to Eleanor Ramsay and Michael Rowan, more than 50% of people living in regional Tasmania (that is, outside of Hobart) have no qualifications beyond Year 10, which is higher than any non-metropolitan area of Australia except for the Northern Territory beyond Darwin. In regional Victoria, only 36.6% of people have no qualifications beyond Year 10; in regional South Australia, only 35.4% of people have no qualifications beyond Year 10[10].

Here in Hobart, despite a relatively high proportion of the population with PhDs (thanks to the University, the CSIRO and the Antarctic Division), 39.3% of people have no qualifications beyond Year 10 – higher than for any other State capital (Sydney 35%, Brisbane 33%, Perth 30%, Adelaide 28% and Melbourne 27%).

As Rowan and Ramsay say, "we are a community in which relatively low levels of educational attainment have become the norm" – a perception which is reinforced by the long-standing practice at government high schools of describing the social events which their students stage at the end of Year 10 as "Leavers' Dinners", and of course by the fact that those same high schools traditionally only go up to Year 10.

It might have been possible, in the Tasmanian economy which Robert Cosgrove and Eric Reece built – and which Robin Gray tried to preserve with borrowed money – for people to assume that a Year 10 education was sufficient to ensure a reasonably secure job at decent wages for a person's working life.

But, although many of the industries which were established in that era remain important contributors to our economy, that assumption has not been true for many years – and it will be even less valid in the Tasmanian economy of the future.

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[8] Eleanor Ramsay and Michael Rowan, 'A note on Year 12 retention and attainment in Tasmania' (12th July 2014).

[9] Productivity Commission, *Report on Government Services 2014,* Part B: Child Care, Education and Training (January 2014).

[10] Eleanor Ramsay and Michael Rowan, 'Tasmanian education today: Digging around in the data' (May 2014).

In March 2006, according to the earliest available data from the Federal Employment Department's Internet Job Vacancies survey, 39% of the job vacancies in Tasmania were for 'labourers and sales workers' – jobs for which, arguably, a Year 10 education might suffice. In March 2015, only 26% of the vacancies in Tasmania were for such jobs. Conversely, in March 2006, fewer than 19% of the vacancies in Tasmania were for 'managers and professionals'; by March 2015m almost 29% of the advertised vacancies were for those categories of worker[11].

Our poor levels of educational participation and attainment are arguably the single most important reason why we remain, by a wide margin, the poorest State in Australia, with a per capita gross State product (GSP) some $19,600 – or nearly 29% - below the national average in 2013-14[12].

The "Three Ps" framework used to generate long-term economic forecasts in the Commonwealth Government's *Intergenerational Reports* can be used to explain why this is so:

- 37% of this gap – or $7,350 per head (roughly) – is due to the fact that only 45.3% of Tasmanians had a job in 2013-14, 4.3 percentage points below the national average;
- 40% of this gap – or $7,800 per head (roughly) – is due to the fact that those Tasmanians who did have jobs worked an average of 2.1 fewer hours per week than employed Australians, which is equivalent to about 3½ fewer weeks of work per year; and
- 23% of this gap – or $4,300 per head (roughly) – stems from the fact that Tasmanians with jobs produced $12.20 less by way of goods and services for each hour that they worked than the national average – that is to say, the productivity of Tasmanian workers was, on average, 15% below the national average.

Low levels of educational participation and attainment don't explain all of these differences – some of them are due to Tasmania's population being older, on average, than that of the mainland, and some are due to differences in the structure of Tasmania's economy compared with that of the rest of Australia.

But they do account for part of each of them.

The higher the level of educational attainment a person has, the more likely he or she is to have a job; the more hours he or she is likely to work, on average; and the higher his or her productivity is likely to be.

There is, in my opinion, nothing that would do more, over the long run, to narrow the gap between Tasmanians' material living standards and those of other Australians than to raise the level of educational participation and attainment of Tasmanian children and (as far as possible) adults.

And for that reason there is no policy of the present State Government that I support more strongly than the policy of extending the opportunity to obtain a complete secondary education to children attending all government high schools – although I believe that ultimately this will require high schools in urban areas, not just rural ones, to extend all the way to Year 12.

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[11] Australian Government, Department of Employment, *Vacancy Report* (March 2015) (http://lmip.gov.au/default.aspx?LMIP/VacancyReport).

[12] ABS, *Australian National Accounts: State Accounts 2013-14*, Catalogue No. 5220.0 (November 2014).

Another relatively simple change which I think would help to boost retention rates to Year 12 would be to bring the age at which Tasmanian children start school into line with other States and Territories – it is currently seven months higher than NSW and Queensland, six months higher than WA and the Northern Territory, and five months higher than the ACT, Victoria and SA, for no obvious reason – so that fewer Tasmanian children reach the minimum leaving age of 17 during year 11 or 12 and thus feel that they can 'drop out'.

It would also help, I think, if teachers, students and the media stopped regarding Year 10 as an acceptable exit point from the education system. I've got nothing against kids suiting or frocking up and having a good time to mark the occasion of completing Year 10. But calling these events "Leavers' Dinners" sends totally the wrong message.

I also want to emphasize that the below-average rates of educational participation and below-average levels of educational attainment are not the result of inadequate levels of spending on education by successive Tasmanian Governments.

In the 2013-14 financial year, the latest for which figures are available, the Tasmanian State Government spent $12,540 per student on education[13]. That's $1,324, or 12%, more than the average of mainland State and Territory Governments.

Tasmanian Government spending on school education per student has risen by 63% over the past decade, compared with an increase of 47%, on average, by mainland State and Territory Governments.

Unfortunately, this above-average spending isn't delivering above-average educational outcomes for Tasmanian students – otherwise I would be the first to applaud it.

I don't believe there's any evidence to support the idea that Tasmanian children are any less inherently capable of learning than children from other parts of Australia, and therefore need more spent on them in order to achieve results comparable with those attained by children in other parts of Australia.

On the contrary, Michael Rowan and Eleanor Ramsay's analysis of NAPLAN results suggest that Tasmania students do as well as those from South Australia, the State most directly comparable with Tasmania in most respects[14].

Rather, I think it is because Tasmania spends what it spends on education inefficiently – in particular, by having a relatively large proportion of relatively small schools, reflective of an era when transport and communications possibilities were very different from what they are today.

The average Tasmanian government school has 295 students – a figure which has risen by just 4 over the past decade. By contrast, the average government school on the mainland has 362 students – a figure which has risen by 35 over the past decade[15].

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[13] ABS, *Government Finance Statistics, Education, Australia, 2012-13*, Catalogue no. 5518.0.55.001 (May 2014); *Schools, Australia*, 2014, Catalogue no. 4221.0 (February 2015).

[14] Eleanor Ramsay and Michael Rowan, 'Tasmanian education today: Digging around in the data' (May 2014).

[15] Calculations based on data published in ABS, *Schools, Australia*, 2014, Catalogue no. 4221.0 (February 2015).

Whether a school has 295 students or 362, it will still have one principal, probably two assistant principals, the same number of finance and administration staff, the same number of librarians, and probably the same number of cleaning and grounds staff.

Hence the Tasmanian government school system employs 19% more non-teaching staff per 100 students than mainland government school systems do, on average.

The Tasmanian government school system also has 7.8% more teaching staff per 100 students than mainland systems – despite there being no evidence that, within the ranges that we are talking about here, smaller class sizes make any difference to student outcomes[16].

So, the answer to the problems of low educational participation and attainment in Tasmania is not emore spending on education.

Rather, the answers lie, I believe, in no small part in:

- cultural change within Tasmanian households, and across the Tasmanian community more broadly, in order that we ascribe a much higher value to educational participation and attainment, and have higher expectations for what our education system can and should deliver; and
- organizational change within the Tasmanian education system, so that we get better outcomes for what is spent.

Andreas Sleicher, the OECD's Director for Education and Skills, and Qian Tang, the Assistant Director-General of UNESCO, put it this way:

> "There is no short cut to improved learning outcomes in a post-2015 world economy where knowledge and skills have become the global currency, the key to better jobs and better lives. And there is no central bank that prints this currency. We cannot inherit this currency, and we cannot produce it through speculation; we can only develop it through sustained effort and investment in people … A culture of education isn't just inherited, it is created by what we do"[17].

They go on to say,

> "Among … all high-income countries the data no longer show a relationship between spending and the quality of learning outcomes … it is not primarily about how much they spend on education, but about how they spend their resources. For example, whenever high-performing education systems have to make a choice between a smaller class and a better teacher, they go for a better teacher."

They also have an important message for the broader community:

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[16] Ben Jensen, *Investing in Our Teachers, Investing in Our Economy*, The Grattan Institute (Melbourne, November 2010), pp. 8-10.

[17] Andreas Sleicher and Qian Tang, 'Education post-2015: Knowledge and skill transform lives and societies", in Eric Hanushek and Ludger Woessman, *Universal Basic Skills – What Countries Stand to Gain*, OECD (May 2015), pp. 9-14.

> “The leaders in high-performing school systems seem to have convinced their citizens to make choices that value education more than other things … Another part is the belief in the success of every child. Top systems expectevery child to achieve and accept no excuse for failure”.

All of us have a role to play in advocating for, and implementing, the changes needed to ensure that future generations of Tasmanians can aspire to live as well as other Australians.