WHAT *DID* HAPPEN AFTER THE HIGH SCHOOL LEAVERS' DINNER?

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1. Background

The Hon. Ruth Forrest MLC presented a series of questions on notice to the Legislative Council seeking data on the percentage of students attaining the TCE according to the (government) school they attended in year 10 (Question 15 of 2014), and college attended (Question 16 of 2014). The answers provided by the Hon. Vanessa Goodwin are available on Hansard for 28 October 2014. Among other information, these answers give the percentage of students from each Tasmanian high school that completed year 10 in 2011 and gained their TCE in 2013, and the percentage of 2012 year 11s attending each college who continued to year 12 and gained their TCE in 2013. We will refer to this as the Legislative Council data.

Pending clarification of the data relating directly to the colleges (question 16), here we discuss just the data related to TCE success for students from individual high schools – that is, according to where they studied in year 10. (Note that all data and discussion concerns government schools only.)

2. How can we use this data?

The point of having such information is not just to see the relative success of each high school in terms of their students' TCE completion rate, but to identify which schools **appear** to be most successful at supporting their students to achieve their TCE - so that good practices can be identified and shared with a view to lifting TCE attainment rates state-wide.

Of course the good practices of a school are not the only things influencing student outcomes. In particular, there is a strong (but not constant) correlation between student success and family background, particularly levels of wealth and parental education. Accordingly, if we take a school where most students come from families with low incomes and with parents who themselves did not complete year 12, and compare this school's TCE attainment rate with those of another school where the opposite is the case, we are not comparing like with like.

To help identify which schools are like and unlike in this respect, governments across Australia use the Index of Community Socio-Economic Advantage (ICSEA). The average ICSEA for all Australian schools is 1000 and the ICSEAs for Tasmanian high schools ranges between 823 and 1107.

We have added the ICSEA for each school to the Legislative Council data to facilitate comparisons. We do this with some concern, however, as we need to be cautious about treating ICSEA as if it were the only or even the most important determinant of the character of a school and in particular its capacity to support students' learning. It is too easy to slip from noting the well known **correlation** between ICSEA and student learning outcomes to assuming that ICSEA **causes** outcomes and that nothing much can be done about it. But we will see that this is not the case as schools with similar ICSEAs have very different levels of success as measured by the proportion of their year 10s completing the TCE (or in other states, their equivalent senior secondary certificate). In other words, the success of some schools in counteracting their students' socio-economic circumstances

overturns the common assumption that students' postcodes determine their educational destiny. This is perhaps the most important thing we can learn from the data.

We have also created a matching data set for South Australian (government) schools, estimating the percentage of 2010 year 10s gaining the South Australian Certificate of Education (SACE) for each high school (in SA years 8-12), area school (R-12) and other schools that go to year 12 (some large suburban schools have sub-schools on the same campus covering the whole range from reception to year 12). While this data set for South Australia is an estimate from publicly available sources (My School and the individual School Context Statements) rather than a formal departmental record, and thus should not be relied upon to be accurate 'to the last student' as it were, it is useful for a couple of reasons:

- First, South Australia is the state most like Tasmania in relation to the relative poverty of the population and thus we can find many South Australian schools with ICSEAs close to those of Tasmanian schools, which makes school to school comparisons more relevant than would be the case with much wealthier and more highly educated populations – e.g. the ACT.

- Second, South Australia reviewed its senior secondary education (including the SACE) in 2004, and subsequently introduced significant changes to the SACE aimed at increasing the percentage of young people staying on to year 12 and gaining their year 12 certificate. The review report, *Success for All,* (http://www.saasso.asn.au/wp-content/uploads/2012/10/SACE_Review_full.pdf) sets out an ambitious policy agenda for making the SACE more relevant to the whole range of young people without lowering the standards required for success, and for supporting their learning to achieve these standards. (This was taken up in the State Strategic Plan, which included a goal to increase the number of 19 year olds who attained the SACE or an equivalent qualification. The 2011 review of the Plan reported an increase in this indicator from 62.6% in 2005 to 75.2% in 2011.)

Using the Legislative Council data set, and our South Australian estimates, we are able to draw tentative conclusions both about the success of individual schools in Tasmania, relative to like schools in the State, and the success of the Tasmanian schools as a whole, relative to another schooling system that is most like Tasmania's in relation to ICSEA. (Which is not to say that 'the data provides the answer' about which schools or schooling systems are 'better' than others, but rather that the data suggests differences which are worthy of detailed investigation at school and system level. That is to say, from a quality assurance and improvement perspective, the data should be a spur to deeper analysis, not a substitute for it. But analysis that does not account for the data can too easily become a rationalisation of whatever is happening. Data keeps us honest, and it keeps us asking questions, even if it does not tell the whole story.)

South Australia is also like Tasmania in another important respect. It has many small schools remote from the capital city. It is worth paying particular attention to this since one explanation often put forward for why Tasmania lags behind the other states in the proportion of our young people completing twelve years of schooling is that our population is very dispersed compared to the other states. That is true in the sense that our capital city is home to a smaller percentage of the State's population than in the other states, but it is false if it is taken to mean that the other states do need to provide programs to year 12 in both small and remote schools in order to meet the needs of all their young people. South Australia has five schools with less than 10 year 10s, and

another 18 with between 10 and 20 year 10s. In total this is more than half the number of all schools in Tasmania that offer year 10 (55) according to the data presented to the Legislative Council (and noting the qualification regarding schools with less than 10 students explained below).

3. What the data shows.

Let us continue with this theme of small schools. In South Australia the size of the year 10 class does not have much bearing on how successful the students are in terms of continuing on to gain their SACE.

Table 1: % of 2010 SA Year 10 students gaining their SACE in 2012 in schools of differing sizes

YEAR 10 CLASS SIZE	AVERAGED ICSEA*	% OF STUDENTS GAINING SACE
Schools with Year 10 cohorts from 1 to 9	999	55%
Schools with Year 10 cohorts from 10 to 19	955	47%
Schools with Year 10 cohorts from 20t o 39	974	49%
Schools with Year 10 cohorts from 40 to 99	966	45%
Schools with Year 10 cohorts from 100 to 199	977	45%
Schools with Year 10 cohorts of 200+	1026	51%

*The averaged ICSEA is calculated by taking an average of the ICSEAs of the schools included, weighted by school size.

This strongly suggests that smaller schools can have just as much success in supporting their students' learning and attainment as larger schools – and in fact there is increasing research evidence (http://www.tqa.tas.gov.au/4DCGI/_WWW_doc/257183/RND01/Attachment C) suggesting that students from less advantaged family backgrounds are more successful in smaller schools providing greater learning support across a smaller range of subject choices.

This resonates with the Legislative Council data in terms of the percentage of Tasmanian year 10s gaining their TCE, which shows that there are three schools with enrolments of less than 300 students with a higher percentage of year 10s gaining their TCE than any of the larger schools with between 300 and 450 students.

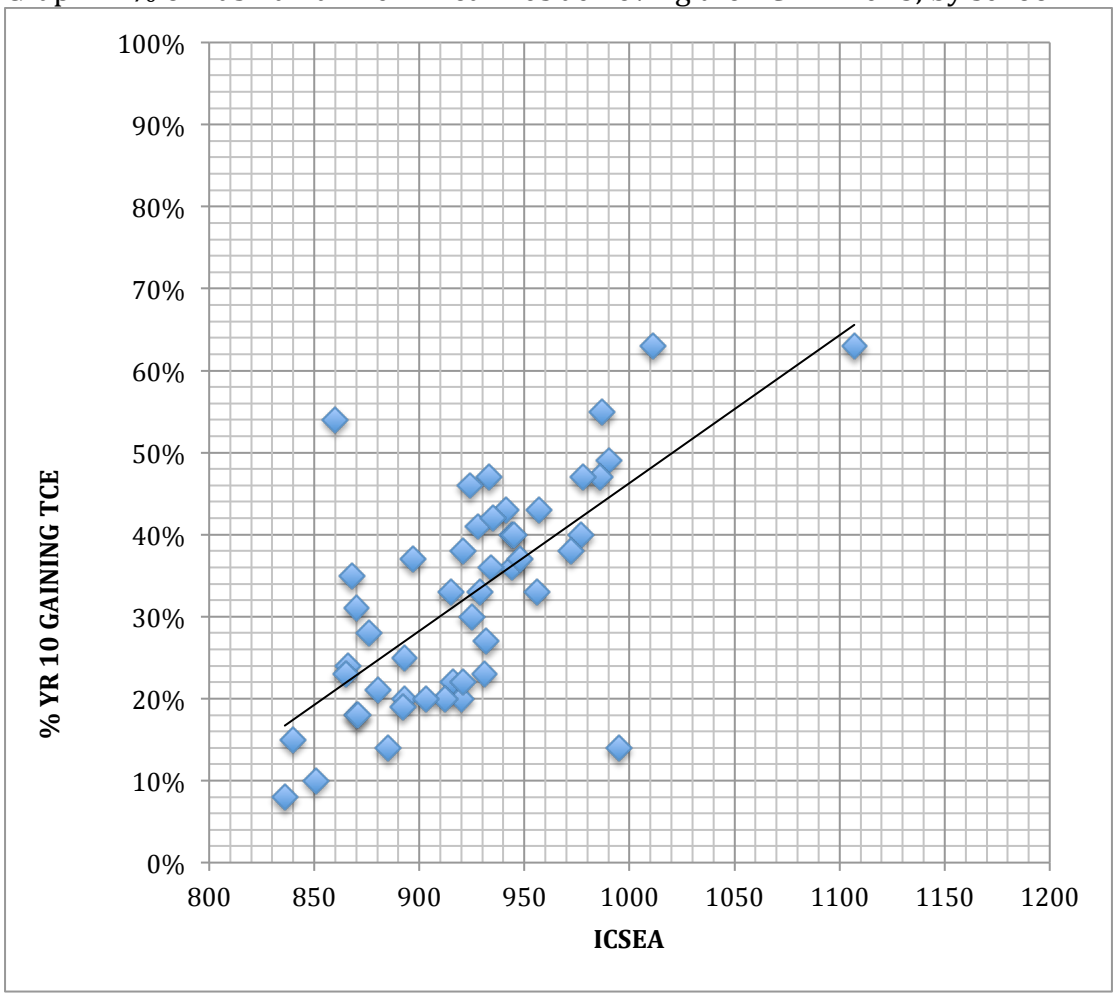
We cannot say anything about the very small schools in Tasmania, however, as the data provided to the Legislative Council excluded schools with less than 10 students in year 10 to preserve the confidentiality of the students concerned. We have therefore excluded from Graph 2 below any South Australian schools with less than 10 year 10 students. Accordingly, the remainder of this discussion deals only with schools which have year 10 cohorts of 10 or more students, which is the overwhelming majority in both states.

This is an appropriate point also to remind ourselves of the dangers of taking the results for just one year as a measure of a school and its students' capacity, particularly for

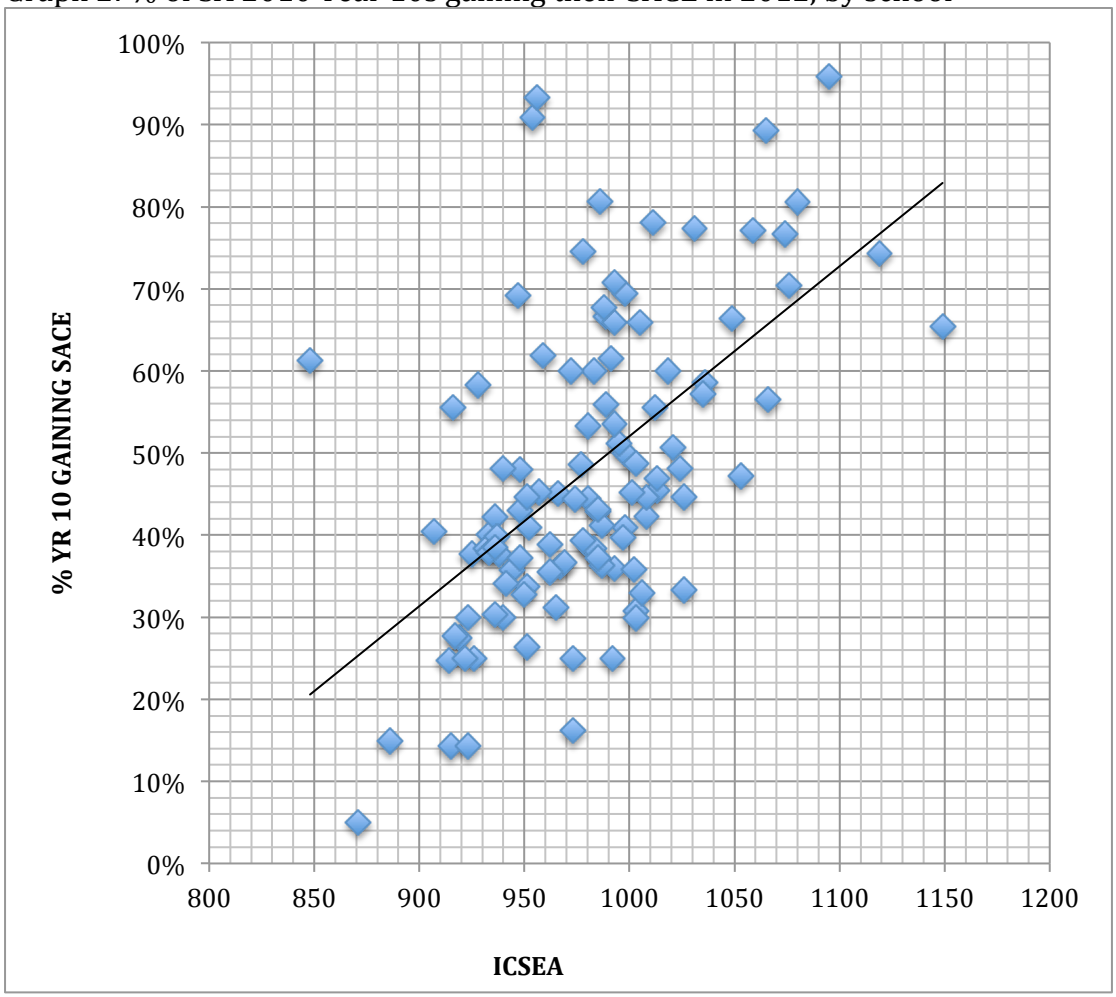
smaller schools. Based on probability, we know that if we toss a coin a few times, chance will often give us lots more heads than tails, or vice versa. For the same reasons, a small 'sample' of students, such as the year 10s in a small school in 2011, may just by chance give us lots more really successful students or students for whom learning is more of a struggle, and this may have little to do with the schools' own efforts to support positive educational outcomes for its students.

With those qualifications we present the data in the two graphs below, one representing the Legislative Council data for Tasmania and the other the estimated South Australian data, using Excel to add a simple linear trend line. (Note: this trend line should not be interpreted as the relationship between ICSEA and achievement of the TCE or the SACE, since the data points represent schools of different sizes. For example, if the schools with higher ICSEAs were larger than those with lower ICSEAs, the trend would be steeper than shown here. Moreover, a linear relationship might not be the curve of best fit. Since we are more interested in the scatter of the data, rather than the trend, we ignore these complications here.)

Graph 1: % of Tasmanian 2011 Year 10s achieving the TCE in 2013, by school*



Graph 2: % of SA 2010 Year 10s gaining their SACE in 2012, by school*



*Schools with less than 10 year 10s or no ICSEA available are not included in the data.

4. **What can we learn from these graphs?**

First, we see a definite relationship between ICSEA – parental wealth and level of education – and students' attainment of their senior secondary certificate (SSC). As we move from left to right we are looking at schools with increasingly wealthy families and higher levels of parental education, and as we might expect the percentage of students completing their SSC goes up as well. But the relationship is far from strong – there is a big spread around the average.

In Graph 1, for example, while only four (less than 10%) Tasmanian government schools have more than 50% of their year 10 students continuing on to attain their TCEs, the ICSEAs of these four schools are very different. Reading the graph from left to right, the first school with above 50% TCE attainment has one of the lowest ICEAs of any school in the State (remembering that this discussion concerns government schools only).

Everyone with an interest in increasing the number of young Tasmanians gaining their TCE, and particularly principals of schools with similar and higher ICSEAs, will want to know what that school and its community is doing to support such outcomes and which interventions are most effectively contributing to these results.

At the other extreme, the school furthest to the right does not seem to be preparing its students for TCE attainment as well as we might expect given its ICSEA (1100+), with a TCE attainment of just over 60%; indeed, it is doing no better than another school with an ICSEA just above the Australian average of 1000. So the 'wealthier' school will want to be talking to the Australian average school to see why the additional income and educational level of its families is not translating into better outcomes at year 12.

But most of all, we just need to glance at the graph for Tasmania to see that while a higher ICSEA increases a school's likelihood that its students will be successful at year 12, there is clearly a lot that some individual schools and their communities are doing right to improve the rate at which their students gain the TCE compared to schools with similar ICSEAs – often by as much as 20% - without wishing for wealthier or better educated parents to make the job easier, or blaming less well-off and less educated parents for lower TCE attainment rates.

The same can be said for the South Australian schools. While 41 schools (almost 40%) have 50% or more of their year 10s gaining the SACE, schools with the same ICSEA show an even wider spread in student attainment at both the lower and higher end of the ICSEA scale, with variations between similar schools' SACE attainment rates of 40% or so frequently apparent. This makes it obvious that in South Australia as well as in Tasmania, the routine availability of such data would enable principals and school communities to recognise that they have much to learn from each other in striving to achieve the best possible outcomes for their students. Among educators as in other professions, data informed benchmarking, communities of practice, peer mentoring and collaborative learning processes are powerful tools for improving outcomes.

Comparing the overall patterns for South Australia and Tasmania revealed by these graphs is also interesting. For schools with lower ICEAs, there is little difference between the two states, with the trend line for each indicating SSC attainment rates of about 20% for the year 10 student cohorts from schools with ICSEAs of around 850. But as we move across the graph to look at schools with higher ICSEAs, an increasing gap develops between the SSC attainment rates of the two states, with just over 5% more South Australian students gaining their SSCs in schools towards the Australian ICSA average of 1000, increasing towards 10% at above ICSEA 1100 (despite the wealthiest South Australian high school dragging the SA figure down at the highest ICSEA end of the range, which like its Tasmanian counterpart does not appear to be supporting attainment levels comparable to many less wealthy schools,).

We infer from this that while our Tasmanian schools are doing as 'good' a job as South Australian schools in supporting students from poorer families with parents not having had the advantage of a full secondary or tertiary education, we are falling behind in schools enrolling students from wealthier families with higher levels of education. That result does surprise us, particularly since Tasmanian government schools to year 10 enrol a larger percentage of students (compared to non-government schools) than government schools in South Australia (about 7% more), which might be expected to boost outcomes in the wealthier government schools. (We write 'good' because 20% of students attaining their year 12 is not good at all, whatever their background and circumstances: but that is what the Gonski funding is all about, and it is needed everywhere in Australia, in South Australia as much as in Tasmania. Indeed, the aim of the Gonski funding package is to ensure that ICSEA is no longer a good predictor of student success, by ensuring that all schools have the resources needed to give all their students a fair chance of reaching their potential for learning, regardless of the lottery of their birth circumstances.)

5. **Conclusion**

Ruth Forrest has done young Tasmanians and their schools an enormous service in making this data available on the public record. It shows our communities and our schools that while it might be easier to reach high SSC attainment levels with students from wealthier families and higher levels of education, all Tasmanian communities and all Tasmanian schools can aim high and achieve their aims. Because we see that some schools have done just that. And just as importantly, small schools can be at least as successful as larger ones. Which means every Tasmanian community, working in partnership with their local high school, can reasonably aim to support the great majority of their young people through all the years of schooling, to the successful completion of their TCE. Nothing could be more important for their future, or indeed for the future of Tasmania.