



SEPARATING SCHOLARS

How Australia abandons its
struggling schools

DISCUSSION PAPER

In a Class of Their Own



CENTRE
FOR POLICY
DEVELOPMENT

CREATE. CONNECT. CONVINCED

<http://www.cpd.org.au>

JANUARY 2019

CHRIS BONNOR

Published by the Centre for Policy Development
© Centre for Policy Development 2018

Cover Image – ‘Children’s street mobile game with hand-drawn chalk squares on which to jump’ by Luljo 2018© via depositphotos. To view the original image click [here](#).

Image 1 – ‘Classroom without students’ by Archiedeaphoto © via depositphotos. To view the original image click [here](#).

Image 2 – ‘Intelligent group of school children’ by Racorn 2014. To view the original image, click [here](#).

AUTHOR

Chris Bonnor AM is a retired principal, education writer and Fellow of the Centre for Policy Development (CPD). Chris was co-author of *Uneven Playing Field: The state of Australia’s schools*, released by CPD in 2016. He is a previous president of the NSW Secondary Principals’ Council and author of several books including *The Stupid Country* and *What Makes a Good School*, both written with Jane Caro.

ACKNOWLEDGEMENTS

The author wishes to acknowledge the assistance of Christina Ho, Garry Richards and Geoff Shuetrim.

The ongoing work in Effective Government is possible because of contributions from CPD’s program and organisational donors, including the Community and Public Sector Union (CPSU), the Susan McKinnon Foundation, Qantas, Brian and Diana Snape, the Garry White Foundation, and a number of individual Ideas Sustainers. We would also like to thank CPD subscribers, followers, and individual donors, whose contributions make our work possible. You can read more about the Effective Government Program [here](#).

ABOUT THE EFFECTIVE GOVERNMENT PROGRAM

The Effective Government Program examines how Australia can best ensure that its public institutions deliver active and effective government in the 21st century. This means tackling long-term policy challenges, delivering high-quality services to the community, weathering existential shocks from abroad, and instilling in the public a shared confidence and respect in their public institutions, and in one another. The role of education in Australia, and public funding for it, has long been a focus of the program.

Separating Scholars: how Australia abandons its struggling schools is the third in a series entitled *In a class of their own*, within the Effective Government Program. The first in the series, *A creeping Indigenous separation*, highlighted the plight of Indigenous students, increasingly found in schools with the least capacity to support them. The second, *Institutionalised separation: the impact of selective schools*, broadens concerns about the effect of selective schooling on the unselected students and their schools.

ABOUT CPD

The Centre for Policy Development (CPD) is an independent, values-driven, and evidence-based policy institute. Our motivation is an Australia that embraces the long term now. CPD’s policy development is geared towards an Australia that is equitable, aspirational, and truly prosperous – and enlivened by the challenge of shaping a better future. CPD’s core model is three-fold: we create viable ideas from rigorous, cross-disciplinary research at home and abroad. We connect experts and stakeholders to develop these ideas into practical policy proposals. We then work to convince government, businesses, and communities to implement these proposals. CPD has offices in Sydney and Melbourne and a network of experts across Australia. We are not for profit: donations to our Research Fund are tax deductible. More information about CPD is available at <https://cpd.org.au/>.

CONTENTS

- EXECUTIVE SUMMARY1
- INTRODUCTION3
- THE CONTEXT OF SCHOOLS.....6
- MEASURES OF SCHOOL ACHIEVEMENT6
 - New South Wales Analysis7
 - Victorian Analysis.....10
 - Queensland Analysis12
- IMPLICATIONS AND INDICATORS14

EXECUTIVE SUMMARY

This discussion paper analyses how schools are changing over time, especially in terms of enrolment characteristics and the school achievement measures and results most familiar to parents and teachers. The analysis uses end-of-school measures of student achievement and focusses on New South Wales, Victoria and Queensland, to show the relationship between school achievement and other school characteristics, including level of student advantage and location. Increasingly, we can see high achievers concentrated in the most advantaged schools, while those in lower socio-economic status (SES) schools are facing falling achievement levels.

The findings are replicated, in different ways, across each of the three states. In New South Wales in 2017, the proportion of Higher School Certificate (HSC) Distinguished Achievers (DAs) in the highest level of advantage (Index of Community Socio-Economic Advantage or ICSEA) schools was 19%, whereas in the lowest ICSEA schools it was 1%. In Victoria, this pattern is repeated, with the proportion of students with a Victorian Certificate of Education (VCE) score of 40 or over is 24% in the highest ICSEA band but only 2.2% in the lowest band. In Queensland 85% of the highest achievers come from schools above ICSEA 1000, 15% from the schools below.



Even more significantly, such gaps have been widening over the last decade. In New South Wales, the schools in the highest ICSEA band have markedly increased their numbers and proportion of DAs since 2005/06. This has been accompanied by a change in the distribution of enrolments to these schools, so that increasingly the most advantaged students are going to the most advantaged schools. In all three states, schools in the highest ICSEA band have increased the proportion of students from the highest Socio-Economic Advantage (SEA) quarter, so that Queensland (+6%), Victoria (+8%) and New South Wales (+13%) have all seen a concentration of high SEA students moving into the most advantaged schools.

At the same time, the reverse is true, with the lowest ICSEA schools in Queensland (+10%), Victoria (+3%) and New South Wales (+9%) each seeing an increase in the number of students from the lowest SEA quarter. These factors are creating a system that concentrates advantage and disadvantage in different types of schools, with obvious flow on effects for the achievement levels of those students. There is also a stark difference between cities and regional areas, with the proportion of DAs in major cities in New South Wales at 23%, but only 2.3% in inner regional areas, and just 0.3% in outer regional areas.

The data suggest that achievement outcomes are becoming *increasingly* connected to the level of advantage of the school a student attends, so that some of the differences in achievement among schools may simply reflect who is enrolled – and how this enrolment is changing – rather than the quality of teaching.

These enrolment trends mean that students who are already advantaged are concentrating in high achieving schools, while the disadvantaged are being segregated into struggling schools, so that the burden of lifting up the most disadvantaged is not evenly spread across schools, sectors and locations.

INTRODUCTION

The beginning of the school year is a time of great excitement and expectation for students and their families: a new year, new friends, and often a new school. It is also exciting for teachers and school principals as they welcome new students to their school community. Principals especially are keen to know how many students they will have, because the size of a school enrolment determines the support – including teacher numbers and learning resources – for the school.

But it is more than just the *number* of students that matters. School principals know that improving the quality of teaching and learning is their first priority. They also know that some students help this happen – and enhance the image of the school – more than others. Students can be an intellectual and cultural resource for schools, bringing to their school prior learning, family education, networks and know-how.

Far too often across Australia, getting the ‘right’ students forms a hidden agenda in the competition between schools. But the capacity of schools to choose their students varies considerably. Some schools set entry tests or charge fees; others must take all comers. For this reason, the story behind school achievement and the way it changes over time is far more complex – and troubling. It is only partly a school ‘inside story’ – the ‘outside story’ is creating a pattern of winners and losers among Australia’s students, schools and communities.

This pattern is of increasing concern because differences between schools, in terms of who they enrol, are increasing. Depending on their location, origin, wealth and social status, Australian families can have quite disparate experiences of school. Those able to do so are walking away from struggling schools. In a process heavily supported by governments, families with the means to choose are paying to enrol their children in a fee-charging school. Many others relocate to live within the catchment of higher status public schools.

To state this is not to attribute credit or blame to families; it is just how the school system works. However, the system clearly does not improve educational equity or overall student achievement. It is instead characterised by enrolment discrimination, unequal resourcing and considerable inequity in access and opportunity. These features of the education system diminish the impact of countless initiatives in school reform and blunt our efforts to lift the achievement of all young people. The widening gaps between schools make it increasingly difficult to lift the achievement of disadvantaged children and communities.

In broad terms we’ve long known about the downside of the resulting inequality, but this paper shows how changing student enrolment patterns are impacting achievement in schools, grouped according to their level of advantage, their geographic location and their sector.

THE CONTEXT OF SCHOOLS

The character and success of schools derives from the quality of learning and teaching, the resources schools can apply *and* the family background of their students. Most of the public debate is focused on what goes on inside schools, including the quality of teaching and school leadership. Variations in this quality explain some of the differences between schools.

But the family background of students and their peers - factors beyond the control of most schools - has a large additional impact on educational attainment. This paper tracks those outside influences, in particular, the level of Socio-Educational Advantage (SEA) or Socio-Economic Status (SES) of school enrolments, on tangible measures of student achievement.

SEA and SES

The My School website uses Socio-Educational Advantage (SEA) while other sources cited in this paper use socio-economic status (SES) as a measure of advantage. There are differences – for example, SEA doesn't include family income – but there is also sufficiently close alignment between the two measures. For convenience, most references in this paper are made to SES unless in the specific context of My School data.

ICSEA

The Index of Community Socio-Educational Advantage (ICSEA) is a score calculated for every school in Australia and reported on the My School website. ICSEA comprises factors shown to have an impact on student outcomes, such as parental education levels, parental occupation, school geographic location, and proportion of Indigenous students. ICSEA is set at an average of 1000 across Australia. The higher the ICSEA, the higher the level of educational advantage of students attending the school (ACARA 2016). Media reporting sometimes uses the ICSEA incorrectly as a measure of socio-economic status, but it does not include any direct indicators of parental income or wealth. This is why this paper refers to 'socio-educational advantage' when discussing ICSEA values.

This paper explores the links between changing school achievement and patterns of student enrolment, particularly the enrolment of higher SES students. It builds on the wealth of research that illustrates the close relationship between school achievement and SES.

There is a direct family SES impact on student achievement but there is an additional school impact created by the SES of a student's cohort of peers.¹ This becomes important because high and low SES students are distributed very unevenly between schools. High SES students tend to be concentrated in high SES schools and low SES students in low SES schools. The former students gain an academic boost, going beyond the effect of their personal SES, while the latter face greater struggles, again going beyond the direct affect of their own SES.

The extent of this social segregation has increased over time. A 2018 report shows that Australia now has the equal fourth most segregated school system of the 36 countries in the Organisation for Economic Co-operation and Development (OECD).² Only 16 countries/economies out of 73 participating in the OECD Programme for International Student Assessment (PISA) have a greater concentration of disadvantaged students in disadvantaged schools than Australia.³

¹ ACER (2011), *Challenges for Australian Education: results from PISA 2009*, <https://www.acer.org/files/PISA-Report-2009.pdf>, page 290.

² OECD (2018), *Equity in Education: breaking down barriers to social mobility*, <https://doi.org/10.1787/9789264073234-en>.

³ See *Save Our Schools*, <http://www.saveourschools.com.au/equity-in-education/australia-has-one-of-the-most-socially-segregated-schools-systems-in-the-world>.

The effect of this separation of students by their SES is to cement benefits at the high end of the school SES scale while increasing the disadvantage for students at the lower end. The resulting differences between schools are commonly spoken about in terms of school quality – but it is far less about innate school quality than it is about who goes to which schools. When schools enrolling students with similar backgrounds are compared, there is little difference in student outcomes.⁴



⁴ Bonnor, Chris (2017), *Losing the Game*, <https://cpd.org.au/2017/06/losing-the-game/>.

THE IMPACT OF SES

The SES of school enrolments has complex effects on schools. It contributes to differences between schools in such things as parental and student expectations, teacher morale and the attractiveness of the school to families. Marked differences between schools, created by who they enrol, are increasingly measured and widely known: the 2012 Gonski review found that increased concentration of disadvantaged students in certain schools was having a significant impact on educational outcomes. Around the same time, New South Wales Department of Education research noted that the performance of low SES students will, on average, be lower if they also attend a school with a large number of other low SES students⁵.

Such findings are replicated by others.⁶ The OECD has also identified an impact of average school SES on student achievement.⁷ More recently in Australia, Chesters and Daly showed that attending a school with a higher proportion of students from educationally disadvantaged families can have a negative effect on educational achievement.⁸

Such findings mean that the idea that some students more than others are a better resource for schools is not just a hunch held by parents and principals. It isn't surprising that the enrolment shift in Australia is towards higher SES schools, regardless of sector. When the most aspirant and able students change schools they take their intellectual and cultural resources with them, almost always to schools higher up the SES ladder. Richard Teese points to the way the schools these students leave behind become increasingly uncompetitive, a weakness which exposes them to further erosion of enrolments.⁹

In this way, enrolment trends can increase differences between the pooled characteristics of schools, readily displayed on the My School website in data about student backgrounds and enrolment composition, level of advantage, funding and attendance rates.

MEASURES OF SCHOOL ACHIEVEMENT

In analysing how this plays out, this discussion paper goes beyond static comparisons of schools to analyse how schools are changing over time, especially in terms of enrolment characteristics and the school achievement measures and results most familiar to parents and teachers. The analysis uses end-of-school measures of student achievement, with a focus on:

- the distribution of high achieving students in the **New South Wales Higher School Certificate (HSC)** in 2005/06 and again in 2016/17;
- the school-by-school percentage of high scores in the **Victorian Certificate of Education (VCE)** in 2007/08 and again in 2016/17;
- the distribution of **Queensland** students achieving **Overall Position (OP)** ranks 1 to 5 in 2009 and 2017.

⁵ NSW DEC (New South Wales Department of Education and Communities) (2011) *Discussion Paper: Australian school funding arrangements*, https://drive.google.com/open?id=1cEUu9FUITSmJHD2nGSDUdBK_dodkgLN0, page 13-14.

⁶ Including by Hamnett, C., Ramsden, M. & Butler, T. (2007) 'Social background, ethnicity, school composition and educational attainment in East London', *Urban Studies*, 44(7): 1255-1280. Also Palardy, G. J. (2013) 'High school socioeconomic segregation and student attainment', *American Educational Research Journal* 50(4): 714-754.

⁷ OECD (2010), *PISA 2009 Results: Overcoming social background – equity in learning opportunities and outcomes (volume II)*, <http://dx.doi.org/10.1787/9789264091504-en>, page 93.

⁸ Chesters J, Daly A (2017), 'Do peer effects mediate the association between family socio-economic status and educational achievement?' *Australian Journal of Social Issues*, 52:63–77. doi: 10.1002/ajs4.3.

⁹ Teese, Richard. (2011), *From Opportunity to Outcomes. The changing role of public schooling in Australia and national funding arrangements*, University of Melbourne Centre for Research on Education Systems, Melbourne.

There are obvious differences between each state, created by the student achievement measures used as well as other variations such as the size of each state and the distribution of schools. The methodology in this analysis also varies depending on how student achievement is presented in each state, but the consistent focus is on the distribution of high achieving students and/or their scores across schools, and how this has changed over time. Where possible, to increase the sample sizes, the analysis uses data over two years in the earlier period and two years in the recent period.

Over time, some schools close and other schools open. The datasets used in this paper include schools that enrolled Year 12 students in either the first two-year period or in the last two-year period of analysis. Entry and exit of schools could impact upon the distributional trends being analysed. For this reason, a parallel analysis was also conducted using only those schools which existed in both the earlier and recent periods. The results of this parallel analysis are little different.

Student achievement data is combined with other data, especially about school location, and level of advantage (ICSEA). School ICSEA measurement methods changed during the early years of My School reporting but have since become more consistent. In broad terms, current ICSEA values reasonably represent the SEA level of schools over eight years or more and so these current ICSEA values have been used to group schools by their level of advantage.

The analysis includes around 700 schools in New South Wales, 500 in Victoria and 400 in Queensland. In some cases, the number of schools has been too small to include. In the interests of reliability, the My School data used most commonly dates from 2011/12.

New South Wales Analysis

Individual Australian Tertiary Admission Rank (ATAR) scores are not published in NSW, hence the best available indicator of school-level achievement in the HSC is the list of Distinguished Achievers (DAs), which is made available each year by the NSW Education Standards Authority (previously the NSW Board of Studies). The DAs are the students who gained a result in the highest band possible (Band 6 or Band E4 for extension courses) for one or more courses.

For the purpose of this analysis, the number of *students* in each school receiving at least one award has been totalled for two separate periods: 2005/2006 and 2016/2017. The *distribution* of such high-achieving students is then compared between the two periods. For this purpose, schools are grouped in two ways. For the first analysis, schools are grouped by their level of student advantage, indicated by the ICSEA value of each school. For the second analysis, schools are grouped by their geographic location (major cities, inner regional, outer regional and remote).

Table 1 shows the changed distribution of HSC DAs between 2005/2006 and 2016/2017, with schools grouped by ICSEA range. In Table 1 the more advantaged groups of schools, those with higher ICSEA values, are shown towards the top of the table, and the more disadvantaged schools towards the bottom.

Table 1. Distribution of NSW HSC distinguished achievers by 2017 school ICSEA value, for the combined years 2005/06 and the combined years 2016/17.

Sources: My School, NSW Education Standards Authority

School ICSEA band	1. Number of Distinguished Achievers		2. Enrolment		3. Distinguished Achievers as a % of total enrolment		4. 2012-2017 Q1/Q4 % point change	
	2005/06	2016/17	2009	2017	2009	2017	Q1	Q4
1150 & over	9 167	12 031	69 571	65 081	13.18	18.49	-1	+13
1100-1149	4 349	6 172	60 404	58 354	7.20	10.58	-4	+11
1050-1099	3 721	6 624	91 563	108 073	4.06	6.13	-6	+6
1000-1049	3 668	5 140	111 714	122 075	3.28	4.60	-4	+1
950-999	2 126	2 280	123 648	103 781	1.72	2.20	0	-2
Up to 949	1 695	1 295	106 628	106 170	1.59	1.22	+9	-3

Notes:

1. Q1 is the percentage of students from families in the lowest SEA quarter, Q4 is the percentage from families in the highest SEA quarter
2. Excludes schools without an ICSEA value and Q1-Q4 distribution data.
3. Earliest reliable My School data is used as a proxy for 2005/06 in columns 2, 3 and 4.

As Table 1 shows, there has been significant changes in the distribution of Distinguished Achievers around NSW schools. In raw number terms (column one) the schools above ICSEA 1000 increased their *numbers* of Distinguished Achievers between 2005/06 and 2016/17. Those just below ICSEA 1000 saw a slight increase but those below ICSEA 950 saw a marked decrease.

We can see these total numbers of DAs in context if they are considered alongside the number of students (shown in column two) enrolled in each group of schools. The number of DAs as a percentage of enrolments is then shown in column three. In all school groups over ICSEA 1000 this percentage rose substantially. The schools just under ICSEA 1000 saw a smaller rise and the ones below 950 saw a fall.

The final column in the table suggests why the more advantaged schools are markedly increasing their numbers and percentage of DAs. These schools are also increasing their *proportion* of the most advantaged (Q4) students in their enrolments, for example up by thirteen percentage points in the schools over ICSEA 1150. The opposite is taking place in the less advantaged schools: in general they are *reducing* their proportion of the most advantaged students making up their enrolment, with the lowest ICSEA schools increasing their proportion of the most disadvantaged (Q1) students.

This means that the *SES composition* of school enrolments is changing, suggesting that students who are potentially distinguished achievers are moving to the higher ICSEA schools, taking their 'higher scores' with them. This leaves the lower ICSEA schools with an increasing proportion of the less advantaged and a declining share of distinguished achievers. While not shown in the table, the more advantaged schools also tend to be larger and growing – and the less advantaged schools smaller and shrinking – in size. There are also differences in the size and growth of schools above and below the median ICSEA.

While not shown in the table, the data also shows differences between the sectors, mainly created by who they enrol. Independent schools have the highest ICSEA values, followed by Catholic schools and then government schools. The associated differences in their share of DAs can be quite marked. Where different

sectors do enrol similar students, any achievement differences largely disappear, as illustrated in *Losing the Game*¹⁰ and very recently by the Grattan Institute¹¹.

The next analysis looks at the geographic location of NSW schools and also considers the differences between the government and non-government schools. The comparative progress of students in the city and 'the bush' is the subject of considerable debate, most commonly around the relative disadvantage of rural schools. However the reality on the ground in the bush is more complex.

Table 2. Distribution of NSW HSC Distinguished Achievers by geographic location, 2005/06 and 2016/17.

Sources: My School, NSW Education Standards Authority

Geographic location	Cohort	1. Number of Distinguished Achievers		2. Distinguished Achievers as a percentage of total enrolments *		3. Percentage Point Change 2005/06 to 2016/17
		2005/06	2016/17	2005/06	2016/17	
MAJOR CITIES	All schools	22218	31154	21.8	22.8	1.0
	Government	10905	14840	10.7	10.9	0.2
	Non-Govt	11313	16314	11.1	11.9	0.9
INNER REGIONAL	All schools	3126	3120	3.1	2.3	-0.8
	Government	1734	1051	1.7	0.8	-0.9
	Non-Govt	1392	1995	1.4	1.5	0.1
OUTER REGIONAL	All schools	557	397	0.5	0.3	-0.3
	Government	479	267	0.5	0.2	-0.3
	Non-Govt	78	130	0.1	0.1	0.0

Notes: There are very few schools with DAs in rural and remote areas. The table also excludes schools without an ICSEA value. Earliest reliable My School enrolment data is used as a proxy for 2005/06

* Overall the proportion of students categorised as DAs increased between the two periods shown. To enable valid comparisons between these periods total enrolment figures have been adjusted accordingly.

As Table 2 indicates, schools in the major cities have increased their number and share of DAs, while the share held by schools outside the major cities has generally fallen. This confirms what we often hear about lower levels of achievement in the bush.

But the impact on the school sectors is very uneven: government schools in the major cities have slightly increased their share of DAs, but have substantially lost both their numbers and share in the regions. A reverse trend is evident for non-government schools, something which may reflect their increasing numbers, especially in inner regional NSW. There was a 50% growth in the number of regional Independent schools (and a 30% growth of Catholic schools) with DAs in the period shown. My School data clearly shows that enrolment in these schools disproportionately includes students from more advantaged families.

¹⁰ Bonnor, Chris (2017), *Losing the Game*, CPD, <https://cpd.org.au/2017/06/losing-the-game/>.

¹¹ Goss, Peter and Emslie, Owain (2018), "Here is the expensive truth about private schools and student learning", *The Guardian*, <https://www.theguardian.com/commentisfree/2018/aug/20/here-is-the-expensive-truth-about-private-schools-and-student-learning>.

Can trends be explained by school enrolment and general population shifts? Year 7-12 school enrolments in the major cities have risen, but not dramatically. They have fallen by over 4% in the last six years in outer regional areas. Government schools in the outer regions have seen this fall, which has been accompanied by a rising concentration of disadvantaged students and a significant fall in the schools' share of DAs. Clearly the level of school SES, as much as location, has a significant impact: in any discussion of rural school disadvantage the first questions to be asked are which schools and why?

Are such rises and falls an indication of changes in school quality? It is difficult to explain in school quality terms the declining share of high achievers in lower ICSEA schools, in government schools and in regional schools, unless the efforts of teachers and the quality of teaching in these schools have somehow collectively started to deteriorate.

However, it is certainly the case that a shrinking and marginalised school enrolment has had an impact. Faced with reducing enrolments, low ICSEA and regional (and remote) schools face greater difficulties in sustaining curriculum breadth, assuming they can find staff with appropriate expertise. Without far more support, these trends are likely to continue. Such schools are struggling to hold their share of DAs, and the burdens accompanying this struggle are certainly not evenly shared between locations and school sectors.

Victorian Analysis

This paper has so far relied on measurements of the changing distribution of high scoring *students* in one Australian state: New South Wales. In this section the focus is on the distribution of high *scores* in another: Victoria. Readily available information about school achievement in the Victorian Certificate of Education (VCE)¹² includes the school average percentage of VCE scores of 40 and over, commonly used to show achievement differences between schools. It is a different measure in a different jurisdiction, but does it tell a similar story?

What trends emerge when the distribution of high VCE scores is compared over time for different ICSEA groups of schools? Table 3 shows changes between the combined years 2007/08 and the combined years 2016/17 for VCE +40 scores.

Table 3. Victorian Certificate of Education high scores by 2017 school ICSEA value, 2007/08 and 2016/17*

School ICSEA Band	1. Average % of VCE Study Scores of 40 and over			2. 2012-17 Q1 and Q4 change	
	2007/08	2016/17	Change	Q1	Q4
1150 & over	23.4	24.3	0.9	-1	+8
1100-1149	14.1	13.8	-0.3	-2	+9
1050-1099	7.9	7.5	-0.4	-3	+5
1000-1049	5.0	3.8	-1.2	-4	+2
950-999	3.9	3.4	-0.6	-4	0
Up to 949	2.9	2.2	-0.7	+3	-1

* Indicated by school average percentage of VCE study scores above 40.

¹² Victorian Curriculum and Assessment Authority (2018) *Senior Secondary Completion and Achievement Information*, <https://www.vcaa.vic.edu.au/Pages/vce/statistics/schoolstats/index.aspx>.

Note that earliest reliable My School data is used as a proxy for 2005/06 in columns 2 and 3

In Table 3 the changing distribution of school average +40 study scores is shown in column one. While the differences between high and low ICSEA schools seem less pronounced than in NSW, the Victorian measures still suggest a marked difference between the schools above and below ICSEA 1050. The schools above ICSEA 1050 have generally maintained or increased their relatively high academic profile; the schools below have seen declining average academic achievement levels. Column two shows familiar changes in enrolment composition. Again, as found in New South Wales, the higher ICSEA schools are increasing their concentration of advantaged (Q4) students.

While not shown in the table, related data from My School shows other trends. In common with other parts of Australia, higher ICSEA schools in Victoria tend to be larger and increasing in size while lower ICSEA schools tend to be smaller and declining in size. VCE results also differ between the sectors, with higher scores in independent schools, followed by Catholic and government schools; a pattern which reflects the ICSEA differences between these sectors. Once again, high scores and their changing distribution reflect the socio-educational advantage of school enrolments. Recent research in Victoria illustrates that when schools enrolling similar students are compared, the sector differences are insignificant.¹³

Is there an urban/rural divide in the changing distribution of high scores? Table 4 shows student achievement in schools grouped according to their geographic location.

Table 4. Victorian Certificate of Education high scores by geolocation.
Sources: My School, Victorian Curriculum and Assessment Authority*

Geographic location	1. Average % of VCE Study Scores of 40 and over			2. 2012-17 Q1 and Q4 change	
	2007/08	2016/17	Change	Q1	Q4
MAJOR CITIES	8.7	8.8	0.1	+4	+1
INNER REGIONAL	5.5	4.0	-1.5	+10	-1
OUTER REGIONAL	6.2	3.8	-2.4	+11	0

* Indicated by school average percentage of VCE study scores above 40
Note: There are very few schools with DAs in rural and remote areas.

In Table 4, the distribution of achievement by geographic location in Victoria reveals trends that are consistent with those indicated by the HSC in NSW. Schools in the major cities of Victoria have the highest results and a consistent or increasing share of these high results. In the rest of Victoria, the decline in VCE +40 scores is closely associated with increasing distance from the major cities. While the table includes unweighted achievement measures, the trends are the same when VCE +40 scores are weighted against the number of students enrolled in each location. In common with trends evident in NSW there is an association, over time, between declining school achievement levels and such factors as Q1/Q4 enrolment composition

¹³ Zyngier, David (2018), "Spending more on private schools doesn't guarantee success", Pearls and Irritations, <http://johnmenadue.com/david-zyngier-spending-more-on-private-schools-doesnt-guarantee-success/>

and school size: the lower achieving schools in regional areas are reducing in size, while also seeing a growing Q1 enrolment portion.

Queensland Analysis

The final and shorter analysis in this discussion paper tracks the changing distribution of high achieving students in Queensland. Eligible Year 12 students in Queensland are awarded the Queensland Certificate of Education as well as an Overall Position or OP, the latter contributing to their university entry. To be eligible for an OP a student must study three subjects over four semesters. Data on OP achievement levels is readily available, including on school ranking sites.¹⁴ For this analysis the number of students in each school achieving the highest ranked OPs (1-5) is used.

Familiar patterns emerge when the distribution of high achieving students is tracked by school ICSEA.

Table 5: Distribution of Queensland school high achievers by 2017 school ICSEA

School ICSEA Band	1. Number of OP 1 to 5 Students*		2. Enrolment in sec and combined schools		3. OP 1 to 5 students as a % of total enrolment			4. 2012-17 Q1 and Q4 change*	
	2009	2017	2009	2017	2009	2017	Change	Q1	Q4
1150 & over	951	1220	19331	22982	4.9	5.3	+0.4	-1	+6
1100-1149	1048	1349	41877	51813	2.5	2.6	+0.1	-2	+9
1050-1099	709	910	46968	58119	1.5	1.6	+0.1	-3	+5
1000-1049	911	1069	93269	126553	1.0	0.8	-0.2	0	+1
950-999	549	517	90010	82045	0.6	0.6	0	0	-1
Up to 949	318	279	74201	71069	0.4	0.4	0	+10	-3

*Restricted to schools with at least one student with an OP 1 to 5 in either 2009 or 2017

Table 5 shows that schools above ICSEA 1050 generally have increasing numbers and an increasing share of higher achieving students; schools below ICSEA 1000 tend to have declining numbers and a declining share. In common with the other states, higher ICSEA schools in Queensland are also increasing their proportion of the most advantaged (Q4) students and lower ICSEA schools are losing some of their advantaged students. Once again, the trends in Queensland suggest a drift of the more advantaged students to schools that are further up the ICSEA ladder.

Do the trends indicated by school location also reflect those evident in the other states? Table 6 shows the distribution of these students by geographic location.

¹⁴ OP Summary Statistics for All Schools, Queensland 2017, <http://www.topscores.co/report.php?z=Qld&newreq=op-school-4,2017,name,1>.

Table 6: Distribution of Queensland school high achievers by geographic location

Geographic location	1. Number of OP 1 to 5 Students*		2. Enrolment in sec & combined schools		3. OP 1 to 5 students as a percentage of total enrolments			4. 2012-17 Q1 and Q4 change*	
	2009	2017	2009	2017	2009	2017	Change	Q1	Q4
MAJOR CITIES	3202	4019	121738	133079	2.6	3.0	+0.4	6	0
INNER REGIONAL	817	819	23927	25926	3.4	3.2	-0.2	11	-2
OUTER REGIONAL	490	541	28330	32838	1.7	1.6	-0.1	10	-1

Note: There are very few schools with DAs in rural and remote areas.

The numbers in column one show that 71% of all OP 1-5 students in 2009 were located in schools in the major cities. By 2017 this had increased to almost 75%. In contrast, a much lower percentage (18.1%) of such students were found in inner regional Queensland in 2009 and this fell to 15.2% in 2017. Outer regional schools fared better than those in the inner regions. Column three shows that, as a percentage of total enrolment, OP 1-5 students are increasingly found in the major cities and declining in the regions.

Part of the explanation for the urban/regional differences may lie in demographic and enrolment change. However, while not shown in the table, schools in the major cities only slightly increased, and regional schools only slightly reduced, their share of all enrolled students between 2012 and 2017. What the table does show is that the concentration of the most disadvantaged (Q1) students has more noticeably increased in regional Queensland.

While the somewhat unique geography of Queensland might explain some local trends, the overall picture resembles that evident in the other two states: the high achievers are drifting towards larger, urban and advantaged schools.

IMPLICATIONS AND INDICATORS

There is substantial debate in Australia about the performance of schools and how student achievement could be improved. Attention is focussed, as it should be, on what contributes to school quality and how quality practice can be supported and disseminated. But the findings in this paper reveal that equal attention needs to be given to the changing circumstances within which schools are operating – unless we prefer to believe that Australia’s more distant, less advantaged and fully inclusive schools are collectively falling behind due to their own inadequacies.

Families with the means to choose are walking away from such schools. They have relocated or paid fees to gain a place in a school up the SEA/SES ladder. It’s commonly described as a search for better quality schools, but as Rowe and Lubiensk suggest, it is more about shopping for peers than it is about shopping for schools,¹⁵ with the ‘shoppers’ paying far less attention to school quality than to the socio-demographic characteristics of schools.

Our education system is creating both apparent and real gains for some families and schools, and losses for others. The findings in this paper confirm where the losses are found and how the deficits for some schools are increasing. Despite a frenetic focus on school reform, the most vulnerable schools have continued to fall further behind. All the while, the reformers have failed to look outside the school gates to see what else must change if we are to give all our schools – and the best of our reforms – the chance to succeed.

This paper shows what happens to student achievement when we segregate our student population, with the strugglers ending up in ‘a class of their own’ in the schools with a declining capacity to lift them. The paper has focused on SEA/SES and geographic differences between schools, but underpinning the differences is a stark reality that the school sectors have a profound impact. As My School readily shows, in almost every community in Australia, non-government schools enrol students from more advantaged backgrounds.

The consequences continue to mount, revealed by an ongoing drip-feed of research and reports. Here are some recent examples:

- An OECD Working Paper has investigated **student resilience**, the positive adjustment that enables individuals to overcome adversity. Australian students are becoming less resilient and the distribution of resilient students is closely associated with school socio-economic status.¹⁶
- The Australian Council for Educational Research has reported that Australian students, on average, have a declining **sense of belonging** at school. Students in provincial and remote schools, as well as those from low SES backgrounds, are particularly affected.¹⁷
- Barbara Preston’s analysis of the 2016 census shows how the **social segregation** of Australia’s schools has increased markedly over the past 40 years.¹⁸
- In an analysis which overlaps this paper, Trevor Cobbold explains how NAPLAN data shows continuing **large achievement gaps** between advantaged and disadvantaged students.¹⁹

¹⁵ Rowe, Emma and Lubienski, Christopher (2017), "Shopping for schools or shopping for peers: public schools and catchment area segregation." *Journal of Education Policy*, 32:3, 340-356, DOI, <http://dx.doi.org/10.1080/02680939.2016.1263363>.

¹⁶ OECD (2018), Academic Resilience: what schools and countries do to help disadvantaged students succeed in PISA, OECD Working Paper No. 167, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP\(2018\)3&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2018)3&docLanguage=En).

¹⁷ Thomson, Sue (2018), "Many Australian School Students feel they 'don't belong' in school: new research", *The Conversation*, <https://theconversation.com/many-australian-school-students-feel-they-dont-belong-in-school-new-research-97866>.

¹⁸ Preston, Barbara (2018), "The Social Make up of Schools", paper prepared for AEU, <http://www.aefederal.org.au/application/files/7115/2090/2405/Preston2018.pdf>.

¹⁹ Cobbold, Trevor (2017), *Large Achievement Gaps Between Advantaged and Disadvantaged Students Continue*, <http://www.saveourschools.com.au/equity-in-education/large-achievement-gaps-between-advantaged-and-disadvantaged-students-continue>.

- A recent OECD report reveals that Australia has one of the most socially segregated school systems in the developed world.²⁰ A recent UNICEF report shows that Australia has the second most unequal system in the developed world.²¹

Recent years have also seen more suggestions on how to reduce the extent and impact of the SES segregation of schools. These include previous Centre for Policy Development reports, *Uneven Playing Field* (2016) and *Losing the Game* (2017). Laura Perry wrote in 2018 about the need to support targeted students and how making our schools more socially integrated is the most effective way to raise student achievement.²²

The search for solutions needs to address the role of funding. As Perry describes, funding policy promotes unequal resourcing between schools via a large fee-paying school sector, something which inevitably leads to stratification, educational inequalities and underachievement. This requires extra or redistributed funding to address poor achievement. In Perry's words, this will not be much more than a band-aid if not accompanied by greater structural reform in the way we fund and organise schools.

It's an expensive band-aid. A recent Public Education Foundation issues paper analysed the costs of the students at the bottom falling further below those at the top: between 2009 and 2015, this growing inequality cost Australia around \$20.3 billion, equivalent to 1.2% of GDP. The longer-term cost to Australia is even greater, because the gap was widening well prior to 2009.²³

It seems that we are compounding a series of errors in the way we are providing and resourcing schools. An earlier CPD report, *Uneven Playing Field*,²⁴ projected a future which would include rising inequity, enrolments shifting to advantaged schools, concentrating disadvantage, a deepening school SES hierarchy, an increasing achievement gap, and increasing costs of failing to tackle disadvantage. In tracking the changing distribution of student achievement, this discussion paper confirms that we are on target for this unhappy future.

The big question for Australia has still to be addressed. How can we expect to make the much-needed breakthroughs in student and school achievement when we continue to leave untouched the policies and practices that worsen what we have?

²⁰ OECD (2018), *Equity in Education: Breaking Down Barriers to Social Mobility*, <https://doi.org/10.1787/9789264073234-en>.

²¹ Chzhen, Yekaterina; Gromada, Anna; Rees, Gwyther; Cuesta, Jose; Bruckauf, Zlata (2018). An Unfair Start: Inequality in Children's Education in Rich Countries, *Innocenti Report Card* no. 15, UNICEF Office of Research - Innocenti, Florence

²² Perry, Laura (2018), "To reduce inequality in Australian schools, make them less socially segregated", *The Conversation*, <https://theconversation.com/to-reduce-inequality-in-australian-schools-make-them-less-socially-segregated-95034>

²³ Hetherington, David (2018), "What Price the Gap?", Public Education Foundation, https://publiceducationfoundation.org.au/wp-content/uploads/2018/04/Issues-Paper_What-Price-The-Gap.pdf

²⁴ Bonnor, Chris and Shepherd, Bernie (2016), "Uneven Playing Field", CPD, <https://cpd.org.au/wp-content/uploads/2016/05/The-State-of-Australias-Schools.pdf>