



# Overcoming the Odds: A study of Australia's top-performing disadvantaged schools

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This research project was possible thanks to the generous support of the Susan McKinnon Foundation.



**Research Report 39**

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Why We Need NAPLAN (Research Report, May 2018)

Getting the most out of Gonski 2.0: The evidence base for school investments  
(Research Report, October 2017)

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The views expressed in this report are my own and do not necessarily reflect the views of the Victorian Department of Education and Training, the South Australian Department for Education, or the schools participating in this research.

Any errors or omissions remain my own.





## Executive Summary

- Students from disadvantaged social backgrounds perform worse academically on average than more advantaged students, both in Australia and overseas.
- The educational inequity associated with socio-economic status in Australia is about the same as the OECD international average or slightly lower. No country in the world has succeeded in eliminating the impact of student disadvantage on school results.
- Some students and schools from lower socio-economic backgrounds are successful, but limited research has been done on how this success has been achieved.
- This study investigated Australia's top-performing disadvantaged schools, with the aim of finding any common policies and practices that have led to their success.
- 18 top-performing disadvantaged primary schools (12 of which are in Victoria) were identified on the basis of NAPLAN literacy and numeracy test results. These high-achieving schools do not receive more funding than other similarly disadvantaged schools.
- 9 of these top-performing disadvantaged schools were visited by a researcher for this study, involving interviews with school principals and staff, and observations of literacy and numeracy lessons. The other 9 schools were either not permitted by their system authorities to participate in the study, or declined to participate.

- Six common themes were found across the nine schools:
  1. *School discipline.* Based on high expectations, a clear set of consistently applied classroom rules, and a centralised school behaviour policy.
  2. *Direct and explicit instruction.* New content is explicitly taught in sequenced and structured lessons. Includes clear lesson objectives, immediate feedback, reviews of content from previous lessons, unambiguous language, frequent checking of student understanding, demonstration of the knowledge or skill to be learnt, and students practising skills with teacher guidance.
  3. *Experienced and autonomous school leadership.* Stable, long-term school leadership, and principal autonomy to select staff and control school budgets.
  4. *Data-informed practice.* Using data from teacher-written, NAPLAN, and PAT assessments to improve teaching, track student progress, and facilitate intervention for underachieving students.
  5. *Teacher collaboration and professional learning.* Collaboration among teachers and specialist support staff to cater for the often complex needs of disadvantaged students. With a focus on teacher professional learning; involving peer observations, mentoring, and attending practical professional development activities which help refine literacy and numeracy instruction.
  6. *Comprehensive early reading instruction.* Including five necessary elements of reading instruction: Phonemic awareness, Phonics, Fluency, Vocabulary, and Comprehension.
- These six consistent themes indicate how disadvantaged primary schools could improve significantly, without necessarily requiring more taxpayer funding.
- This study's findings are consistent with the existing research on high-achieving schools in Australia and around the world.
- It is possible for students from disadvantaged backgrounds to succeed at school, given the right policies and practices.





## Introduction

A negative relationship exists between student socio-economic disadvantage and academic achievement in Australia. That is, more socio-economically disadvantaged students are likely to have low academic achievement. This is shown by Australia’s results on international standardised assessments as well as the National Assessment Program — Literacy and Numeracy (NAPLAN) tests.

NAPLAN results in both literacy and numeracy indicate that Australian students from disadvantaged backgrounds (measured on the basis of parental occupation and education, geographical location, and Indigenous status) tend to receive lower test scores across year groups.<sup>1</sup> For example, students with parents from the most advantaged occupations (Group 1) are much more likely to be in the higher achievement bands than those with parents from the least advantaged occupations (Group 4), as illustrated by the 2017 Year 5 reading results in Figure 1.<sup>2</sup>

One of the most common policy responses to educational disadvantage in Australia, and around the world, has been to increase school spending, targeted especially towards disadvantaged students.

In Australia, annual recurrent government spending per school student increased by 14% in real terms between 2006-07 and 2015-16.<sup>3</sup> The proportion of total

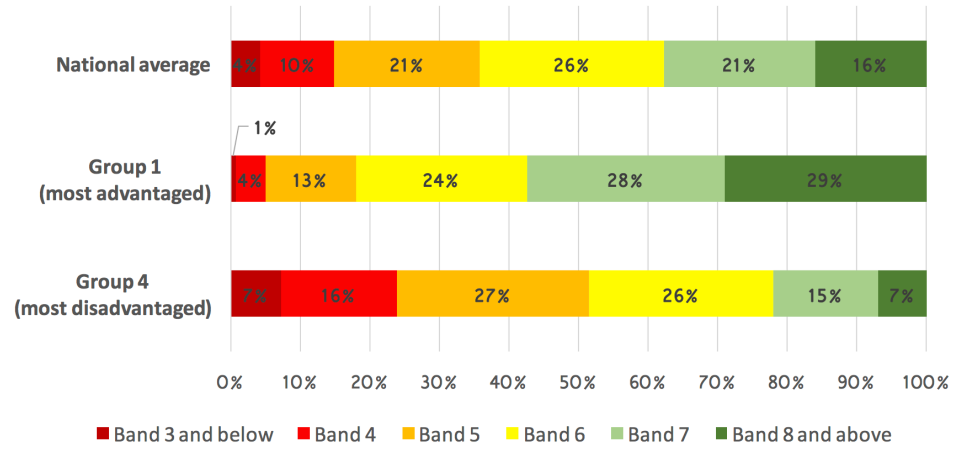
government recurrent funding for schools allocated on the basis of disadvantage increased from about 11% in 2009<sup>4</sup> to approximately 25% in 2017.<sup>5</sup> Nevertheless, during this time, Australia’s school results have either stagnated or declined on international standardised tests, and there is no evidence of improvement in education equity.

Another policy debate has been the extent to which non-government schools affect education equity. On average, wealthier parents are more likely to pay to send children to non-government schools — thereby increasing social stratification between schools. Australia has a much higher proportion of students attending non-government schools (34%)<sup>6</sup> than the OECD average (16%),<sup>7</sup> despite having about the same or slightly lower student inequity (see next section).

In addition, according to international test data, Australia actually has lower between-school variation in science scores than the OECD average, despite having higher within-school variation.<sup>8</sup> This shows how education inequity in Australia is far more complex than the size of the non-government school sector.

To date, there has been limited research rigorously investigating the reasons for education inequity and the most effective ways of ameliorating it in Australia.

**Figure 1: 2017 NAPLAN Year 5 reading results by proportion of students from parental occupation groups in each achievement band**





## Can disadvantaged schools be high-achievers?

### The international context

The negative relationship between student academic achievement and disadvantage is well established, including in the major international school tests. This is summarised in Table 1.

Unlike the PISA tests, the TIMSS and PIRLS analysis does not explore the extent to which test scores are explained by variation in student socio-economic status.

None of this is to say that student performance is entirely determined by socio-economic status. The statistics in Table 1 relate to average performance and do not preclude the possibility that students from disadvantaged backgrounds are high-achievers.

The OECD defines students as 'resilient' if they are from the bottom quartile of disadvantage but perform in the top quartile of science scores in their country.<sup>9</sup> 11.3% of disadvantaged 15-year-old students in the OECD are 'resilient'. This shows it is feasible that a significant proportion of students from disadvantaged backgrounds can be among a country's top-performing students, and an education policy focus should be on maximizing this proportion as far as reasonably possible.

### Is Australia's school system inequitable compared to other countries?

International reports show that education inequity in Australia is not substantially different to the international average.

The OECD 2018 report on equity in education, based on 2015 PISA data, found that socio-economic status explained 11.7% of the variation in Australian students' science performance. This was lower than the OECD average of 12.9%, and that of Singapore — the top-performing country on all PISA and TIMSS tests — with 16.8%.<sup>10</sup> Among the most disadvantaged quarter of students in Australia, 12.7% of them score in the top quarter for science, compared to the OECD average of 11.3% or Singapore's 9.5%.<sup>11</sup>

A 2018 report from the United Nations International Children's Emergency Fund (UNICEF) found that across 38 high-income and middle-income countries, Australia has one of the least equitable education systems and ranked 30th.<sup>12</sup> However, UNICEF defines education inequality as the gap in scores between the lowest 10% and highest 10% of students on the PISA reading test, not the influence of socio-economic status on student achievement.<sup>13</sup>



**Table 1: International tests findings on student disadvantage and achievement**

International Test	Topic	Global findings	Australian findings
<b>Programme for International Student Assessment (PISA) 2015 conducted by the Organisation for Economic Co-operation and Development (OECD)</b> <sup>14</sup>	Science, Maths, and Reading for 15-year old students	On average for countries in the OECD, 12.9% of the variation in science performance is explained by a student's socio-economic status (as measured by an index based on parents' education and occupation, and educational resources in the home). No country in the world has eliminated socio-economic educational disadvantage.	11.7% of the variation in science performance for Australian students is explained by their socio-economic status.
<b>Trends in International Mathematics and Science Study (TIMSS) 2015 conducted by the International Association for the Evaluation of Educational Achievement (IEA)</b> <sup>15</sup>	Year 4 Maths	Students in more affluent schools (as reported by school principals) achieved an average score of 527 (compared to the international average of 500), with a gap of 44 points above the average scores in more disadvantaged schools of 483.	Average gap of 72 points (551 for more affluent schools and 479 for more disadvantaged ones).
	Year 8 Maths	Average gap of 56 points (513 for more affluent schools and 457 for more disadvantaged ones).	Average gap of 71 points (545 for more affluent schools and 474 for more disadvantaged ones).
	Year 4 Science	Average gap of 43 points (526 for more affluent schools and 483 for more disadvantaged ones).	Average gap of 62 points (552 for more affluent schools and 490 for more disadvantaged ones).
	Year 8 Science	Average gap of 55 points (517 for more affluent schools and 462 for more disadvantaged ones).	Average gap of 67 points (548 for more affluent schools and 481 for more disadvantaged ones).
<b>Progress in International Reading Literacy Study (PIRLS) 2016 conducted by the IEA</b> <sup>16</sup>	Year 4 Reading	Average gap of 43 points (530 for more affluent schools and 487 for more disadvantaged ones).	Average gap of 61 points (570 for more affluent schools and 509 for more disadvantaged ones).

UNICEF's method seems to be inferior to the OECD approach, as the size of a relative gap between the highest-achieving and lowest-achieving students within a country could be due to factors other than the influence of social disadvantage on education — such as how effectively a country challenges its top-performing students, or how concentrated student scores are within the top or bottom 10% of students. Furthermore, several top-performing PISA countries, like Singapore and Hong Kong, are not included for comparison in UNICEF's analysis.

The TIMSS and PIRLS tests found there is a larger average achievement gap between students in more affluent schools and students in more disadvantaged schools (as reported by school principals) in Australia than for the international average — though Australia's average gap is similar to Singapore's for these tests.<sup>17</sup> Australia's average results are well above the international average for both TIMSS and PIRLS, so the raw score range would be expected to be higher, and these datasets do not include how much of the variation in student performance is determined by socio-economic background.

To conclude, the OECD's PISA analysis remains the only international indicator — albeit an imperfect one — of the extent to which a student's socio-economic

background influences their academic achievement; and on this measure Australia is at around or slightly below the OECD average. This indicates that while educational disadvantage exists in Australia and should be mitigated as much as practical, some inequity is inevitable and Australia does not have an especially inequitable school system.

### Policy responses to educational disadvantage

International policy responses to educational disadvantage have centred around school spending for many years. However, according to the OECD:

“Among the countries and economies whose cumulative expenditure per student is under USD 50 000, higher expenditure on education is strongly associated with higher PISA science scores. But this is not the case among high-income countries and economies, which include most OECD countries. It seems that for this latter group of countries and economies, factors other than the level of investment in education are better predictors of student performance.”<sup>18</sup>

While some disadvantaged schools may require significant extra funds to improve student performance, it is unclear if this is always the case. In many developed countries, spending is already high, and there appear to be diminishing marginal returns to school spending.

This likely applies to Australia, where spending per student in both primary and secondary schools as a dollar amount is higher than the OECD average and some top-performing countries.<sup>19</sup> Recently in Australia, there have been substantial increases in both the total amount of school spending in each school sector and the proportion of spending allocated on the basis of student disadvantage.<sup>20</sup> There is little evidence to suggest further increases would lead, of themselves, to significant improvements in student results.

At the school level, there is some evidence that effective schools help disadvantaged students succeed. For example, seven schools within the Fairfield area in New South Wales have been identified as 'high value add' schools. These schools serve communities with significant socio-economic disadvantage and yet their results are substantially better than predicted based on the social backgrounds of their students.<sup>21</sup> In the US, a 2011 study found that high-quality schools (specifically, a group of charter schools) were able to significantly increase academic achievement among students from poor backgrounds.<sup>22</sup>

There has been some research on how schools can help disadvantaged students to succeed.

A 2011 OECD report found the two factors most often associated with disadvantaged students performing well on science tests were: a positive attitude to science; and the amount of time spent learning science.<sup>23</sup> A systematic review and meta-analysis in 2017 examined academic interventions for school students from low socio-economic backgrounds.<sup>24</sup> It found the most effective interventions were tutoring, feedback and progress monitoring, and cooperative learning. However, it focused exclusively on interventions rather than school-wide policies, and hence many possible important factors such as types of teacher instruction and school discipline were not included.

The research to date on how to improve academic outcomes specifically for disadvantaged students is limited.

## Finding Australia's top-performing disadvantaged schools

Disadvantaged schools in Australia tend to perform worse academically on average; but nevertheless, high-achieving disadvantaged schools do exist. The aim of this study was to identify the top-performing disadvantaged schools in Australia and investigate the reasons for their success. This is to enable other schools to emulate their effectiveness in helping disadvantaged students.

The approach of the research method was to identify schools that are in the lowest quartile of disadvantage but consistently above the national average for achievement in literacy and numeracy across a three-year period. For the full study methodology, see Appendix 1.

The high-achieving schools identified do not just perform well compared to previous years or other schools with similar levels of disadvantage. These schools also compare well against all Australian schools.

The analysis found 21 primary schools and three secondary schools in both the high-achieving and disadvantaged categories, out of a total of 1,481 primary and 555 secondary disadvantaged schools with the available data.

School income was also considered in the analysis. Schools were defined as having either above average or below average school funding, within their school type, sector, and quartile of disadvantage. Only three primary schools were found to have above-average income, and these were duly excluded from the analysis, to take into account school income as a possible explanation for why some disadvantaged schools are high-achieving, and to make the findings more applicable to schools without higher than average levels of funding.

The states and sectors of the remaining 18 primary and three secondary schools are shown in Table 2.

Given the substantial differences between primary and secondary schools, the particular challenges they each face, and the fact that most of the high-achieving disadvantaged schools are primary, this study focused exclusively on primary schools. High-achieving disadvantaged secondary schools will be the subject of a future CIS research report.

**Table 2: High-achieving disadvantaged schools by state and sector**

Primary	Secondary
1 SA government school	1 VIC government school
9 VIC government schools	1 NSW government school
2 VIC Catholic schools	
3 QLD government schools	
2 NSW government schools	
1 VIC independent Jewish combined school	

## Box 1: The primary schools included in this analysis

There was a significant proportion of Victorian schools in the high-achieving disadvantaged category (12 out of 18 primary schools). This is consistent with a recent analysis of NAPLAN results finding that Victoria is the most effective state for improving results of disadvantaged students.<sup>25</sup> It is also corroborated by PISA data showing Victoria has the most equitable school system in Australia in terms of the impact of socio-economic status.<sup>26</sup>

The relevant government departments and school systems were contacted, and if approval was given, the individual schools were then invited to participate in the study. The Queensland Department of Education and Catholic Education Melbourne declined the research applications. Two government schools in New South Wales and one government school in Victoria also declined the invitation to participate. One government school in Victoria had closed and merged with another school since 2017.

Nine schools (seven Victorian government schools, one Victorian independent Jewish school, and one South Australian government school) agreed to participate. These schools were visited by a researcher who interviewed the school principal, teachers and other school staff, and observed literacy and numeracy lessons. The aim of these visits was to identify any common themes across the schools regarding the reasons for their success.

This study is limited by several important factors, so care should be taken about inferring implications for other disadvantaged schools. For example, there was no control group of advantaged or low-performing schools, which means it is possible the common themes found across the nine schools could also be found among low-performing schools. For more detail on the limitations of the study, see Appendix 1.

### Six common themes across nine high-achieving disadvantaged schools

A questionnaire was used in interviews with the school principals, teachers, and other staff (Appendix 2). There was also a standard observation record sheet used for all the lesson observations (Appendix 3). The questions were grouped into three categories: Leadership and Organisation, Pedagogy, and Professional Learning. The selection of questions was broadly based on the findings of previous studies on high-performing schools.<sup>27</sup> Open-ended questions were also included to ensure principals and staff were able to identify any factors leading to their school's success which were not included in the questionnaire.

Based on the data collection, 6 common themes have been identified across the nine high-achieving disadvantaged schools.

#### 1. School discipline

*"School discipline is a key to our success. To be able to teach, you need to have an orderly and safe classroom and learning environment, and that's something that we've put a lot of work into, as a precursor to the learning so that the learning can take place." — Principal of School A*

There is a large body of evidence indicating that a positive, safe, and orderly school environment is an important contributor to academic achievement,<sup>28</sup> especially in disadvantaged schools.<sup>29</sup> This appears to be the case in Australia as well, as outlined in Box 2.

The clearest common theme across the nine high-achieving disadvantaged schools was their success in cultivating a positive school environment with effective discipline. Every school principal highlighted generally positive student behaviour in and out of class as a key reason for their success. Three principals stated that student misbehaviour was a significant problem when they first arrived and improving school discipline was their main focus for several years before results began to improve.

This was corroborated by interviews with teachers at every school, who often spoke about a positive student culture where misbehaviour in class was uncommon and unacceptable. All the literacy and numeracy lessons observed displayed safe and orderly classrooms, and the minimal student disruption was handled effectively by teachers.

Every school principal reported that student behaviour at their schools was generally very good, with only rare cases of serious misconduct. Teachers at each school also gave this opinion. In each school, it was reported that student behaviour is at the stage where detentions and suspensions are seldom necessary, although still used occasionally. The fact that exclusions and suspensions are rare indicates these schools have not achieved success by simply removing all students who are recalcitrant, but rather by building up a positive culture over time. The success is also unlikely to be explained by parental community expectations, as eight of the nine schools are government primary schools serving mainly families in their local catchment areas.

It appears effective school discipline can get to a point where a 'critical mass' is reached and new students are quickly incorporated into the positive school climate. A principal commented: "Unless you've got an orderly environment, you can't focus on learning. So we worked really hard on that for years. And that works really well now. It gets easier over time."

## Box 2: School discipline issues in Australia

According to the PISA school disciplinary climate index — which is based on student reports of disruption in lessons and has a significant association with student science achievement — Australia has one of the worst school systems in the OECD for student behaviour (only five countries are below Australia).<sup>30</sup>

In contrast, TIMSS and PIRLS data — based on school principal reports — indicate Australian school discipline is better than the international average, although still with widespread discipline problems and worse than most top-performing countries.<sup>31</sup>

Student misbehaviour is a significantly larger problem in secondary schools with higher proportions of disadvantaged students in Australia, according to PISA data.<sup>32</sup> Australia's TIMSS and PIRLS results also reveal a clear association between academic performance and primary school discipline, and school discipline problems are worse in schools with more disadvantaged students.<sup>33</sup>

A 2018 OECD study found that in Australia there was a significant positive relationship between school discipline and the proportion of disadvantaged students who are high-achievers; but not a significant relationship between school resources and high-achieving disadvantaged students.<sup>34</sup> There is also some international evidence for this: research by Macquarie University academics indicated school discipline in secondary schools explains significantly more of the variation in PISA scores (88%) than the level of school funding (12%).<sup>35</sup>

School discipline — and effective student behaviour management policies — may be even more important than school funding in helping students from low socio-economic backgrounds to succeed.

While there was a wide range of school discipline policies across the nine schools, there were some shared practices and approaches: high expectations; a clear set of consistently applied classroom rules; and a consistently applied whole school behaviour policy.

Every school had high expectations regarding student behaviour. All the schools have a number of positive core values that students are expected to know and always comply with. Even minor misbehaviour outside the classroom — such as littering, swearing, and not taking care of uniform and appearance — are considered unacceptable. This is illustrated by the school grounds, classrooms, and corridors, which are kept neat and tidy. Students are encouraged to feel responsible for their school.

Some insights into how teachers managed behaviour was gathered through the lesson observations. One common practice across almost all teachers in the nine schools was having a clear set of classroom routines and rules, consistently applied to all students. Teachers give explicit instructions regarding how students should behave in class. Incidents of students not following rules (such as interrupting the teacher or a fellow student, not starting writing when asked to do so, or calling out) are quickly corrected in a calm manner.

The nine schools had executive support in place to help teachers deal with student misbehaviour. The systems varied in terms of the steps involved, how detentions and suspensions are used, and the roles of head teachers and principals. But across the schools, teachers spoke about how they never felt alone managing student misbehaviour. They could confidently approach the school leadership and executive when incidents arose and knew they would be supported. Five of the schools had specific procedures in place for new teachers in particular, to help them settle in and understand the processes for dealing with disruptive student behaviour.

These findings regarding school discipline approaches at high-performing disadvantaged schools are

consistent with existing research, which points to the benefits of high expectations<sup>36</sup> and clear classroom rules with consequences.<sup>37</sup>

### 2. Direct and explicit instruction

*"We haven't got time to muck around for kids to discover things by themselves, we have to actually teach them." — Principal of School D*

Direct instruction is a teaching method with a focus on clearly explaining new content to students in a systematic and methodical way. There are a number of different definitions of this approach and a number of terms are used (explicit instruction is often used as a synonym), but it can broadly be described as teacher-directed instruction involving the explicit teaching of new content in sequenced and structured lessons.

There is a large and growing body of research indicating the considerable benefits of direct and explicit instruction. A recent meta-analysis, which considered the findings of over 300 studies across 50 years, concluded direct instruction has significant positive effects on student achievement across all subjects and non-academic indicators, including for disadvantaged students.<sup>38</sup>

A recent OECD report concluded teacher-directed science instruction (as reported by a 15-year-old student) is positively associated with science results, across almost all countries, regardless of funding, classroom environment, and student proficiency and socio-economic background.<sup>39</sup> An analysis of PISA results by McKinsey found the most effective teaching involves a combination of mostly direct instruction with a smaller amount of enquiry-based learning<sup>40</sup> (which can be seen, depending on the definition, as the opposite of direct instruction, with a focus instead on student-led activities and students learning new content with minimal teacher guidance).

This implies direct instruction is almost always a beneficial teaching practice. But there is some evidence



indicating students in disadvantaged schools are less likely to receive direct instruction, including in Australia.<sup>41</sup> Two studies of high-performing schools in Australia (although not necessarily all disadvantaged schools) have found teacher direct instruction is a common practice in successful schools.<sup>42</sup>

Principals and teachers in the nine high-performing disadvantaged schools were asked how much they use direct instruction. Every principal said direct instruction was a central part of their school’s approach to teaching, especially in literacy and numeracy, and one described it as “absolutely imperative to everything we do.”

Almost all teachers interviewed said they used direct instruction in every lesson, especially for new content and at the start of lessons. Some schools even had a school-wide instructional model that all teachers use, involving a set structure and specific amount of time for direct instruction in lessons.

Each lesson observation included the researcher filling out a direct/explicit instruction checklist (Appendix 3), based on the work of US academic Barak Rosenshine.<sup>43</sup>

All literacy and numeracy lessons observed met most of the items on the checklist. A majority of lessons met all items on the checklist.

The most common features of lessons observed were:

- a defined and stated lesson objective;
- immediate feedback;
- review of previously taught content;
- clear and unambiguous language;
- teacher frequently checking for student understanding;
- teacher demonstrating the knowledge or skill to be learnt; and
- students practising new skills with teacher guidance.

The widespread use of direct instruction in the seven Victorian schools in this study are consistent with the Victorian Department of Education and Training’s identification of direct instruction as a high-impact teaching strategy that reliably increases student learning.<sup>44</sup>

Principals were also asked about the extent to which enquiry-based learning is used in their schools.

Most principals said enquiry-based learning is used in some of their activities, but generally not in literacy and numeracy. Some of the examples given of enquiry-based learning activities — such as science lab experiments — could be classified as direct instruction to the extent that they are teacher-directed activities with clear instructions and goals, albeit in an applied context.

Several principals mentioned that for disadvantaged students in particular, enquiry-based learning activities are problematic because often these activities require background knowledge that students from low socio-

economic backgrounds will not possess unless they are explicitly taught at school.

Unlike direct instruction, enquiry-based learning in Australia is associated with significantly lower science scores in schools with poor disciplinary climate, and not associated with significantly higher science scores even in schools with good disciplinary climates, according to a recent OECD report.<sup>45</sup>

Given the strong evidence in its favour it is not surprising that the high-performing disadvantaged schools in this study focus on direct instruction.

### 3. Experienced and autonomous school leadership

*“I can work my way through the school budget in whatever way I want...I have complete autonomy to select staff in whatever way I choose and is best for the school.” — Principal of School G*

Effective school principals have a major positive impact on student outcomes and are vital to improving school performance.<sup>46</sup> Stable, long-term leadership has been found to be a common factor across high-performing Western Australian primary schools.<sup>47</sup> More experienced school principals will generally have a greater practical understanding of how to increase school effectiveness, and positive changes driven by a principal will likely take several years to flow through into improved literacy and numeracy results.

Table 3 summarises the leadership experience of the principals at the nine high-performing disadvantaged schools.

**Table 3: Experience of school principals at high-achieving disadvantaged schools**

School	Number of years current principal has held the position
School A	20
School B	4 (and previously assistant principal at the school for 7)
School C	3 (and previously assistant principal at the school for 8)
School D	31
School E	13
School F	6
School G	8
School H	1 (previous principal had been at the school for 5)
School I	1

The median tenure for these school principals is 6 years, and the average is about 10 years, which is considerably higher than the national average of approximately 4.8 years for primary school principals.<sup>48</sup> This shows some correlation between principal tenure and higher achievement, and it is unlikely the school’s success has led to the longer principal tenure rather than the other way around, because ultimately

principals are responsible for most school policies and practices.

The above-average principal tenure is likely to have contributed to the ability of these schools to maintain high NAPLAN results compared to the national average across the entire period 2015-2017, as most principals would have been in the position for at least several years before 2015 in order for their leadership to affect student results. This assumes that principals have sufficient autonomy to implement effective school policies.

School and principal autonomy appears to significantly improve student achievement, given the right circumstances and accountability mechanisms.<sup>49</sup>

This may be an explanation for why Victoria has such a high proportion of Australia's top-performing disadvantaged schools. Victoria has a relatively high level of government school and principal autonomy — especially with respect to hiring school staff and controlling school budgets — and has had the most autonomous government school system in Australia for many years.<sup>50</sup> There is evidence this relatively high autonomy has led to success in some Victorian government schools.<sup>51</sup>

The nine principals were asked to describe their level of autonomy, and comment on the extent to which it is important that they can manage school budgets and select school staff. All seven of the Victorian government school principals said their autonomy has been an integral part of their school's success. They highlighted — as a key factor — the ability to select school staff who are of a high quality and enthusiastic to be a part of the school culture.

The freedom to spend school budgets as decided at the school level was utilised in many different ways by principals — such as on particular literacy and numeracy programs, hiring speech pathologists, or investing in technology like iPads — but nevertheless, they all stressed the importance of being able to use their funding to respond to the particular needs of their school community.

The principal of the Victorian independent school stated there was total autonomy regarding selection of school staff and deciding how the budget is allocated, so there could be a greater focus on literacy and numeracy.

The one school principal outside Victoria (from South Australia) also highlighted the importance of budget autonomy, but noted while there was freedom to select school staff it was not necessarily as flexible as might be desired.

It should be noted that more principal autonomy could theoretically lead to worse results in the cases of ineffective school leadership.

But, in summary, it appears flexibility allows experienced principals to lead schools effectively in order to cater for the specific needs of their disadvantaged students.

#### 4. Data-informed practice

*"We collect data for every student by year level...then discuss the students we have concerns about...but also celebrate the successes of the students who have been high-achieving, and look at why and what we've done for them, so that it can be shared across the school." — Principal of School C*

Using data to inform teaching, track student progress, and intervene to help underperforming students was common to all nine high-achieving disadvantaged schools. Data was collected and analysed at the student, class, year, and school level. As one principal commented: "The more data, the better."

Use of data varied in the level of sophistication and the granular detail used, but they all involved a consistent school-wide approach in which teaching and non-teaching staff are expected to actively participate. A common theme was a focus on using data for specific purposes — such as tracking individual student progress and improving teaching of particular subjects — and not collecting data simply for the sake of it. A head of literacy described this as "data-informed, not data-driven."

Based on teacher interviews, the schools expected teachers and specialist support staff to take ownership of data relating to their students, and proactively use it to refine teaching practices over time, in collaboration with fellow staff.

In addition to teacher-developed assessments, all nine schools used data from two standardised tests: NAPLAN and the Progressive Achievement Tests (PAT) from the Australian Council for Educational Research. The South Australian school also had data from the Year 1 Phonics Screening Check.

The independent Jewish school in the study — which starts in kindergarten — starts tracking student reading ability from the end of kindergarten, to ensure pre-school and foundation teachers are able to prepare and cater for new students right from the start of the school year.

Given the relatively high proportions of students from disadvantaged and non-English speaking backgrounds across these schools, there was an emphasis on using data to track the growth of underperforming students. Test results are used to identify underperforming students in literacy and numeracy, and then facilitate and evaluate interventions.

This is consistent with multiple studies showing high-performing schools use data in a comprehensive and systematic way to improve teacher practice and student performance.<sup>52</sup>

### Box 3: NAPLAN tests and use of results to improve schools

NAPLAN is controversial among some education stakeholders, partly because the assessments are claimed to cause 'teaching to the test' and stress for school staff.

Since NAPLAN results were used to select the high-achieving disadvantaged schools, each principal was asked about if, and how, their school prepares for NAPLAN tests. Three principals said their schools do not prepare at all, beyond ensuring the materials are ready or the computers are tested if they take NAPLAN online. The remaining principals indicated only minor preparation the week before NAPLAN assessments, with the aim of ensuring students are comfortable with the format of the test, such as how to answer multiple choice questions.

Student and teacher stress associated with NAPLAN was not raised as an issue by anyone interviewed in this study. This is consistent with the limited existing research on the subject (which is based on small sample sizes or non-rigorous studies) indicating NAPLAN-related stress among school students and staff is not widespread, and any anxiety or disruption caused by NAPLAN appears to be only minor and temporary, as discussed in previous CIS research.<sup>53</sup>

Several principals pointed out that they focus on literacy and numeracy throughout the year and these skills can only be developed over a long period of time, so they see no value in 'cramming' students for NAPLAN tests. One principal commented "NAPLAN is a very well-designed test."

Principals were also asked how they use NAPLAN results. All the schools use NAPLAN data to improve literacy and numeracy teaching, as an external benchmark against which the progress of the school or individual students can be measured. Examples include monitoring school-wide trends over time, identifying particular areas the school needs to improve, determining the work of learning support specialists for the next year, having a comparison for teacher-written test results, and tracking individual student and cohort growth.

Multiple principals mentioned they were looking forward to the transition to all NAPLAN tests being conducted online, as it will lessen the administrative burden, reduce the wait for the test results, and allow for adaptive testing catered to individual student ability.

#### 5. Teacher collaboration and professional learning

*"Teachers always talk professionally: professional approaches to the data, and to the kids – that's the focus of their work." – Principal of School A*

The nine high-achieving disadvantaged schools all had a positive and professional culture among the school staff. Teachers collaborated extensively with each other and specialist support staff outside lessons; meeting after school hours to plan lessons for the next day, review individual student progress, and discuss how to help struggling students.

Given the complex needs of many disadvantaged students at these schools — including any number of combined factors such as limited vocabulary, a non-English speaking background, emotional wellbeing issues, and family violence — it is not possible for one teacher or staff member alone to be able to help all individual students. A coordinated approach involving the class teacher, specialist academic and wellbeing support staff, and school executive, was adopted by all the schools to cater for the individual needs of students.

Several studies have shown effective use of teacher time outside the classroom to plan lessons and refine teaching can significantly boost student achievement.<sup>54</sup> Australian research has found teacher collaboration positively predicts student achievement in some Victorian schools,<sup>55</sup> and whole-school goals are common across high-performing New South Wales schools.<sup>56</sup>

There was a focus at the nine top-performing schools on productive use of time outside of the classroom, and ensuring teachers — especially those who are new to the school — are not left to work by themselves. The consistent approach across schools extended to how they use casual relief teachers, with the goal of guaranteeing they are aware of the school's practices and how to help specific disadvantaged students.

Teacher peer lesson observation was practised formally on a consistent basis across all nine schools, at least four times per year for each teacher. A professional learning coordinator said: "The main benefit of peer observations is getting those conversations afterwards, where teachers can reflect on how they teach with a supportive colleague." Principals and teachers from each school also mentioned that informal observations between teachers were frequent. Another study of high-performing schools found peer observations and in-class coaching are widely practised among successful school teams.<sup>57</sup>

There was an effort across the nine schools to have experienced and high-quality teachers coaching the newer ones. An assistant principal said "mentoring new teachers is an important investment of time" and "helps with consistency of teaching across year groups."

The schools generally took a pragmatic approach to professional development. A principal said that a 'focussed' attitude on professional learning is essential, as there is substantial variation in the quality of professional development activities available to teachers.

Professional learning specifically on improving teacher instruction of the fundamentals of literacy and numeracy seemed to be prioritised across the nine schools. This included multiple schools prioritising teacher professional development in specific areas for improvement identified by student literacy results data. Several principals mentioned professional development can disrupt school timetables and student learning; so a focus on practical professional learning to boost student outcomes is especially important to ensure the teacher time spent away from class is worthwhile.

Recent research indicates a ‘focussed’ professional learning approach on practical topics for teachers is widespread among high-achieving schools,<sup>58</sup> which corroborates the findings of this study.

### 6. Comprehensive early reading instruction

*“The students have to be really strong in early reading. Because if they’re not, it holds them back in everything.” — Principal of School G*

Reading ability in the early years of school is crucial. It strongly influences later literacy skills and achievement across subject areas.<sup>59</sup> This means high-quality teaching of reading in primary school is especially important.

Disadvantaged home environments can significantly affect student literacy skills as they enter school,<sup>60</sup> which means effective reading instruction is especially important for these students. Several principals spoke about this challenge, and one principal commented that: “As a school goal, we want 100% of our students reading. We don’t care what their backgrounds are when they come, we’ll do everything we can to get them to read.”

A thorough review of the research by the NSW Centre for Education Statistics and Evaluation in 2017 found there are five essential elements of effective early reading instruction:<sup>61</sup>

1. *Phonemic awareness.* Identifying and manipulating the individual sounds in spoken words.
2. *Phonics.* ‘Sounding out’ or decoding words using knowledge of the relationships between letters and sounds.
3. *Fluency.* Reading quickly and accurately.
4. *Vocabulary.* Knowing the meaning of many words and the structure of written language.
5. *Comprehension.* Understanding and interpreting texts.

The nine primary school principals and staff were asked about each of these five components, and the literacy lesson observations noted if these aspects of reading instruction were covered. School principals and teachers all answered that they explicitly covered these five aspects of reading throughout the early years of primary school. Although not all five parts of reading were explicitly covered in every lesson, the lesson observations supported this.

The importance of vocabulary was highlighted by many principals and teachers, in particular for their students from disadvantaged and non-English speaking backgrounds. The schools had a focus on explicitly teaching new words every day, especially more complex words and words which are not part of everyday experience for children. This approach is intuitive, given that disadvantaged students are less likely to learn new words at home than more advantaged students.

Of the five keys to effective reading, there is some evidence phonics is the least well-taught in Australia. According to a 2016 systematic literature review and other recent studies, many new teachers do not possess sufficient language knowledge to teach phonics effectively.<sup>62</sup> In the context of disadvantaged schools, this is especially concerning, because explicit instruction in phonemic awareness and phonics have been found to substantially reduce the reading gap between disadvantaged and advantaged students.<sup>63</sup>

High-performing primary schools in Western Australia have been found to use synthetic phonics<sup>64</sup> — that is, a focus on learning associations between letters and their sounds in a clearly defined, incremental sequence.<sup>65</sup>

Across the nine disadvantaged schools, there was a range of approaches taken to teaching phonics, with various early reading programs adopted (summarised in Table 4). Five of the schools use a whole class or intervention program with a structured explicit phonics component: Jolly Phonics, MiniLit, Sound Waves, and SMART Spelling.

**Table 4: Early reading programs in high-achieving disadvantaged schools**

School	Early reading programs
School A	Doorway to Practical Literacy (DIPL)
School B	Jolly Phonics
School C	MiniLit
School D	N/A
School E	Sound Waves
School F	MiniLit
School G	Teaching, Handwriting, Reading & Spelling Skills (THRASS)
School H	InitiaLit and MiniLit
School I	SMART Spelling

Most schools had a literacy coordinator or head of literacy position, with the responsibility of overseeing reading instruction. The schools without this position still had a consistent school-wide approach to the teaching of reading.

There is an overwhelming amount of research on the importance of comprehensive explicit early reading instruction — involving the five key components discussed above — especially for disadvantaged students. The practices of the high-performing schools in this study are consistent with the reading instruction evidence base.

## Conclusions and policy implications

The nine top-performing disadvantaged schools in this study have achieved success in their particular context using different methods, but there are six common themes among them with significant policy implications:

1. *School discipline.* A safe and orderly learning environment, achieved through high expectations, a clear set of consistently applied classroom rules, and a centralised school behaviour policy.
2. *Direct and explicit instruction.* Explicit teaching of new content in sequenced and structured lessons, involving defined and stated lesson objectives, immediate feedback, reviews of previously taught content, clear and unambiguous language, teachers frequently checking for student understanding, teachers demonstrating the knowledge or skill to be learnt, and students practising new skills with teacher guidance.
3. *Experienced and autonomous school leadership.* Stable, long-term leadership by a principal, combined with the autonomy to select school staff and control school budgets.
4. *Data-informed practice.* Using data to inform teaching, track student progress, and intervene to help underperforming students. Based on results from teacher-written, NAPLAN, and PAT assessments.
5. *Teacher collaboration and professional learning.* Collaboration among teachers and specialist support staff to facilitate the complex needs of many disadvantaged students. Supported by a focus on rigorous professional development, with teacher peer observation of lessons, mentoring of new teachers, and teachers attending practical professional development activities to improve teaching of literacy and numeracy.
6. *Comprehensive early reading instruction.* Covering the five essential elements of reading instruction: Phonemic awareness, Phonics, Fluency, Vocabulary, and Comprehension.

These six school practices and policies are potentially effective and cost-effective ways to significantly boost the achievement of students from low socio-economic backgrounds in Australia.

The findings have several implications for education policy regarding educational disadvantage:

- The ongoing public debate about school funding should shift from how *much* money is spent to *how* it is spent.
- School systems should consider giving extra incentives and support for experienced principals to stay longer at disadvantaged schools, conditional on school improvement.
- State and territory school systems should consider emulating the greater autonomy given to principals in Victoria, especially regarding selecting school staff and deciding exactly how school budgets are spent.
- Sources of comparable data — such as the NAPLAN and PAT tests — should be kept and continually refined, to facilitate schools tracking student and cohort progress, and intervening to help underachieving students.
- Disadvantaged schools should consider prioritising the development of effective school discipline practices, school-wide direct instruction initiatives in literacy and numeracy, and comprehensive early reading instruction involving the five keys for reading.
- There should be a renewed focus on teacher professionalism and collaboration, especially in the context of catering for the often-complex needs of disadvantaged students.

There are some limitations to this study (see Appendix 1), so the results should be interpreted accordingly. Nevertheless, all the findings are consistent with the existing research on high-performing schools and disadvantaged students, from both Australia and overseas.

The success stories of the disadvantaged schools in this study show that — given the right set of policies and practices — students from disadvantaged backgrounds can consistently perform above the national average for literacy and numeracy. No country in the world has succeeded in eliminating education inequity, but a school system that is more effective for disadvantaged students is possible in Australia if evidence-based policies are adopted, and this can be achieved without necessarily increasing education budgets.

This study should reassure Australian parents and education policymakers that it is possible for disadvantaged schools to be high-achievers.



## Appendix 1: Study methodology and limitations

The research method involved four stages:

1. Identify disadvantaged schools according to average Index of Community Socio-Educational Advantage (ICSEA) scores for the three years from 2015-2017.
2. Among the disadvantaged schools, identify the high-achieving schools according to NAPLAN results from 2015-2017.
3. Take into account school income among the high-achieving disadvantaged schools according to MySchool financial data from 2014-2016.
4. Conduct research visits to the selected schools that agreed to participate in the study.

### **1. Identify disadvantaged schools according to average ICSEA scores from 2015-2017**

In 2017, there were 9,543 schools, split into four types:

- 6,219 primary,
- 1,473 secondary,
- 1,359 combined, and
- 492 special.

The 492 special schools were eliminated from the analysis, because they are not comparable to the other types of schools.

Only schools for which NAPLAN result data was available for the entire three-year period 2015-2017 for all 10 primary tests and/or all 10 secondary tests were included in the analysis (5,927 primary and 2,218 secondary, 8,145 in total).

The primary schools were then analysed separately from the secondary schools (combined schools were split into two schools — one primary and one secondary — for the purposes of the study). NAPLAN results and school finances are more comparable among primary or secondary schools, rather than across both types.

All schools in each type (primary or secondary) were ranked according to the average of their ICSEA scores between 2015 and 2017. These rankings were then divided into quartiles. Disadvantaged schools were defined as those in the lowest quartile of average ICSEA scores for 2015-2017. There were 1,481 disadvantaged primary schools and 555 disadvantaged secondary schools.

### **2. Among the disadvantaged schools, identify the high-achieving schools according to NAPLAN results from 2015-2017**

NAPLAN is the only national dataset available for all Australian schools that allows for a clear comparison in literacy and numeracy. Other possible indicators of disadvantaged schools being high-achieving — such

as student wellbeing and future employment — do not have an equivalent standardised dataset to compare all schools.

Each school had 30 average NAPLAN test scores (10 per year for 2015, 2016, and 2017), made up of years 3 and 5 (primary) or years 7 and 9 (secondary) results for each of the five tests: reading, writing, spelling, grammar and punctuation, and numeracy.

Across a three-year period, this includes five different student cohorts for each school.

There are many different ways of interpreting a school's NAPLAN results to determine if it is high-performing.

One approach is to focus on relative performance. This can be done either by using student gain data (which measures change in results for students who have taken consecutive NAPLAN tests at the same school) or by being compared to schools with similar students (in terms of disadvantage). The problem with this approach is that it does not actually measure if a school is high-performing, but rather only if it is high-performing given previous results or its level of disadvantage. Additionally, student gain data between Years 3 and 5 has limited utility, as the starting point for the growth will depend in part on growth up to Year 3, which is not measured by NAPLAN data.

The alternative approach is to consider school performance based on absolute NAPLAN test scores, and compare them to the national average. This reflects the school achievement relative to all Australian schools, which gives a more comprehensive picture of how a school is performing. For example, a disadvantaged school with NAPLAN test scores above the national average can be described as a high-achieving school, without having to qualify this statement with comparisons to previous performance or that of other disadvantaged schools. Therefore, this approach was chosen for the study.

Schools were identified as high-achieving using an 'average difference' method. If the average difference between the school's average test score and the corresponding national average test score was positive, it was classified as high-achieving. That is, high-achieving schools are those that, on average, performed above the national average, across all 30 NAPLAN tests.

Using this methodology, there were 21 primary schools and 3 secondary schools identified as being both disadvantaged and high-achieving.

For comparison, another method was used to define high-achieving schools, using a 'MySchool average' method. The MySchool website classifies each school's average test score as being statistically above or below the national average. Using this classification for each of the 30 NAPLAN tests, the difference between the number of above average and below average test scores for each school was determined. Then schools



were classified as high-achieving if they had more statistically above average than statistically below average test scores.

Under this method, there were 20 primary schools (17 of which were from the group of 21 using the 'average difference' method) and 2 secondary schools (both of which were from the group of 3 using the 'average difference' method). So this resulted in almost the same group and number of schools being selected as the 'average difference' method.

The 'average difference' method takes into account the size of the score difference between the school's average and the national, whereas the 'MySchool average' method does not. Therefore, the 'average difference' method better reflects the difference between a school's average performance and the national average, and was chosen for the project.

For secondary schools, Year 7 NAPLAN results are not necessarily a reasonable indicator of the school's success, as students will have only been at the school for a few months before sitting the tests, and so the school has only limited opportunity to make an impact. Therefore, for comparison, the calculation above was redone to consider only the Year 9 results. However, this alternative method only increased the number of high-performing secondary schools from 3 to 4 (2 of which were from the group of 3 found using both Years 7 and 9 NAPLAN results).

### **3. Take into account school income among the high-achieving disadvantaged schools according to MySchool financial data from 2014-2016**

All schools in primary and secondary were ranked according to the average of their net recurrent income per student between 2014 and 2016, and grouped by school sector (Government, Catholic, or Independent), ICSEA quartile, and school type (primary or secondary). This was based on MySchool financial data, which is published one year behind NAPLAN results in being released online.

School finance varies significantly between school sectors, ICSEA quartiles, and school types. So in order to make the MySchool finance data reliably comparable, schools were ranked in income by school sector and type in the lowest ICSEA quartile. All schools were then divided into either below average or above average income schools on this basis.

There were three primary schools in the high-achieving disadvantaged category which had above average income (all other 18 primary schools and the three secondary schools had below average income). These three above-average income schools were excluded from the analysis to take into account school income as a possible explanation for why some disadvantaged schools are high-achieving, and to make the findings more applicable to schools without higher than average levels of financial resources.

The breakdown of the remaining 18 primary schools and three secondary schools by sector and state is as follows:

Primary	Secondary
1 SA government school	1 VIC government school
9 VIC government schools	1 NSW government school
2 VIC Catholic schools	
3 QLD government schools	
2 NSW government schools	
1 VIC independent Jewish combined school	

### **4. Conduct research visits to the selected schools that agreed to participate in the study.**

Given most of the schools were primary — and the several major differences in structure and challenges faced between primary and secondary schools — this stage of the research project focussed exclusively on the primary schools.

Each of the relevant government departments or Catholic education bodies was invited to participate in the research, and if approval was given, the individual schools were contacted directly for permission. The Queensland Department of Education and Catholic Education Melbourne declined the research applications, and two government schools in New South Wales and one government school in Victoria declined the invitation to participate. One of the Victorian government primary schools had closed and merged with another school since 2017, and so was excluded from the analysis.

Eight government primary schools (seven Victorian and one South Australian) and one independent combined school (a Victorian Jewish school) agreed to participate in the research.

The data-gathering involved a site visit by the researcher to each school, using three methods to gather data:

- i. Interview with school principal.
- ii. Interviews with multiple school teachers and staff.
- iii. Observations of class lessons in literacy and numeracy.

The only exception to the data-gathering method was the independent Jewish school, where lesson observations were not possible.

The questions asked in the interviews were broadly based on the findings of previous research regarding high-achieving schools (though without a focus on disadvantaged schools in particular): a 2015 study of 9 high-performing primary schools in Western Australia,<sup>66</sup> a 2013 study of school effectiveness across 39 schools in New York City,<sup>67</sup> and a 2015 study of effective

practices in 36 high-achieving New South Wales schools (20 primary and 16 secondary).<sup>68</sup>

Questions were grouped into three areas: Leadership and Organisation (covering school leadership, use of data and evidence, school discipline policy, and timetable), Pedagogy (covering direct/explicit instruction, enquiry-based learning, the five keys to reading, maths programs, and specialist support), and Professional Learning (covering professional development and peer observation). Open-ended questions were also included to ensure principals and teachers had the opportunity to talk about any factors in their school's success not covered by the questions.

The researcher used a lesson observation form for the lesson observations, which considered mainly pedagogy and student behaviour, as well as taking note of any other significant aspects of the lesson. This form also included a direct/explicit instruction checklist, based on the widely-accepted Barak Rosenshine instruction principles.

A copy of the school principal interview questions and the lesson observation form are attached as Appendix 2 and 3 respectively.

## Study limitations

The study had several substantial limitations, which underlines the need for future research on this important topic.

Nine of the 18 primary schools identified as being disadvantaged, high-achieving, and below average income, were visited for the research. This means there may be some common success factors in the remaining nine schools which have not been identified. But the sample still represents half of the total number of schools in the category.

The fact that eight of the nine schools participating in the study were from Victoria also means caution should be taken about inferring conclusions for schools in the rest of Australia based on this sample. However there is no reason to believe that schools and students in other states and territories would not benefit to the same extent as students in Victoria from the educational policies and practices identified in the study.

There was no control group of advantaged or low-performing schools, which means it is possible that the common factors found across the nine schools in this study could also be found among low-performing schools. This is unlikely given the evidence base, but should be noted as a possibility.

Furthermore, the schools were selected based on the 2015-2017 results, but the school visits took place in late 2018; which means there is a possibility that the school practices at that time were not the same as those which led to the academic success in earlier years. However, given that the school leadership had been stable over that period, this is not a strong likelihood.

Finally, the schools were selected based on NAPLAN results and ICSEA scores, both of which are relatively narrow measures. There are other outcomes besides literacy and numeracy — such as student wellbeing — which NAPLAN does not take into account. And there are other aspects of school disadvantage — like the proportion of students with disabilities at a school — which ICSEA scores do not consider.

Nevertheless, the findings of this study are consistent with previous research on the subject both in Australia and overseas. Future research could attempt to replicate the results across a larger sample of Australian schools with a control group.

## Appendix 2: School principal interview questions

Researcher to ask following questions to school principal and record responses.

### Leadership and Organisation

#### ***School leadership***

- How long have you been school principal and working at the school?

- Please describe the level of principal autonomy you have. To what extent do you think it is important to be able to select school staff and control school budgets?

#### ***Evidence-based practice***

- What processes does the school have to ensure evidence-based teaching practices?

- How does the school use data to improve performance? Please outline how NAPLAN data is used by the school and any preparation the school does before NAPLAN tests.

#### ***School discipline policy***

- Please give an overview of the school's discipline and behaviour policy.

- In general, how would you describe the behaviour of students at the school?

#### ***Timetable***

- Approximately how much time each week is dedicated to literacy and numeracy?

### Pedagogy

#### ***Direct/explicit instruction***

- To what extent is direct/explicit instruction used in the school and are there any particular approaches used?

#### ***Inquiry-based learning***

- To what extent is inquiry-based learning used in the school and are there any particular approaches used?

### **Five Keys to Reading**

- Please comment on if and how the following five components of reading are taught in the school:

1. Phonemic awareness.

2. Phonics (and the extent to which systematic synthetic phonics or analytic phonics is used, and if any particular phonics programs are used by the school).

3. Fluency.

4. Vocabulary.

5. Comprehension.

### **Maths programs**

- Please outline any particular maths programs used by the school.

### **Specialist support**

- Please give an overview of the specialist support in place for gifted students and underachieving students, and are there any particular programs used?

### **Professional Learning**

#### **Professional development**

- Please give an overview of the school's approach to teacher professional development.

- To what extent are reading instruction, maths instruction, direct instruction, inquiry-based learning, and classroom management covered in professional development activities?

#### **Peer observation**

- Is teacher peer observation and feedback practised in the school? If so, please give an overview of how it is organised and used to improve teaching.

### **Other**

Are there any other factors in the school's success you would like to talk about?

## Appendix 3: Class lesson observation form

Researcher to make general class lesson observation notes, and include responses to the following questions if applicable for the lesson.

### **Direct/explicit instruction**

- To what extent is direct/explicit instruction used in the lesson?  
(\*Use direct/explicit instruction checklist below to answer question\*)

A defined and stated lesson objective	
Review previously taught content	
Model or demonstrate the knowledge / skill to be learnt ("I do")	
Student practice with teacher guidance ("We do")	
Student practice without teacher guidance ("You do")	
Immediate feedback	
Teacher frequently checks for student understanding	
High levels of teacher-student interaction	
Students engaged and active	
Content presented in multiple contexts	
Language used by teacher is clear and unambiguous	

### **Inquiry-based learning**

To what extent is inquiry-based learning used in the lesson and what projects are students working on?

### **Reading instruction**

- To what extent are the following components of reading taught in the lesson?

— Phonemic awareness.

— Phonics (and the extent to which systematic synthetic phonics or analytic phonics is used, and if any particular phonics programs are used).

— Fluency.

– Vocabulary.

– Comprehension.

### ***Maths instruction***

- Are there any particular maths programs used in the lesson?

### ***Student behaviour and engagement***

- What strategies does the teacher use to engage students and handle misbehaviour if it occurs?

- To what extent are students generally on task?

### **Other**

- Are there any other notable factors or teaching techniques in the lesson?



## Endnotes

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