

Improving student learning in Australia

Submission to the Review of the National School Reform Agreement, June 2022

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1 Improving student learning should be a national priority

Improving the quality of school education should be a national priority. Better academic results would improve the lives of students and lift workforce productivity.

National and international assessments suggest Australia has significant room to improve academic results at both ends of the performance spectrum.

There is an urgent need to strengthen the evidence base on effective classroom practice and create clearer pathways and stronger incentives for effective practices to be adopted in all schools. Reforms are also needed to overhaul teacher career paths to recognise and deploy teaching expertise more strategically, and ensure teachers have enough time to focus on the preparation needed to deliver effective teaching in every classroom.

This submission to the Productivity Commission's *Review of the National School Reform Agreement* (NSRA) consultation process draws on Grattan Institute's research on school workforce strategy, teaching quality and school improvement. The submission focuses primarily on matters relating to student achievement and priority areas for reform. As such, this submission primarily addresses questions raised under the Productivity Commission's Information Request 1 and Request 2.

2 Australia has significant room to improve student achievement

Australian students are falling behind their international 2.1 peers

This submission compares student performance in the OECD's Programme for International Student Assessment (PISA), the best known cross-country benchmark. PISA tests students' problem-solving skills in maths, science, and reading at age 15.1

In 2018 Australia performed worse in maths (and also science and reading) than the average of similar OECD countries (see Table 2.1).² Australian students scored an average 491 points in PISA maths in 2018.³ This was 15 points below the average of the comparator group. Japan and South Korea scored about 35 points higher in maths - the equivalent of an extra one-and-a-quarter years of learning - while Canada and the Netherlands were 21 and 28 points higher respectively - equivalent to an extra three-guarters-to-one year more of learning.⁴

Australia's below-average performance in maths appears across the whole distribution; high-achievers in Australia - those at the 90th or 95th percentile - scored below their peers in comparator countries, as did low-achievers (those at the 5th or 10th percentile).

- 2. The comparator countries were selected based on the methodology in Daley et al (ibid).
- 3. PISA is held every three years. The most recent available results are for 2018.
- 4. Conversion to years of learning is based on Thomson et al (2019, p. 113) from the Australian Council for Educational Research. Individual country results should be interpreted carefully because the participation rate varies widely by country, and non-participating students are likely to perform below the average.

	PISA maths, 2018	Gap between top and bottom SES quartiles in PISA reading, 2018	Spend per student, 2018
	PISA score points	Years	% of GDP/capita
Australia	491	2.7	23.7
Canada	512	2.1	24.3
Germany	500	3.5	23.2
Japan	527	2.2	24.5
Netherlands	519	2.7	21.9
New Zealand	494	2.9	23.6
South Korea	526	2.3	32.5
Sweden	502	2.7	24.5
UK	502	2.4	26.6
US	478	3.0	22.8

Table 2.1: International scorecard for school education

Notes: For column 1: mean score in PISA 2018 Mathematics. For column 2: translated from PISA points to years of learning using 33 points = 1 year, see Thomson et al (2019, p. 45). For column 3: total expenditure on educational institutions per full-time equivalent student relative to GDP per capita (2018). For column 3: While Australia spends more of its GDP on school education than the OECD average, Australia has a younger population than most other advanced countries. See Daley et al (2019, p. 104) and Wood et al (2022, p. 99).

Source: PISA maths score points, 2018: OECD (2020, Table I.B1.5). Gap between top and bottom SES quartiles in PISA reading, 2018: Grattan analysis of OECD (ibid, Table II.B1.2.3). Spend per student, % of GDP per capita, 2018: OECD (2021, WEB Table C1.4).

^{1.} This submission draws heavily on and updates the analysis of Australia's comparative performance in school education in Daley et al (2019, Chapter 8).

Australia performed better in science and reading, but still below the comparator group average. $^{\rm 5}$

More concerning is Australia's drop in absolute terms compared to its own performance in earlier years. Australian students did worse in PISA in 2018 than in 2003:

- The average maths score dropped from 524 in 2003 to 491 in 2018, the equivalent of 1.2 years' worth of learning; and
- The proportion of high performers in maths nearly halved during the same period (from 19.8 per cent to 10.5 per cent), while the proportion of low performers grew from 14.3 per cent to 22.4 per cent.

There were similar, if less dramatic, trends in science and reading between 2000 and 2018.

The scores in many comparator countries have also dropped, but none by more than Australia. But improvement is possible: the UK's reading score increased by 9 points between 2006 and 2018. Meanwhile, outside the comparator group, Portugal's mean performance improved across the board, including a 26-point increase in maths between 2003 and 2018.⁶

- 5. Australia was 6 points below the average of the comparator group in science (503 points versus 509), and 1 point below in reading (503 points versus 504). The overall OECD average is lower than that of our comparator group because it includes low-performing countries (such as Mexico and Turkey) that are poor bench-marks for Australia.
- 6. See Thomson et al (2019, Table 3.1, 5.1 and 6.1). PISA trend comparisons are only possible from 2000 for reading, from 2003 for maths, and from 2006 for science (see OECD (2019) for further detail). In the UK, the sample of students that sat the 2000 and 2003 assessments did not meet PISA response rate standards, so trend data can not be reported for these years (for further detail, see OECD (2008)). Australia is one of seven OECD countries whose mean performance has declined across all three subjects over time. Others include Finland, South Korea, the Netherlands, and New Zealand: see OECD (2019).

2.1.1 Equity is also a significant challenge for Australian schools

According to the OECD, equity in education means that differences in students' outcomes are unrelated to their socio-economic status (SES).⁷ Under this definition, equity is a significant challenge in Australian schools.

On average, across reading and numeracy, Year 9 students in Australia whose parents have a bachelor degree are more than four years ahead of those whose parents didn't complete Year 12, and almost three or more years ahead of those whose parents completed Year 12 but undertook no further study (see Figure 2.1 and Figure 2.2).

There are a variety of different ways to benchmark Australia's performance on educational equity to international peers. Using 2018 PISA reading data to focus on the gap in performance between advantaged and disadvantaged students shows that the reading skills of advantaged students in Australia were on average 2.7 years ahead of disadvantaged students.⁸ By this measure, Australia's equity gap is about the same as the average of similar countries and the average of all OECD countries. Germany and the US have the biggest gaps, while Canada has the smallest.

Although Australia's advantaged students do reasonably well, our disadvantaged students are behind those in Canada, the UK, and

See OECD (2018a, p. 22). The 2011 Gonski report uses a similar formulation

 differences in educational outcomes should not be the result of differences in wealth, income, power, or possessions: Gonski et al (2011).

^{8.} Advantaged students are in the top SES quartile; disadvantaged students are in the bottom SES quartile. This equity metric is chosen because it allows for an intuitive understanding of the impact of socio-economic differences on how well students perform in PISA. PISA 2018 had a specific focus on reading, which is why this metric focuses on this domain. Conversion to years of learning for reading is based on Thomson et al (2019, p. 33) from the Australian Council for Educational Research.



Figure 2.1: There is a large equity-based reading gap in Australia Equivalent year level, NAPLAN reading, median, Australia, 2021

Notes: Grattan analysis of ACARA (2021) using Goss et al (2016) method determining equivalent year levels.

Source: Goss et al (2016, p. 13) and ACARA (2021).

Figure 2.2: There is a large equity-based numeracy gap in Australia Equivalent year level, NAPLAN numeracy, median, Australia, 2021



Source: Goss et al (2016, p. 13) and ACARA (2021).

South Korea (Figure 2.3). This suggests there is significant room for improvement in Australia.

Disparate access to resources may explain part of the gap. In nearly all OECD countries, principals in disadvantaged schools report greater shortages of materials and suitable staff than their peers in advantaged schools. But the gaps in Australia are wider than in any comparator country (Figure 2.4). This is a significant concern that should be addressed. In particular, disadvantaged schools are more likely to have higher numbers of beginning teachers, teachers who are required to teach outside their subject expertise, and teacher turnover.⁹ These factors combine to compound the challenges associated with delivering high quality classroom instruction to children in disadvantaged schools.

2.1.2 COVID has had a significant impact on school education in Australia, but it's not all bad

COVID caused unprecedented disruption to school education in Australia during 2020 and 2021, particularly in Victoria and NSW. The shift to remote schooling to cope with widespread school closures challenged children, families, and schools. Although a full understanding of the impact of the disruption on children is still emerging, it is likely that it has exacerbated learning challenges for many children and widened existing learning gaps between advantaged and disadvantaged children.¹⁰ For example, NSW assessment data from Term 4 2021 suggests high school students were many months behind where they would be expected to be, but for COVID disruptions to schooling.¹¹ Meanwhile, international evidence also points to significant negative impacts of COVID disruptions on learning, particularly for disadvantaged students in the early years of school.¹²

- 11. Baker (2022); and NSW Department of Education (2022a).
- 12. Tracey et al (2022); and Weidmann et al (2022).



Source: OECD (2020, Table II.B1.2.3).

Figure 2.3: Australia's disadvantaged students do worse in reading than their peers in Canada, South Korea, or the UK Mean performance in PISA reading, 2018, points

^{9.} Weldon (2016); and OECD (2018b).

^{10.} Hunter and Emslie (2021).

At the same time, the disruption prompted significant innovation within some schools and jurisdictions, including examples of high-quality online delivery of teaching programs and large investments in small-group, school-based tutoring to help students who have fallen behind.¹³ Among these wide-ranging innovations may be examples of new practices that could help Australia create more resilient, versatile, and effective models of schooling.

But much more work is needed to understand which of these innovations are the most effective, and the conditions that need to be in place for all children, irrespective of their backgrounds, to benefit. For example, equitable access to technology will be particularly important for all children, regardless of where they live. Ensuring individual teachers and schools have a similar capacity to integrate technology into their learning programs will also be important to prevent existing equity gaps widening further. **Figure 2.4: Australia's disadvantaged schools have worse access to educational staff and materials than in any comparator country** Difference between advantaged and disadvantaged schools on the OECD indices of shortage of educational staff and materials, 2018



Notes: The charts show the difference in access between disadvantaged and advantaged schools, i.e., a negative number means that disadvantaged schools have worse access to educational resources than advantaged schools. The OECD index of shortage of educational staff summarises school principals' agreement with four statements about whether the school's capacity to provide instruction is hindered by a lack of and/or inadequate qualifications of school staff. The index of shortage of educational material summarises school principals' agreement with four statements about whether the school's capacity to provide instruction is hindered by a lack of and/or inadequate educational materials, including physical infrastructure. Source: OECD (2020, Tables II.B1.5.13 and II.B1.5.14).

^{13.} This includes large investments in tutoring from both the NSW and Victorian governments (NSW Department of Education (2022b) and Victorian Department of Education (2022)).

3 Teaching has become less attractive to high achievers and the career structure is too limited

3.1 Too few high achievers enter the teaching profession

Evidence shows that teachers with strong academic records are likely to be more effective in the classroom.¹⁴ A higher-achieving teacher workforce would give the typical Australian student an extra six-to-12 months of learning by Year 9, possibly much more.¹⁵

But in Australia, not enough high achievers are attracted to teaching. Demand from high achievers for university education courses has fallen dramatically, while demand for science, IT, and health courses has risen strongly.

Far fewer high achievers in Australia choose teaching today than 30 years ago. In 1988, young teachers were most likely to come from the top fifth of school students in maths and reading; about 30 per cent of 23-year-old teachers were from the top fifth of students in reading, and 25 per cent in maths. But by 2017, only 19 per cent came from the top fifth of each subject. Figure 3.1 shows the change in the distribution of 23-year-old teachers across achievement quintiles since 1998.¹⁶

Teaching has also become less attractive to high achievers from regional and low socio-economic areas. From 2006 to 2017, demand from these groups fell even further than their more advantaged and metropolitan peers. And compared to many of Australia's international peers, including Germany, Japan, and the Netherlands, fewer high-achieving 15-year-olds are now interested in becoming teachers.¹⁷

The good news is that many more high achievers could be persuaded to become teachers. A 2019 Grattan Institute survey of 950 young high achievers found that 70 per cent would consider going in to teaching. But teaching is currently perceived to fall short in two key areas: intellectual challenge and pay (see Figure 3.2). Many young high achievers think teaching lacks career progression opportunities – an aspect closely related to intellectual challenge. About 90 per cent of respondents thought their chosen career would provide such opportunities, but only 64 per cent thought teaching would. And while 76 per cent of high achievers said that their chosen career would provide adequate pay, only 19 per cent thought that teaching would.¹⁸

3.2 Existing teacher career paths don't recognise teaching expertise sufficiently or deploy it strategically

Australia also falls short in building, rewarding, and deploying teaching expertise across the teaching workforce. Australia's best teachers are under-utilised in sharing their expertise and supporting others to improve. They are often confined to their own classrooms, or stretched too thin without adequate time, guidance, or support to provide high-quality professional learning to other teachers in their schools. This is a waste of their skills, and a missed opportunity for Australia. When supported to deliver effective instructional leadership, top teachers can have a powerful impact on teaching practice.¹⁹

Many state governments have invested in ways to use their top teachers to help others develop and improve. But these efforts do not go far enough. Coaching programs chop and change a lot, and

^{14.} Boyd et al (2008); Dobbie (2011); Jacob et al (2018); Rockoff et al (2008); and Clotfelter et al (2008).

^{15.} Goss and Sonneman (2019).

^{16.} Goss and Sonneman (ibid, p. 13).

^{17.} Han et al (2018, pp. 3–39); Goss and Sonneman (2019, pp. 15–16).

^{18.} Goss and Sonneman (ibid, p. 20).

Kraft and Papay (2014); Backes and Hansen (2018); Kennedy (2016); Scher and O'Reilly (2009); Yoon et al (2007); and Timperley et al (2007).

designated roles in industrial agreements are often under-resourced and rarely subject-specific. The 2019 Grattan Institute survey of 700 instructional leaders, teachers, and principals showed that instructional leadership roles in schools today lack the necessary support and credibility, and rarely lead to changes in how teachers teach.²⁰

The existing teaching career path needs to be reformed, to create the conditions for Australia's top teachers to lead professional learning effectively in schools, with a focus on building classroom teachers' subject expertise (often called pedagogical content knowledge, or PCK) and helping integrate the curriculum with good teaching. A more systematic approach to recognising and rewarding teaching expertise, through higher pay and greater responsibility, would also make teaching a more attractive career path for young high achievers.

Figure 3.1: Fewer high achievers become teachers today than in 1988 Percentage-point change in share of 23-year-old teachers from each quintile, 1988 to 2017



Notes: Analysis from the Longitudinal Survey of Australian Youth, which follows young people from school through to the workforce. Quintile of achievement is among students who have not dropped out of the survey by the year in which they turn 23, who tend to be higher-achieving students. 2017 results taken from teachers who took the PISA test in 2009, most of whom were 23 in 2017. 1988 results come from an earlier standardised test. Includes primary and secondary teachers but not early childhood educators.

Source: NCVER (2018).

20. Goss and Sonneman (2020).

Figure 3.2: High achievers say teaching falls short on intellectual challenge, and pay

Young people who state that a career in teaching is more likely to provide a given attribute than their chosen occupation



Notes: Career attributes are ordered top-to-bottom from most to least important. The data in the chart show the difference (i.e. teaching minus chosen occupation) in the percentage of respondents who answered that a given career was likely or very likely to provide each attribute.

Source: Grattan Institute survey of high-achieving young Australians.

4 Teachers struggle to find the time to get to the highest-impact teaching tasks

Effective teaching requires high levels of knowledge and skill, and substantial time for preparation. Developing and sustaining effective classroom teaching day in, day out, does not 'just happen'.

Over the past few decades, our expectations about what schools and teachers should deliver have increased, while the student population in schools has become more diverse. These shifts are generally positive for society, but they increase the demands on teachers' time. Without careful reconsideration of what we are expecting teachers to do in the time available, we risk pulling teachers in so many different directions that they find it hard to teach effectively.

A 2021 Grattan Institute survey of more than 5,400 teachers and school leaders across Australia sounds the alarm on the current situation in schools. The vast majority of teachers (92 per cent) said they 'always' or 'frequently' do not have enough time to prepare for effective teaching. A large majority (77 per cent) of school leaders agreed (see Figure 4.1). These survey findings are troubling. If teachers are not well prepared, student learning suffers.²¹ Our research indicates there are significant opportunities for reforms that would make it much easier for teachers to focus on the critical aspects of their roles.²²

Figure 4.1: Teachers say they don't have time to prepare well Proportion of teachers and school leaders indicating how often teachers do not have enough time to prepare for effective teaching



Notes: Survey question: 'How often do you feel like you / teachers at your school do not have enough time to prepare for effective teaching?' In our survey we define core activities to prepare for effective teaching as involving: planning for classroom instruction; preparing, marking, and analysing student assessments; preparing student feedback and adapting teaching; preparing to support struggling learners; building professional knowledge and skills; and collaborating effectively with colleagues and experts. Sample size: 5,000 teachers, 442 school leaders. Percentages may not sum to 100 due to rounding.

Source: 2021 Grattan survey on teachers' time.

22. Hunter et al (2022); and Jensen et al (2014).

^{21.} Hunter et al (2022).

5 What Australia should do

5.1 The federal government's role in school improvement should be limited and well-targeted

Most of the reforms needed to improve school education are the direct responsibility of state governments. But the federal government can still set clear expectations for a high-performing school system and provide support for reforms, including through targeted funding for initiatives that are likely to significantly improve outcomes for students and have cross-jurisdictional benefits.

That said, the federal government should be cautious in intervening in school operational matters because it may not always be helpful.

The federal government should only get involved in new school reforms if its proposed action meets three criteria:

- Evidence shows it is a good idea;
- Governments (at any level) can make it happen; and
- Federal government support will help, not hinder.

Any new federal government initiatives should help to fill genuine gaps, or take advantage of scale to deliver more productive outcomes.²³

Including a small number of highly targeted reforms as National Policy Initiatives under the National School Reform Agreement can be an effective way for the federal government to support school improvement across Australia in collaboration with states and territories. Other reforms, such as investment in research to build the evidence base on effective teaching approaches or the development of new curriculum or assessments tools, can be funded and delivered directly by the federal government to support schools across all jurisdictions and sectors.

5.2 **Priorities for federal government reforms**

5.2.1 Strengthen the education evidence base in Australia

The federal government should significantly increase its investment in building a robust education evidence base in Australia, including by increasing funding for the Australian Education Research Organisation (AERO).

Australia needs to improve the way it produces and disseminates evidence on what works in the classroom, including how the needs of a diverse student population can best be supported. We also know too little about the curriculum and instructional approaches currently used in Australian schools, or how schools organise their workforces, and how teachers' time is allocated to different activities.²⁴

Australia needs to:

- Lift the standards for scientific evidence in education, and produce more pilots, randomised controlled trials, and quasi-experimental studies. In particular:
 - Popular instructional programs and materials used in schools should be better evaluated.
 - Major government policies should also be better evaluated.
 - More funding should be provided for longitudinal studies to identify trends – and their causes – over time.
- Conduct better research on the conditions that encourage teachers to use the evidence on what works.

^{23.} Sonneman and Goss (2018, p. 20).

^{24.} Hunter et al (2022).

- Better synthesise, translate, and share research and evaluation findings so they are readily accessible to educators and policy makers.
- Build the research capacity of schools and policy makers through specialised training and support.
- Better understand what is happening in schools now, including the pedagogical methods used, the level and effectiveness of existing professional learning for teachers, and the utilisation and integration of the existing schools' workforce.²⁵

The creation of AERO in late-2020 was a good start in tackling this challenge. AERO's research agenda covers many of the high-priority areas that require further action, including effective teaching practices for literacy and numeracy, and evidence use in schools.²⁶ But AERO's current funding of \$50 million over four years is insufficient to meet the size of the challenge.²⁷ In contrast, the UK's Education Endowment Foundation was created to build and disseminate the education evidence-base in the UK with an initial endowment of £125 million in 2011 (this is equivalent to about \$280 million in Australian dollars today).²⁸ The UK government has recently committed to increasing the EEF's endowment beyond 2026.²⁹

5.2.2 Capture lessons learned from COVID disruptions to schools and increase the resilience of schools to future disruption

The federal government should fund rigorous research on the innovations that emerged from the COVID disruptions to schools,

- 26. See AERO's 2021-2022 research agenda: AERO (2021).
- 27. See DESE (2020) for a description of AERO's objectives.
- 28. Productivity Commission (2016).
- 29. Education Endowment Foundation (2022).

- Invest in research that establishes the conditions required for remote schooling, including live online teaching, to be delivered effectively to students. This could have significant benefits for students in a range of settings, including in rural and remote communities and disadvantaged communities, where students may have more limited access to curriculum offerings due to difficulties accessing qualified teachers or low student demand.
- Invest in rigorous pilots and evaluations of promising small group tutoring models, leveraging lessons learned from Covid catch-up tutoring programs in NSW, Victoria and South Australia, as well as the Smith Family's model in 2021 and 2022.³⁰ Small group intervention or tutoring programs have the potential to deliver significant learning gains for students who have fallen behind.³¹ When delivered through a robust 'response to intervention' framework, small group interventions can also play an important ongoing role, post pandemic, in reducing learning disparities in Australia, including equity gaps.³² But how small group tutoring programs are designed and implemented matters significantly for the student outcomes they deliver. To capitalise on the recent investment and innovation in school-based tutoring programs to date, rigorous evaluations of the most promising programs should be conducted now. Evaluation findings should be made public, so that all jurisdictions and educators can benefit from the findings going forward.

- 31. Sonneman and Goss (2020).
- 32. Hunter et al (2022).

^{25.} Sonneman and Goss (2018, pp. 15, 16, 24, 25).

NSW Department of Education (2022b); Victorian Department of Education (2022); South Australian Department of Education (2022); and Smith Family (n.d.).

Invest in practical curriculum and lesson supports that boost the resilience of school education to future disruptions, be it another pandemic or more localised natural disasters, such as fires or floods, that force further school closures. One highly promising international example that could be adopted in Australia is the UK's Oak National Academy, which was founded in 2020 to cater for the COVID-19 remote learning period, and rapidly developed high-quality video lessons that teachers and families could use to support remote schooling across key subjects in the UK curriculum.³³ Ochre Academy, recently launched in Australia, is modelled on Oak National Academy, and could play an important role in building the resilience of Australia's national school education system for future disruptions, if sufficient funding is made available for it to scale up.³⁴

5.3 Strengthen the teaching profession and career structure

There are significant opportunities for the federal government to work with the states and territories to strengthen the teaching profession and the teaching career structure. Commitment to these reforms could be formalised through new National Policy Initiatives in the NSRA.

5.3.1 Attract more high achievers to teaching and improve initial teacher education

The federal government should do more to make teaching an attractive career choice. Governments can change the way young high achievers think about teaching so that more choose to make it their career. Grattan Institute's 2019 survey of high achievers showed they value

upfront financial support while studying, as well as better pay and career challenge.

The federal government should work with the state governments on a goal of doubling within 10 years the proportion of young high achievers who choose teaching. We note the new federal government's campaign policy proposal to offer bursaries of up to \$12,000 a year to high achieving school leavers to study teaching.³⁵ Grattan's research shows that financial incentives of this nature can be effective in increasing the attractiveness of a teaching career for high achieving students (ATAR 80 or above, or comparable undergraduate academic achievement, plus strong non-academic capabilities).³⁶ The federal government should also lead a national marketing campaign to re-position teaching as a challenging and rewarding career.

Initial teacher education (ITE) also needs to be improved. The federal government should consider the findings of the 2021 Quality Initial Teacher Education Review and implement reforms to raise the quality of ITE programs.³⁷ It is essential that ITE graduates leave university with foundational knowledge and skills to teach effectively in the classroom, including an up-to-date evidence-based understanding of how students learn and the critical role of the classroom teacher.

5.3.2 Work with state governments to create a new expert teacher career path

The federal government should support the state governments to introduce a new expert teacher career path to build, recognise, and deploy exceptional teacher expertise. Two new permanent positions should be created – Master Teachers and Instructional Specialists – to enable top teachers to lead professional learning in schools. These

^{33.} Oak National Academy has continued to expand and improve its highly accessible video lessons and curriculum support offering, which has been used by many UK teachers to support professional learning and quality lesson planning even as schools have returned to face-to-face teaching: Oak National Academy (2021).

^{34.} Ochre Education (2022).

^{35.} Australian Labor Party (n.d.).

^{36.} Goss and Sonneman (2019).

^{37.} See DESE (2021) for further detail on the Quality ITE Review.

roles would be designed for expert teachers who have recognised domain-specific skills and dedicated responsibilities to work with classroom teachers to build quality practice.

Instructional Specialists would work within schools to set the standard for good teaching, build teaching capacity, and spread evidence-informed practices. They would be paid \$40,000 more than the highest standard pay rate for teachers. The position would be limited to about 8 per cent of teachers.

Master Teachers would be responsible for improving teaching across multiple schools by coordinating professional learning, supporting Instructional Specialists, and connecting schools with research. They would be paid \$80,000 more than the highest standard pay rate for teachers. The position should be limited to about 1 per cent of teachers.³⁸

It is critical that new responsibilities are attached to these roles. Master Teachers should be charged with bringing rigor and coherence to professional judgements about best practice, and act as a system-level broker, facilitating learning between system leaders, schools, and teachers. School-based Instructional Specialists should help support classroom teachers to build their knowledge and implement best practice in the classroom, helping teachers understand not just 'what to do' but 'how to do it' within their classroom context. Central to this role would be frequent opportunities to observe and coach other teachers in their schools.

5.3.3 Improve school effectiveness to support student achievement

Grattan's 2022 research on teacher workload, the wider schoolworkforce, and curriculum planning has identified a range of important

38. Goss and Sonneman (2020).

options for reforms that would lift school effectiveness by giving teachers the opportunity to focus on effective preparation for the classroom.

Governments should focus on three areas of reform:

- first, improve the deployment of the wider schools' workforce, including school specialists and support staff, so teachers can deliver high-quality classroom instruction;
- second, streamline the workload involved in core teaching activities, to reduce the need for teachers to 're-invent the wheel' in curriculum and lesson planning; and
- third, increase school leaders' flexibility to strike a sensible balance between class sizes and teachers' face-to-face teaching time, and to smooth out workloads over the school year by scheduling more time for teachers to work together on preparation activities in term breaks.³⁹

We recommend the federal government invest \$60 million in pilot and research studies with the states and territories to evaluate the best ways to make more time for great teaching. Pilots and research studies would examine the three reform areas above as a priority.

The first reform area, 'better deploy the wider school workforce', is a promising area for innovation. Improving the way schools use specialist staff and teaching assistants to provide assistance to individual students and small groups can deliver big improvements in student outcomes. In addition, teaching assistants and other support staff can significantly reduce the time teachers spend on tasks that do not require teaching expertise, such as routine administration, yard duty and supervision of extra-curricular activities. New pilots and trials on wider workforce innovations could improve the net return on the existing

^{39.} Hunter et al (2022).

 $\$ billion per annum spent on teaching assistants across Australia, for little extra cost. 40

Piloting and evaluating interventions that support more robust curriculum implementation in schools - the second reform area could not only save teachers a significant amount of time, addressing workload concerns in a cost-effective way, but also boost teaching quality. New curriculum interventions could pilot the impacts of expanding access to high-quality, comprehensive materials and teaching guides so that teachers do not have to 're-invent the wheel' in their lesson planning.

New pilot and evaluation studies on the third reform area should examine different ways to organise teachers' work more effectively and efficiently, such as by evaluating the trade-offs involved in striking a difference balance between class size and release time where appropriate, as well as opportunities to smooth out teachers' workload between term time and term breaks. Reforms in these areas would require careful design and implementation support, and may require changes to industrial agreements. However, our 2021 survey results show a majority of teachers agree that reforms in these areas would free-up teacher time.⁴¹

^{40.} We estimate approximately \$5 billion was spent on teaching assistants in 2021, assuming 105,272 teaching assistants across Australia, working on average 25 hours each week, with average annual earnings of \$39,000 plus on costs. Source: ABS (2020, Labor Force Survey (Cat. no. 6291.0)) and National Skills Commission (2021, Labour Market Insights) (using data from ABS Survey of Employee Earnings and Hours May 2021).

^{41.} Hunter et al (2022, p. 43).

Bibliography

- ABS (2020). Labour Force Survey (Cat. no 6291.0). Australian Bureau of Statistics. https://www.abs.gov.au/statistics/labour/employment-andunemployment/labour-force-australia-detailed/latest-release.
- ACARA (2021). NAPLAN 2021 Results. Australian Curriculum, Assessment and Reporting Authority. https://reports.acara.edu.au/.
- AERO (2021). *Research Agenda 2021-2022*. Australian Education Research Organisation. https://www.edresearch.edu.au/our-research/research-agenda.
- Australian Labor Party (n.d.). *Labor's Plan to Fix Teacher Shortages and Stop the Slide in School Results*. https://www.alp.org.au/policies/labors-plan-to-fix-teachershortages-and-stop-the-slide-in-school-results#:~: text=Bursaries%5C%20for%5C%20talented%5C%20students,-An%5C%20Albanese%5C%20Labor&text=Under%5C%20Labor's%5C%20p lan%5C%2C%5C%20up%5C%20to,and%5C%20students%5C%20from%5C %20regional%5C%20areas.
- Backes, B. and Hansen, M. (2018). *Reaching Further and Learning more? Evaluating Public Impact's Opportunity Culture Initiative*. National Center for the Analysis of Longitudinal Data in Education. https://caldercenter.org/sites/default/files/WP%5C%20181_0.pdf.
- Baker, J. (2022). "High school students hit hardest by COVID closures, new data shows". *The Sydney Morning Herald*. https://www.smh.com.au/national/nsw/high-school-students-hit-hardest-by-covid-closures-new-data-shows-20220516-p5almx.html.
- Boyd et al (2008). Boyd, D., Lankford, H., Loeb, S., Rockoff, J. and Wyckoff, J. "The Narrowing Gap in New York City Teacher Qualifications and Its Implications for Student Achievement in High-Poverty Schools". *Journal of Policy Analysis and Management* 27 (4), pp. 793–818. https://www.nber.org/system/files/working_papers/w14021/w14021.pdf.
- Clotfelter et al (2008). Clotfelter, C., Ladd, H. and Vigdor, J. "Teacher Credentials and Student Achievement in High School: A Cross-Subject Analysis with Student Fixed Effects". *Journal of Human Resources* 45 (3), pp. 655–681. http://www.nber.org/papers/w13617.

- Daley et al (2019). Daley, J., Duckett, S., Goss, P., Norton, A., Terrill, M., Wood, D., Wood, T. and Coates, B. *Commonwealth Orange Book 2019*. Melbourne: Grattan Institute. https://grattan.edu.au/wp-content/uploads/2019/04/916-Commonwealth-Orange-Book-2019.pdf.
- DESE (2020). Australian Education Research Organisation. Department of Education, Skills and Employment. https://www.dese.gov.au/quality-schools-%20package/resources/australian-education-research-organisation-aero.
- (2021). *Quality Initial Education Review*. Department of Education, Skills and Employment. https://www.dese.gov.au/quality-initial-teacher-education-review/announcements/final-report-quality-initial-teacher-education-review.

Dobbie, W. (2011). "Teacher Characteristics and Student Achievement : Evidence from Teach For America". http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=85560185670B 27200D673D65C398D0BE?doi=10.1.1.698.2282&rep=rep1&type=pdf.

- Education Endowment Foundation (2022). *New: Government confirms long-term funding for EEF*. https://educationendowmentfoundation.org.uk/news/new-government-confirms-long-term-funding-for-eef (visited on 12/06/2022).
- Gonski et al (2011). Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B. and Tannock, P. *Review of Funding for Schooling - Final Report.* Canberra: Australian Government. https://www.dese.gov.au/schoolfunding/resources/review-funding-schooling-final-report-december-2011.
- Goss et al (2016). Goss, P., Sonneman, J., Chisholm, C. and Nelson, L. *Widening gaps: What NAPLAN tells us about student progress*. Melbourne: Grattan Institute.

https://grattan.edu.au/wp-content/uploads/2016/03/937-Widening-gaps.pdf.

- Goss, P. and Sonneman, J. (2019). Attracting high achievers to teaching Grattan Institute Support Founding members Endowment Supporters. Melbourne: Grattan Institute. https://grattan.edu.au/wp-content/uploads/2019/08/921-Attracting-high-achievers-to-teaching.pdf.
- _____ (2020). *Top teachers: Sharing expertise to improve teaching*. Melbourne: Grattan Institute.

https://grattan.edu.au/wp-content/uploads/2020/02/928-top-teachers.pdf.

Han et al (2018). Han, S. W., Borgonovi, F. and Guerriero, S. "What Motivates High School Students to Want to Be Teachers? The Role of Salary, Working Conditions, and Societal Evaluations About Occupations in a Comparative Perspective". *American Educational Research Journal* 55.1, pp. 3–39. https://doi.org/10.3102/0002831217729875.

Hunter, J. and Emslie, O. (2021). "Mind the gap: what we should do about NAPLAN's worrying report card". *The Sydney Morning Herald*. https://www.smh.com.au/national/mind-the-gap-what-we-should-do-about-naplan-s-worrying-report-card-20211215-p59hne.html.

- Hunter et al (2022). Hunter, J., Sonneman, J. and Joiner, R. *Making time for great teaching: How better government policy can help*. Grattan Institute. https://grattan.edu.au/report/making-time-for-great-teaching-how-better-government-policy-can-help/.
- Jacob et al (2018). Jacob, B. A., Rockoff, J. E., Taylor, E. S., Lindy, B. and Rosen, R. "Teacher applicant hiring and teacher performance: Evidence from DC public schools". *Journal of Public Economics* 166, pp. 81–97. ISSN: 0047-2727. https://www.sciencedirect.com/science/article/pii/S0047272718301555.
- Jensen et al (2014). Jensen, B., Hunter, J., Sonneman, J. and Cooper, S. *Making time for great teaching*. Melbourne: Grattan Institute. https://grattan.edu.au/wp-content/uploads/2014/03/808-making-time-for-great-teaching.pdf.
- Kennedy, M. M. (2016). "How Does Professional Development Improve Teaching?" *Review of Educational Research* 86.4, pp. 945–980. https://doi.org/10.3102/0034654315626800.
- Kraft, M. A. and Papay, J. P. (2014). "Can Professional Environments in Schools Promote Teacher Development? Explaining Heterogeneity in Returns to Teaching Experience". *Educational Evaluation and Policy Analysis* 36.4, pp. 476–500. https://doi.org/10.3102/0162373713519496.
- National Skills Commission (2021). *Labour Market Insights*. Australian Government. https://labourmarketinsights.gov.au/support/snapshot-data/.
- NCVER (2018). *Longitudinal Survey of Australian Youth*. National Centre for Vocational Education Research. https://www.lsay.edu.au.
- NSW Department of Education (2022a). 2021 Term 2 and Term 4 Check-in assessments. https://education.nsw.gov.au/content/dam/maineducation/about-us/educational-data/cese/2021-check-in-assessments.pdf.

- (2022b). Tutoring program extended as students return to school. https://education.nsw.gov.au/news/latest-news/tutoring-program-extendedas-students-return-to-school (visited on 17/01/2022).
- Oak National Academy (2021). Oak National Academy Annual Report September 2020 — July 2021.

https://assets.ctfassets.net/ygggx3rcdvia/52j7koxaqhxdc08gHMoKIZ/d24d65b a96bf5fbf0a7c1d90f186a30c/ONA_Annual_Report_2021_v3.pdf.

- Ochre Education (2022). Ochre Education. https://ochre.org.au/ (visited on 12/06/2022).
- OECD (2008). Comparisons Over Time on the PISA Scales. Paris: Organisation for Economic Co-operation and Development. https://www.oecd.org/pisa/pisaproducts/39712449.pdf.
- (2018a). Equity in Education: Breaking Down Barriers to Social Mobility. https://www.oecd-ilibrary.org/content/publication/9789264073234-en.
- (2018b). Effective Teacher Policies: Insights from PISA. Paris. https://www.oecd-ilibrary.org/docserver/9789264301603en.pdf?expires=1654668915&id=id&accname=guest&checksum=5465F D9584FEC3E136699678A09FE65.
- (2019). *PISA 2018 Results (Volume I): What Students Know and Can Do.* Paris. https://www.oecd-ilibrary.org/content/publication/5f07c754-en.
- (2020). *PISA 2018 Database*. Paris: OECD. https://www.oecd.org/pisa/data/2018database.
- (2021). Education at a Glance 2021: OECD Indicators. Paris: OECD. DOI: 10.1787/b35a14e5-en. https://doi.org/10.1787/b35a14e5-en.
- Productivity Commission (2016). National Education Evidence Base: Productivity Commission Inquiry Report. Productivity Commission. https://www.pc.gov.au/inquiries/completed/educationevidence/report/education-evidence.pdf.
- Rockoff et al (2008). Rockoff, J. E., Jacob, B. A., Kane, T. J. and Staiger, D. O. *Can You Recognize an Effective Teacher When You Recruit One?* National Bureau of Economic Research, pp. 43–74. http://www.nber.org/papers/w14485.

- Scher, L. and O'Reilly, F. (2009). "Professional Development for K–12 Math and Science Teachers: What Do We Really Know?" *Journal of Research on Educational Effectiveness* 2.3, pp. 209–249. DOI: 10.1080/19345740802641527. https://doi.org/10.1080/19345740802641527.
- Smith Family (n.d.). Catch up learning pilot results show boost for struggling students. https://www.thesmithfamily.com.au/research/reports/catch-up-learning-pilot.
- Sonneman, J. and Goss, P. (2018). *The Commonwealth's role in improving schools*. Melbourne: Grattan Institute. https://grattan.edu.au/wp-content/uploads/2018/02/898-the-Commonwealthsrole-in-improving-schools.pdf.
- (2020). COVID catch-up: Helping disadvantaged students close the equity gap. Melbourne: Grattan Institute. https://grattan.edu.au/wp-content/uploads/2020/06/COVID-Catch-up-Grattan-School-Education-Report.pdf.
- South Australian Department of Education (2022). *Learning+ online tutoring program*. https://www.education.sa.gov.au/working-us/teacher-initiatives/learningonline-tutoring-program (visited on 12/05/2022).
- Thomson et al (2019). Thomson, S., Bortoli, L. D., Underwood, C. and Schmid, M. *PISA 2018: Reporting Australia's Results Volume I Student Performance*. Melbourne: Australian Council for Educational Research. https: //research.acer.edu.au/cgi/viewcontent.cgi?article=1035&context=ozpisa.
- Timperley et al (2007). Timperley, H., Wilson, A., Barrar, H., Fung, I. and Education, N. "Professional learning and development: a best evidence synthesis iteration". http://lst-iiep.iiep-unesco.org/cgibin/wwwi32.exe/[in=epidoc1.in]/?t2000=025049/(100).
- Tracey et al (2022). Tracey, L., Bowyer-Crane, C., Bonetti, S., Nielsen, D., D'Apice, K. and Compton, S. *The impact of the Covid-19 pandemic on children's socio-emotional wellbeing and attainment during the Reception Year*. Education Endowment Foundation. https://d2tic4wvo1iusb.cloudfront.net/documents/projects/EEF-School-Starters.pdf?v=1652814985.
- Victorian Department of Education (2022). *Tutor Program To Continue In Victorian Schools.* https://www.premier.vic.gov.au/tutor-program-continue-victorian-schools (visited on 17/01/2022).

- Weidmann et al (2022). Weidmann, B., Allen, R., Bibby, D., Coe, R., James, L., Plaister, N. and Thomson, D. COVID-19 disruptions Attainment gaps and primary school responses. Education Endowment Foundation. https://d2tic4wvo1iusb.cloudfront.net/documents/projects/FFT-COVID-19disruptions-attainment-gaps-and-primary-school-responses-report-Feb-2022.pdf?v=1644567024.
- Weldon, P. (2016). *Out-of-field teaching in Australian Secondary Schools*. Australian Council for Educational Research. https://research.acer.edu.au/cgi/viewconte nt.cgi?article=1005&context=policyinsights.
- Wood et al (2022). Wood, D., Coates, B., Duckett, S., Hunter, J., Terrill, M., Wood, T. and Emslie, O. *Commonwealth Orange Book 2022*. Melbourne: Grattan Institute. https://grattan.edu.au/report/orange-book-2022/.
- Yoon et al (2007). Yoon, K. S., Duncan, T., Lee, S. W.-Y., Scarloss, B. and Shapley, K. "Reviewing the Evidence on How Teacher Professional Development Affects Student Achievement. Issues & Answers. REL 2007-No. 033". *Regional Educational Laboratory Southwest*.