



## Public submission made to the Review to Achieve Educational Excellence in Australian Schools

Submitter: Grattan Institute  
Submitting as a: Think tank  
State: Vic.

### Summary

The Review is a serious opportunity for a new nation-wide conversation on school education. It comes at a critical time. Australia's educational performance is declining internationally, we face new challenges in preparing students for future work, and equity gaps are too wide.

But this does not mean the Commonwealth should have a much bigger role in schooling. The Commonwealth is keen to ensure its extra \$23 billion in school funding is spent wisely, but it is only 3.3 per cent of all government spending over the period.

Part A of this submission identifies key reforms to improve *all* investments in schooling. Part B identifies what the Commonwealth should do within this bigger picture.

Part A argues against a static, top-down model of the evidence base. Continuous improvement requires an adaptive system, where frontline professionals are equipped to mobilise evidence in daily work.

To build adaptive capacity, we call for a much greater focus on student progress and effective teaching. We highlight specific reforms such as improving how teachers use data, providing teachers with better feedback and collaboration, and giving top specialist teachers more responsibilities for developing the workforce.

The Commonwealth should play a modest role within overall reform efforts. Part B recommends against new Commonwealth conditions on funding - they have been tried before and failed. New requirements are most likely to result in tick-a-box responses from the states and large administrative costs.

Instead, we urge the Commonwealth to act in four areas where there are genuine gaps and scale efficiencies:

- (i) Coordinate new investments to improve how we measure non-cognitive skills and critical thinking,

- (ii) Develop a new national measure of learning progress,
- (iii) Invest in new digital assessment tools, and
- (iv) Establish a new national independent evidence body.

*Please note Part B is supplementary to this submission.*

## Main submission

### 1. Design an adaptive system of continuous improvement

This chapter addresses the Issues Paper question: what can we do to improve and how can we support ongoing improvement over time?

The Review is a serious opportunity for reform. Australia must find ways to improve its declining educational performance – an issue of vital importance to Australia’s future productivity and economic growth, as emphasised in a recent major Productivity Commission report (2017).

This chapter argues that a top-down, static model of evidence is not sufficient to drive continuous improvement. But neither is a bottom-up system, with 10,000 schools doing their own thing.

A strong evidence base on ‘what works’ is just the beginning: many other factors also need to be in place for teachers to embed evidence in their daily practice. A more ‘adaptive’ system design is needed, with stronger feedback loops for more systematic learning.

Australia also needs to better understand the conditions that facilitate the uptake of evidence. But in the meantime, the Review team should synthesise existing research on the conditions for evidence mobilisation and implementation.

#### 1.1. Create a more adaptive education system

School education in Australia faces three big challenges:

- First, we must improve the teaching of core foundational skills, where the challenge is largely about how to spread the existing evidence base.
- Second, we need to better prepare young people in ‘new’ capabilities in critical thinking and non-cognitive capabilities, where we know little about what works best.
- Third, we must address the large gaps between advantaged and disadvantaged groups.

The system must be designed to cater to these very different challenges. It needs to encourage teachers to embed clear, existing evidence where it exists (for example on core foundational skills), and at the same time enable disciplined innovation

where the evidence is weak (for example in critical thinking and non-cognitive skills). An 'adaptive education system' gives adequate direction, but also ensures teachers are equipped to make sound judgments where there is ambiguity.

Adaptive improvement is best thought of as an iterative, deliberate way to learn by doing, using a feedback loop with an explicit focus on inputs and outcomes as well as the learning processes along the way. Adaptive reform uses data to link what is done (inputs) to what is learnt (outcomes) and systematically improve the learning process over time.

### 1.2. Strengthen feedback loops at multiple levels

School education has been much slower than other professions such as medicine and engineering to produce scientific evidence and incorporate it into practice. Even where the evidence is clear, it is not necessarily taken up. This is not only an issue for schools, but also for government policymakers.

An adaptive education system has strong evaluative structures and feedback loops to help embed evidence in practice. Figure 1 depicts such a system, with feedback loops at four levels: school, region, state, and nation. At a minimum there are three steps in any feedback loop: (i) 'Act' by deliberately selecting inputs or programs to meet needs; (ii) 'Evaluate' by tracking and measuring the outcomes; and (iii) 'Adapt' by using learnings on what worked best to inform actions next time around.

Feedback mechanisms can encourage a more evaluative way of working, but a range of other barriers to using evidence need to be overcome too. The next sections discuss some of those barriers.

*[Figure 1 removed – see attachment]*

### 1.3. Better understand why people use evidence (or don't)

There are many possible reasons schools and policymakers do not use evidence in daily decisions, as shown in Figure 2. Research findings need to be readily accessible, timely, relevant and trustworthy. The organisational culture must support risk-taking. Individuals must possess the skills to translate and implement the evidence. Interaction between researchers and public servants can be beneficial, including at the departmental level.

*[Figure 2 removed – see attachment]*

#### 1.3.1. System-level policies can increase the uptake of evidence

Government policies can increase the use of evidence in daily decisions, but there is little high-quality research on exactly what system policies and programs are most effective.

Studying high-performing education systems can shed some light on the types of policies likely to help in spreading evidence. Some OECD research points to a mix of policies for system-wide improvement, including both vertical and horizontal accountability, capacity building and ‘learning processes’.

School education literature includes some research on the conditions that facilitate ‘adult learning’ and improvement, but more is needed. Some literature suggests school improvement is not so much about changing mindsets as changing behaviours (although this needs to be rigorously tested). It suggests routines can be a powerful tool to get teachers to change behaviour. They first experience the benefits for student learning, which then influences a shift in mindset later on. Other education systems have recently initiated research in this area, such as the UK and US, and the Productivity Commission identified this as an issue for further research in Australia.

‘Improvement’ and ‘implementation’ science can help shed light on what school settings are needed to translate evidence into practice. Improvement science involves researchers working directly with educators to adapt evidence to local needs and solve specific problems of practice. This collaborative structure can help persuade sceptical educators that scientific research is relevant to their specific context.

But improvement science is not a system-wide solution; large-scale improvement will only come with better-designed experiments that also incorporate steps on how to actually implement the practice under investigation, including the guidance or system supports needed.

As a start, the Review team should synthesize existing research on the conditions that assist in evidence uptake, exploring research in:

- Literature from school education, psychology, public policy, management, organisational change, improvement science and implementation science.
- System design in high-performing school education systems, including the system-level policies and programs for spreading evidence-based practice.
- Other professional sectors, including nursing, medicine, engineering and aviation.

A summary of the existing research on how to improve evidence mobilisation will be useful for schools, but also for policymakers in designing the system-level policies and structures most likely to improve classroom teaching.

The next chapter identifies the big system-level reforms that help build a more adaptive education system.

## 2. Key reforms to lift education outcomes

This chapter addresses the following questions from the Issues Paper: How could schools funding be used more effectively and efficiently to have a significant impact on learning outcomes? What actions can be taken to improve practice and outcomes? What evidence is there to support taking these actions?

This chapter largely draws on previous Grattan Institute work. It outlines the big reforms that offer significant returns on investment. It includes not only reforms at the classroom and school level, but also at the system level for wide-spread improvement; reforms that will help embed the use of evidence in schools.

The big reforms include focusing more on student progress (growth) rather than achievement at a point in time, as well as improving teaching effectiveness and school leadership which have the largest impacts on student learning outside of the home. A big priority must be to strengthen the production and dissemination of rigorous evidence. Policymakers also need to gather better data on what is actually happening inside schools. At the moment, we know far too little about this.

We start by highlighting three factors that should be considered when identifying the big reforms likely to make the biggest difference (see Box 1 below).

Box 1: Three factors to consider in identifying what reforms are high priorities

- Seek to understand the key challenges facing schools in Australia. Without a clear understanding of the problem, it is hard to identify solutions likely to have the biggest impact.

- Consider both the cost and impact of interventions. The return on investment can vary substantively, as seen in Figure XX below.

- Consider the merits of investing in system-level infrastructure. A dollar spent outside of a school is not wasted if it provides the right system design and support needed to improve schools.

The following reforms are known to have a big and positive impact on student learning.

### 2.1. Focus more on student progress (growth)

School education policy should explicitly aim to improve the progress (growth) of all students, not just their achievement at a point in time. There are two important aspects of increasing the focus on student progress:

Putting more 'small data' on student progress in the hands of teachers for improving teaching in the classroom; and

Putting better 'big data' on progress in the hands of policymakers for system monitoring.

The former should be the first priority, because this is known to have one of the biggest impacts on the effectiveness of teaching. Teachers should better use classroom data to track the progress of each of their students, and adapt their teaching to suit what each student is ready to learn next.

Using small data in this way is not the norm in Australian schools, as we discussed in our 2015 report, *Targeted Teaching*. Student achievement varies by up to seven years in a typical Year 9 classroom in Australia. Teachers need more tools, training, trust, time and team work to better use data in practice (as discussed in ‘*Strengthen the use of assessment data*’ below).

Importantly, Australia must improve how it measures student progress both on core academic skills and ‘new’ capabilities such as critical thinking and non-cognitive skills (the latter issue is discussed in Chapter 5 of the supplementary material).

## 2.2. Improve teaching effectiveness

Effective teaching has the largest impact on student learning outside of the home environment. But too often we talk about teacher quality as though the individual teacher is the point at issue. An overarching theme is that teachers need more support from the system – no teacher is an island. A number of specific changes, highlighted in past Grattan reports, are outlined below.

### 2.2.1. Prioritise teacher time toward high-impact tasks

Teacher time is an expensive and precious resource. But simply giving teachers more time will not necessarily lead to better teaching and learning. Teacher time must be redirected from low-impact to high-impact activities.

First, teachers need to be relieved of low-value non-teaching duties, for example administrative or supervisory tasks. Second, elements of teaching instruction should be standardised, to free-up time for high-impact teaching strategies. More use of tried and tested high-quality support materials can enhance student learning and reduce ‘reinvention of the wheel’. Standardisation could include more common lesson plans and formative assessments, more guidance on which textbooks to use and how to use them, and careful use of educational technology.

Policymakers and school leaders must lift their game: they make many of the critical decisions that significantly impact teacher time.

### 2.2.2. Strengthen the use of assessment data

Three changes should be made to help teachers use data to improve their teaching. First, teachers should get better support in how to interpret data on student progress and then adapt their teaching. This is not just about more ‘data managers’ in schools, but more specialised pedagogical guidance to help translate the data into instructional steps. It’s the dialogue that matters, not the data.

Second, teachers should get more and better classroom assessment tools and resources. Such tools should be aligned to the curriculum, easy to use, and provide guidance on how to use data to adjust teaching. Australia needs better tools to measure not only foundational skills but also ‘new’ capabilities in critical thinking and non-cognitive outcomes.

Third, government should play a stronger information-broker role on the tools available, evaluating them and sharing information with the sector, for example via a star rating approach. The alternative is for every school or teacher to choose their assessments based on trial and error, anecdote or Google – and that’s what happens too often today.

#### 2.2.3. Make collaborative learning more productive

Collective teacher efficacy has one of the largest effects on student learning. But simply working in a group is not enough, as seen in the United States where there have been huge investments with little returns. Australia needs much better processes for effective collaboration, moving beyond the simple exchanging of lesson plans to deeper discussions on instruction, interpreting data, and integrating evidence into new ways of working. High-performing education systems such as Shanghai, Singapore and Hong Kong show how professional learning communities can be key vehicles for teacher development – with a deep focus student learning and valuable input from expert teachers who guide group discussions and taking forward findings.

#### 2.2.4. Improve feedback and appraisal

Feedback is one of the most powerful interventions to improve teaching practice. And it doesn’t cost much. Teachers need feedback about their strengths and weaknesses if they are to improve their teaching. But many in Australia don’t get that information during professional learning, appraisal, or their performance management. There should be more opportunities for observation.

#### 2.2.5. Strengthen student engagement

As many as 40 per cent of students are unproductive in a given year, and these students learn less over time. Teachers find this very stressful and are calling out for more support. We must provide better initial training and in-school support in managing classes, as well as better research on the root causes of the problem.

#### 2.2.6. Invest in top specialist teachers to spread best practice

Our best teachers can help lift the effectiveness of the whole workforce. Yet they often remain isolated, with heavy teaching loads in their own classrooms. In high-performing systems, such as Shanghai and Singapore, an elite cohort of specialist teachers sets the direction for effective practice and spreads the message via cross-school networks. Australia’s top teachers have some of these functions on paper, but

they rarely get a platform to enact them in their schools, or across schools. Australia should introduce new ‘master teacher’ and ‘expert teacher’ roles to address this issue. These new positions not only build workforce capacity but elevate the importance of subject-specific teaching expertise.

### 2.3. Revamp school leadership pathways

School leaders are critical to school improvement, yet we don’t select or train people well for these roles. School principal shortages will become much worse unless the career path becomes better supported. Singapore provides a shining example of this: they identify outstanding leaders early on, provide intensive training in preparation (a six month program full time) followed by strong principal peer network support.

### 2.4. Strengthen the evidence-base and data flows

Australia needs to vastly improve the way it produces and disseminates evidence on what works. In particular, we need to:

Lift the standards for scientific evidence, and produce more randomised controlled trials and quasi-experimental studies. Major government policies should be better evaluated, and more funding provided for longitudinal studies to identify trends over time. Establishing nationally agreed scientific evidence standards would be a good first step.

Conduct better research on the conditions that facilitate evidence uptake (through ‘implementation’ and ‘improvement’ science, discussed in Chapter 1). We need to better understand the conditions for using evidence and the system-level policies, programs and processes that then help to enable these conditions. This will only come through better designed experiments that incorporate steps to help educators implement evidence based approaches.

Better synthesise, translate and share research findings so they are readily accessible to educators and policymakers across the country.

Help to develop the research capacity of the sector through specialised training and support

Establish closer working relationships between academics, schools and policymakers to increase the use of evidence in practice.

More broadly, the infrastructure to develop the evidence base should be strengthened. A larger network of organisations should coordinate and work together at national, state, regional and school levels. In particular, the federal government should establish a new national independent research body with a major role in overseeing, coordinating and promoting rigorous evidence (see Chapter 5 in the supplementary material). Further, some state and territory governments could strengthen their research and analytic capabilities, and look to



organisational models such as the *NSW the Centre for Education Statistics and Evaluation (CESE)*.

#### 2.4.1. Better understand what practices are happening in schools

Education policymakers cannot ensure money is spent well if they do not know what is actually happening in schools. In Australia, too little is known about which pedagogical methods are being used, or the nature of collaboration in schools. The dearth of information on practices makes it extremely difficult to identify the key challenges and the best system-wide policy responses, and to evaluate the impact of major policies on teaching effectiveness.

#### 2.5. Other reforms to be explored

The following reforms require further scoping, but could hold promise:

Redesign Initial Teacher Education, so fewer people are trained more intensively (as done in Singapore). This could produce better outcomes for no extra cost.

Increase the use of high-quality textbooks and programs of curriculum content, so individual teachers do not have to 'reinvent the wheel'.

Expand the use of student feedback, which has been shown to be a reliable indicator of teaching quality.

Train teachers in how to use technology to enhance their teaching, especially in subjects such as maths where there could be large benefits (for example helping to build mastery, support targeted teaching, or extend mathematical thinking).

Tackle teacher shortages in maths, science and IT, through salary increases and by training existing teachers to give them specialist capabilities.

Improve incentives to attract high-performing teachers to disadvantaged schools, giving attention to the evidence about what matters most to high performers.

#### 2.6. What governments should not do

We recommend against a greater focus on targets, or teaching standards and regulations.

Targets are useful in agreeing on priorities, but can divert resources from important but less visible activities. Similarly, teaching standards and regulations help in guaranteeing minimum quality but are unlikely to take workforce development to the next stage.

It is also dangerous to rely too much on school autonomy, transparency, accountability and choice as key levers for improvement. Increasing school autonomy will not get the desired results in the absence of the right system support for schools.