

Briefings

Thought leadership for the independent schooling sector

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IS THE CONTINUING INCREASED FUNDING FOR SCHOOLING ACHIEVING RESULTS?

From the CEO

The latest Report on Government Services 2022¹ released by the Productivity Commission highlights the considerable continuing increase in Commonwealth Government funding for Australian schools.

The latest report, which covers the 2019-20 period, highlights a total government recurrent expenditure on school education of \$70.6 billion, a 5.9 percent increase on the previous year. Government schools accounted for \$52.6 billion of that expenditure while non-government schools made up \$18 billion.

The value of governments' investment in government school infrastructure (user cost of capital) for 2019-20 was estimated at \$7.9 billion.

The Australian Government provided 77.4% of total government recurrent expenditure for non-government schools, with State and Territory governments providing 22.6%, a decrease of 1.2% in the proportion of total recurrent funding for non-government schools provided by State and Territory governments in 2018-19.

There were large increases in Australian Government recurrent funding to non-government schools in all states and territories in 2019-20 with South Australia having the largest increase of 30.5% and the Northern Territory having the second highest increase of 21.8%.

Nationally, Australian Government funding for non-government schools increased by 15.2% which is 7.8% more than the increase in 2018-19.

State and Territory recurrent funding to non-government schools increased nationally in 2019-20 by 7.7% which is 3.1% more than the increase in 2018-19. There was significant variance

between the states with the South Australian government showing an 82.8% increase in recurrent funding to non-government schools and the Western Australian government showing a decrease of -3.1%.

A comparison of the growth since 2014-15 shows a substantial increase nationally in funding from the Australian Government to both sectors (Table 1). This coincides with the introduction of the Schooling Resource Standard funding model from 1 January 2014. It is also reassuring to see this increase still well above the CPI increase for the same reporting period.

Table 1: Growth in funding by sector and source, 2013-14 to 2019-20

	GROWTH (%)				
	2014-15 to 2015-16	2015-16 to 2016-17	2016-17 to 2017-18	2017-18 to 2018-19	2018-19 to 2019-20
Government Schools					
Commonwealth	8.6	12.7	9.0	7.9	9.1
State & Territory	4.8	1.7	6.2	6.4	5.3
TOTAL FUNDING	5.3	3.2	6.6	6.6	5.9
Non-government Schools					
Commonwealth	5.0	6.4	6.1	7.4	15.2
State & Territory	1.8	3.4	5.6	4.6	7.7
TOTAL FUNDING	4.2	5.6	6.0	6.7	13.4

1. Available at <https://www.pc.gov.au/research/ongoing/report-on-government-services/2022/child-care-education-and-training/school-education>

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This spending equates to average government recurrent expenditure of \$20,182 per student in government schools. The figure for non-government schools is \$13,189.

Overall, between 2013-14 and 2019-20, real government recurrent per capita expenditure per student grew by 14.2% in government schools and 29.4% in non-government schools. Year by year, the average annual increase was 2.2% in the government sector and 4.4% in the non-government sector

The report notes that total government recurrent funding accounted for only 62.2% of total non-government school recurrent funding in 2020, the remaining 37.8% was sourced from private fees and fundraising.

Tuition fees paid by independent school parents meet, on average, about 55% of school running costs and about 90% of infrastructure costs. To support a thriving and sustainable independent school sector, it is essential that existing and future state and federal funding environments remain in place.

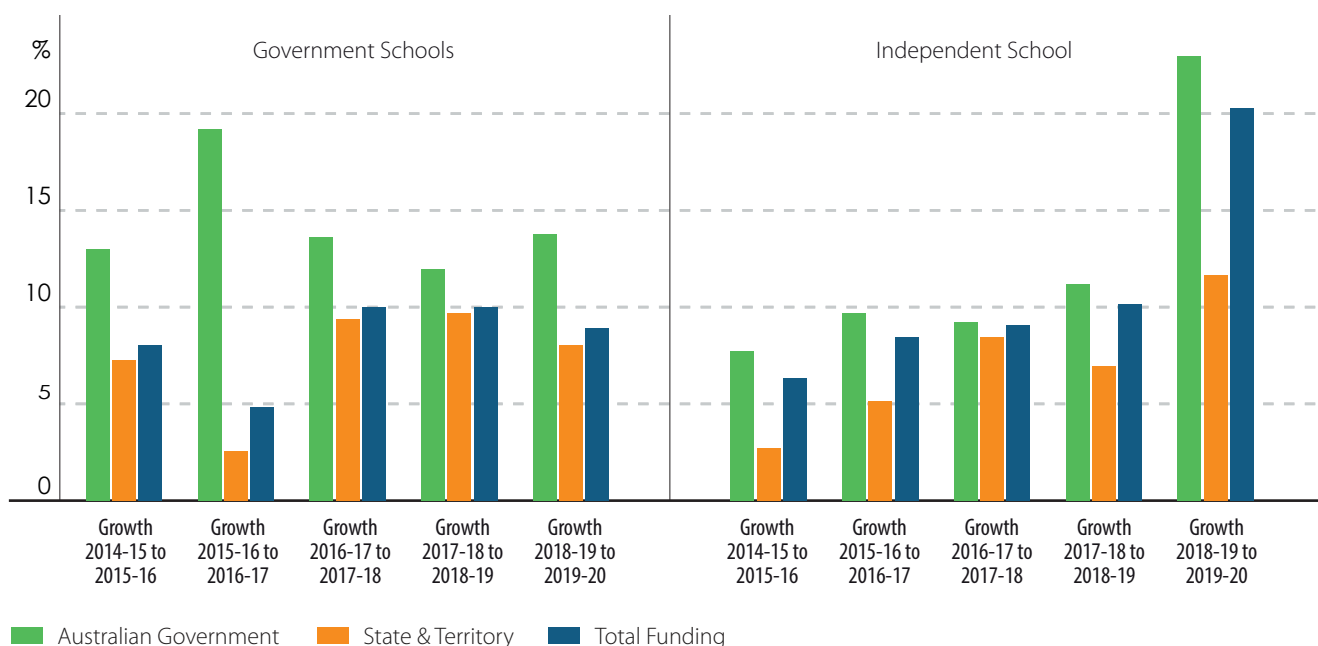
Fortifying this call is the supporting data showing the total savings in government expenditure from students attending non-government schools. While this figure of \$9.5 billion is slightly down on the previous year's figure of \$10.1 billion, the economic realisation is still indisputably evident.

It's of little surprise that COVID-19 had a role to play in some of the larger than expected increases in 2019-20

funding levels seen in the Report on Government Services 2022. This is due to the Australian and state/territory governments providing additional support to non-government schools at the start of the pandemic, especially in the first half of 2020. These support measures included introducing special funding programmes and advancing 2020 calendar year funding into the first half of 2020.

However we interpret the Report on Government Services 2022 figures the point can still be argued, as it was by the former Federal Education Minister Alan Tudge, that improving school performance is not only related to school funding.

Figure 1: Growth in funding by sector and source, 2014-15 to 2019-20



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In his 2021 speech² outlining his vision for Australian schooling, Mr Tudge confirmed that quality teaching is the most important in-school factor in determining student performance and acknowledged that it is the states and territories and non-government school authorities, as the employers of teachers, that realistically face the challenge of improving teaching quality.

He also pointed out that the Federal Government's "main leverage" over quality teaching is its funding of universities to deliver Initial Teacher Education courses, not necessarily the funding of schools. Contention clearly remains around how much funding is received, but just as importantly, how that funding is used.

Discussions around the impact of increased spending on schools to achieve better student outcomes is

still ongoing. Education research fellow at the Centre of Independent Studies, Glenn Fahey insightfully notes³ that continued increases to school funding are not improving overall student outcomes.

Fahey references his research which shows that, in fact, the opposite is occurring, with education outcomes for Australian students declining faster than almost any other country in the world⁴.

We now once again have an opportunity to bring these challenges to the fore as the Federal Election date looms. The major political parties are already outlining education-related policies, and ISQ will be doing all in its capacity to ensure funding arrangements for independent schools not only remain but are adequately used to ensure the best outcomes for students into the future.



CHRISTOPHER MOUNTFORD
Chief Executive Officer

2. A copy of the speech is available at <https://ministers.dese.gov.au/tudge/being-our-best-returning-australia-top-group-education-nations>

3. Available at <https://www.cis.org.au/commentary/articles/more-than-money-to-move-the-educational-needle/>

4. Available at <https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf>

TRUST THE SCIENCE?



MARK NEWHAM
*Director (School Improvement
& Performance)*

“Replication is the intentional repetition of previous research to confirm or disconfirm the previous results, serving as a de facto reliability check on previous research”.

(PLUCKER AND MAKEL, 2021)

The global pandemic has highlighted the importance of having confidence in research. At a time when the community is being asked to trust the science, many social scientists are facing an untimely crisis and are questioning the power and trustworthiness of each other’s work. The loss of trust is often attributed to the replication crisis which spans all research fields, including education. This article will explore instances of the lack of replication in the social sciences, why it matters and what teachers can do to mitigate the impact on their teaching.

Perhaps surprisingly, replication of studies can be rare. A 2005 review of medical publications that have been cited more than 1000 times, and can therefore be seen as very influential in their fields, found only 44% of replications produced results similar to the original study (Ioannides, 2005, cited in Makel & Plucker, 2021). The review also found that replications were less likely to occur when the original study had a small sample and was not randomized - features that are common within education research.

Furthermore, studies that attempt to conduct replications are also rare. Between 2014 and 2018, the percentage of published replication studies on psychology, education, special education, gifted education and criminology, ranged from 0.13% (education) to 1.07% (psychology) (Makel & Plucker, 2021).

The lack of replication studies and the lack of replication of original findings

has the potential to affect people’s trust in the science and may lead to poorer outcomes in people’s health and education (Anven & Lakens, 2018).

An often-cited example on the lack of replicability is the Open Science Collaboration project, whereby 270 researchers attempted to replicate 100 studies that had been published in major psychology journals. Only 39% of the replication studies produced results similar to the original studies, and the effect sizes were usually less than half the size of the original results (Makely, Hodges, Cook & Plucker, 2021).

A famous study that continues to have replication issues is Amy Cuddy’s study on power poses. In 2010, Dana Carney, Amy Cuddy and Andy Yap published a paper that concluded that people who adopted a power pose – such as standing with hands on hips and legs spread apart could - over time potentially experience improved general health and wellbeing over time (Traldi, 2020). This study was the impetus for a popular TED Talk and best-selling book. Even though the results of his study have yet to be definitively replicated, it hasn’t stopped the idea of power posing from infiltrating mainstream consciousness and people adopting the practice. This is despite the fact that one of the original authors of the study stated in 2016 that “the evidence against the existence of power poses is undeniable” (Psychology Today, 2021).

Another study published in 2007, found that difficult Maths problems were easier to solve when presented in a fuzzy font. It was believed that requiring people to focus intently on

the screen could induce more careful reflection and therefore more effective problem solving. However, these findings were not able to be replicated after sixteen attempts (Locken, 2019).

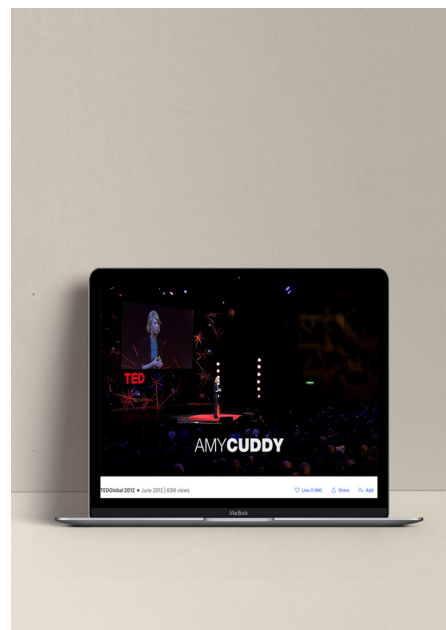
If it is believed that people, including teachers, are discerning and give appropriate weight to the results of studies with a small number of respondents or sample sizes, as well as those that hadn't been replicated, a previous ISQ *Briefings* article on the topic of neuromyths might give readers cause to reconsider (Newham, 2018)¹. Neuromyths are defined as “a misconception generated by a misunderstanding, a misreading, or a misquoting of facts scientifically established” (Dekker et al., 2012, p. 1).

Teachers who adopt strategies that have been based on neuromyths with little or usually no evidence, may be less effective, and there is also an opportunity cost to both students and teachers. Time and energy expended in the implementation of an ineffectual activity is time and energy not spent on activities that have been shown to be more effective for student learning. While the expectations for teachers to try to meet the personalised learning needs for all students increase, so too does the purposeful, evidence-driven approach to maximising student's learning, while avoiding the perils of neuromyths.

Dekker et al. (2012) investigated the prevalence and predictors of neuromyths among teachers in selected regions in the United Kingdom and the Netherlands. More than 200 primary and secondary teachers who had an interest in

Figure 1: Your body language may shape who you are
TEDGlobal 2012

Body language affects how others see us, but it may also change how we see ourselves. Social psychologist Amy Cuddy argues that “power posing” -- standing in a posture of confidence, even when we don't feel confident -- can boost feelings of confidence, and might have an impact on our chances for success.



neuroscience were sampled using an online survey containing 32 statements about the brain and learning, of which 15 were neuromyths. Results showed that on average, most teachers believed nearly half of the neuromyths, including individuals learn better when they receive information in their preferred learning style, and children have learning styles that are dominated by particular senses.

Replication is also an issue for the findings on Growth Mindset theory. As discussed in a previous ISQ *Briefings* article (Newham, 2018b), as of 2015, a number of statisticians and psychologists were becoming increasingly worried that the findings of Carol Dweck's 1998 study had never been replicated in a peer-reviewed research article. In an article by Tom Chivers, Timothy Bates, a professor of individual differences in psychology at the University of Edinburgh, stated that he had been trying unsuccessfully to replicate Dweck's findings in that key mindset study for several years².

In response, Dweck said that attempts to replicate can fail as a result of the scientists inability to recreate the right conditions. Dweck stated that:

Not anyone can do a replication... We put so much thought into creating an environment, we spend hours and days on each question, on creating a context in which the phenomenon could plausibly emerge. Replication is very important, but they have to be genuine replications and thoughtful replications done by skilled people. Very few studies will replicate when done by an amateur in a willy-nilly way. (Chivers, 2017)

IS SECTOR-BLIND SCHOOLS FUNDING ACHIEVABLE?

From the Executive Director

Politicians, media commentators and policy makers all support sector blind needs-based schools funding. What does this really mean and is it achievable within Australia's complex funding arrangements for schools?

Sector blind and needs-based funding could be assumed to mean that a student is funded by governments on the same basis, no matter which school they attend. Taking this approach, a student with the same needs would receive the same funding whether in a state, Catholic or independent school. This would require that no schooling sector be the subject of any special arrangements in terms of government funding for its students. This would be reflected at the local school level.

Recent data suggests that despite some improvements through the Gonville funding models, there is still a long way to go before Australia has sector-blind funding for schools.

There are three sectors of schooling in Australia – state schools which receive about 67% of students, Catholic

schools (20%) and independent schools (13%). These three sectors operate in each of state and territory.

State schooling is fully funded by governments in Australia. This is unlike non-government schooling where the capacity of parents to contribute to the costs of schooling is considered when determining government funding.

Parents also apply for awaiting school choice. If you send your child to the local state school, governments will cover the full costs of educating that child. But if you choose to send your child to a non-state school you won't get that same level of support – it will be discounted by a measure of your financial capacity to contribute to the costs.

This is even though state schools are increasingly either charging non-compulsory fees or imposing charges or levies on parents. However, there does not appear to be any support for a policy that would see funding for state schools discounted by the capacity of parents to contribute to the costs or to meet fees or charges.

Given non-government schools account for over one-third of enrolments in Australia, sector-blind funding is not achievable unless governments continue to discount funding for non-state schools based on parental capacity.

As outlined in Table 1, the average government funding for a student in a government, Catholic and independent school is different.

Table 1: Average Government Recurrent Funding per Student (\$)

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Government	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Catholic	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Independent	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

1. See the report titled 'A Review of the State of Queensland's Schools' (2018) at <https://www.isq.qld.edu.au/media/p3agjahx/briefings-22-4-2018-may.pdf>

2. See the report titled 'Replicating Growth Mindset: A Review of the Evidence' (2018) at <https://www.isq.qld.edu.au/media/vyxhnquw/isq-briefings-22-7.pdf>

Figure 2: ISQ Briefings
Volume 22 Issue 7 . August 2018

1 ISQ Briefings Volume 22 Issue 4 2018 <https://www.isq.qld.edu.au/media/p3agjahx/briefings-22-4-2018-may.pdf>
2 ISQ Briefings Volume 22 Issue 7 - August 2018 <https://www.isq.qld.edu.au/media/vyxhnquw/isq-briefings-22-7.pdf>

TRUST THE SCIENCE? CONTINUED

In the same article, Nick Brown, a PhD student in psychology at the University of Groningen in the Netherlands, responded: “The question I have is: If your effect is so fragile that it can only be reproduced (under strictly controlled conditions), then why do you think it can be reproduced by schoolteachers?” (Chivers, 2017).

In addressing some of the misperceptions around Growth Mindset, John Hattie argued that, “The same popularisation has occurred for related notions, such as mindfulness, positive psychology, and well-being. At times, overstated claims are made about how these programs can enhance academic achievement, help develop world peace, and are foundational to 21st century skills. Many schools advertise they are growth schools, parents are seduced by this new set of skills, and well-being and positive psychology are great brands to market schools to parents. Like many seductive claims, the hype precedes the evidence, but that evidence is now coming in – fast. And it is not all pleasant” (Hattie, 2017).

Larry Hedge, recipient of the Yidan Prize for educational research, was quoted in the *Tes* (formerly the *Times Educational Supplement*):

It’s pretty clear that at some point

this replication crisis is going to be observed in education if we don’t head it off... It is terrifying, and it should terrify us. When I talk about this very issue to education researchers, what I have said is that this is an existential crisis for us. (George, 2019)

Jeremy Hodgen, professor of mathematics education at the UCL Institute of Education, added “agrees there is a replication crisis” (George, 2019).

In response to those concerns around the replicability of education research, organisations such as the Education Endowment Foundation (EEF) in Britain, began reviewing the “validity and security” of all the individual studies that contribute to its highly influential summaries of evidence for teachers.

In Australia, the Commonwealth, State and Territory governments have created the Australia Education Research Organisation (AERO) to advance evidence-based education. Each year, AERO establishes a research agenda that sets out topics on which it will work. Topics are then prioritised based on two criteria: demand from the education community, particularly from practitioners themselves regarding the questions on which they would most like to know the evidence;

and likely impact, judged by expert views of where existing and emerging research, as well as Australian education data, suggest AERO should focus to have the greatest impact on educational excellence and equity.

The Research Agenda for 2021-2022 focuses on:

- literacy and numeracy
- wellbeing of children and young people
- continuity of learning and development across ECEC and schools
- improving outcomes for Aboriginal and Torres Strait Islander children and young people
- addressing educational disadvantage
- supporting continuous school improvement
- examining evidence use in ECEC and school.

Once topics are prioritised, AERO conducts a thorough literature review. For some topics, there might be a sufficient existing evidence base that AERO will synthesise in order to produce evidence-based recommendations and resources. For other topics, AERO may need to conduct new research to generate evidence that is rigorous and relevant to Australian contexts. AERO is able to conduct new research itself, in partnership with others, or by commissioning expert researchers in the field (AERO, 2022).

AERO’s work is guided by Standards of Evidence (AERO, 2022b). The Standards encapsulate AERO’s view on what constitutes rigorous and relevant evidence. They note that evidence is all around us, including: observations of students, assessment data, accounts of colleagues of what has previously worked for them, and research papers, to name just a few. Evidence of different types and quality can give us different levels of confidence in the

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effectiveness of a particular approach, and different levels of confidence may be needed for different types of decisions.

AERO's Evidence Rubric (AERO, 2022c) is a tool designed to help education practitioners and policymakers apply the Standards to decisions they need to make. It helps users to consider the level of confidence they can have in an approach, given the type and quality of the evidence they have available to them. It also provides advice as to how they can build that confidence if they choose to implement the approach.

AERO's Research Reflection Guide (AERO, 2022d) is a tool designed to help education practitioners and policymakers assess and reflect on research articles they have read about approaches they might be considering implementing.

Finally, AERO has produced eight Tried and Tested evidence guides for educators and teachers Reference (AERO, 2022 e). Each individual guide is sequenced, providing a step-by-step outline of how to effectively implement the practices. At the moment there are evidence guides on:

- executive function and self-regulation
- early literacy
- numeracy
- formative assessment
- explicit instruction
- spacing and retrieval practice
- mastery learning
- focused classrooms.

It is hoped that efforts by organisations such as AERO, by education researchers and by discerning teachers, will lead to more informed choices being made about how to best support students in their learning.

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Watch Now: Navigating Educational Data and Research Webinar

This recent webinar forms part of the Educational Data Program and can assist school leaders and teachers to locate and navigate statistically significant and reliable educational research relevant to school contexts

Simultaneously, it may serve to improve your school's data management processes and staff data literacy levels, with a focus on measuring student progress in a valid manner.

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