UNSW Gonski Institute for Education

Building education systems for equity and inclusion

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Final Report

Project lead
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Gonski Institute for Education
UNSW Sydney

Sponsored by:

4 QUALITY EDUCATION

ACADEMY OF THE SOCIAL SCIENCES IN AUSTRALIA 50 Years

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The Gonski Institute for Education acknowledges the traditional custodians of the land, sea country and waterways from across Australia.

We honour and pay respects to their Elders past, present and future.

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The host and convenors

The workshop was hosted by the Gonski Institute for Education at UNSW Sydney. It was convened by Professor Scott Eacott (Gonski Institute for Education) and Professor Eileen Baldry (Deputy Vice Chancellor, Inclusion and Diversity) with administrative support from Sophia Harvey (Faculty of Arts, Design and Architecture Research Office).

Disclaimer

The opinions in this report reflect the views of the authors and do not necessarily reflect those of ASSA.

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Executive Summary

Education is charged with serving as a catalyst for more equitable and inclusive societies. It is at the forefront of social and political debate with constant reforms being proposed to improve outcomes – of all kinds. Governments under fiscal pressure and/or facing under-performance frequently deploy one-stop solutions (e.g., markets) without detailed plans for how exactly improvements will be achieved or at what costs. Existing evidence demonstrates that Australian school systems need to do something different to address stagnant or declining outcomes and enduring inequities.

Australian school systems behave as they are designed in law. From funding to governance, inequities are built into the current system. Choice, autonomy, and accountability have been central design features of Australian education. OECD analysis has shown that choice, autonomy, and accountability can explain large differences in student achievement across countries. This is achieved when reforms and initiatives are targeted at improving outcomes and monitoring the health of the system for delivering on desired outcomes.

School choice has not improved outcomes and instead led to many spillover effects in the distribution of students and schools. Autonomy has not led to significant differentiation in provision rather it has proliferated administrative work at the school-level compromising outcomes. Accountability requirements have not improved outcomes and, in many cases, taken educators away from high impact activities. Parallel policy solutions have not, and cannot, deliver the changes desired in Australian education. Stagnant or declining outcomes and enduring disparity gaps for equity groups are evidence of intergenerational policy failure.

What is required are models offering the basis for more principled ways of prioritising the competing demands of public investment on education with specific attention to equitable and inclusive outcomes. Only then will it be possible to achieve the aspirational targets of government, systems, and the community and not simply leave them to chance. Drawing on the standard three policy levers (choice, autonomy, accountability), a model of school provision is:

$$EIEA = (SC_{g\,sea} + SA_{f\,s\,e} + PA_{ao\,si})*QT$$

Where EIEA is equitable and inclusive education in Australia, SC is school choice across geolocation $_{g}$ and socio-educational (dis) advantage $_{sea}$, SA is school autonomy and particularly over fiscal $_{f}$, staffing $_{s}$, and educational $_{e}$ matters, PA is public accountability linked to academic outcomes $_{ao}$ and social impact $_{si}$, and it is all moderated by the Quality of Teaching (QT).

The above model provides a testable alternative to one-stop solutions and a means to analyse which trade-offs are most important for the delivery of equitable and inclusive education at scale. Being testable and data-driven, the model is particularly attractive when many claims for equity and inclusion do not yield actionable insights or unambiguous answers. Based on analysis of existing policy levers, the model is sensitive to the Australian context and sufficiently robust to deliver principled policy decisions aimed at equity and inclusion. It can also address enduring issues for education in Australia such as intergenerational policy failure, the influence of factors beyond the school gate, an absence of voice for the profession, the role of data, evidence and research, and the need to re-centre a focus on teaching and learning.

Intergenerational policy failure

Education is fundamental to national and individual economic and social prosperity. While the Australian Government is spending more on education than at any point in history, $70.6B in the last financial year, disparity gaps endure for various equity groups on a range of outcomes. Needs based funding tied to the implementation of evidence-based reforms have been distorted courtesy of the unique policy architecture of Australian federalism. School systems have limited financial resources with which to pursue their objectives and the design of school funding policies plays a key role in ensuring that resources are directed to where they can make the most difference.

Recommendation 1: Total government (Commonwealth and State and Territory) funding to schools must be based on equitable distribution factoring in the capacity of the school to raise other funds, and the loading of school, student, and community educational (dis)advantage.

The policy architecture of Australian federalism means there is neither a national system nor a state/territory system of school-based education. Common critiques of federalism focus on overlap in responsibilities and duplication. Achieving uniformity is difficult, time consuming, and frequently limited to the lowest common denominator. Education is a complex policy domain whose actions impact well beyond state or territory borders. Currently, no jurisdiction wants to be the first to admit there are problems meaning systems can deteriorate substantially before action is taken. Asserting jurisdiction independence and sovereignty surrenders some of the strengths of federalism and removes important failsafe mechanisms targeting overall health of the system.

Recommendation 2: Systemic (Commonwealth and State and Territory) oversight needs to focus on the overall health of the education system with reforms and initiatives targeting inequities in the inputs, throughputs, and outputs of schooling using evidence-based interventions.

A significant policy problem for education is the current teacher shortage. Substantial attention has been directed at Initial Teacher Education programs, and the attraction and retention of educators. Less focus has been granted to affordability of housing for teachers. With housing (ownership and rental) costs rising, servicing commitments on a teachers' salary can be difficult – particularly in major cities. The ability to live near the place where one works, or the drivability or commuting infrastructure means that workforce planning needs to take a multi-dimensional approach built on more than just raising the public profile of the profession.

Recommendation 3: Workforce planning programs need to be expanded to address the supply of housing (both rental and ownership pathways) and non-housing mechanisms (e.g., transport subsidies and income supplements) to reduce cost of living pressures on educators.

Beyond the school gate

Australian Early Development Census (AEDC) data indicates that 22 per cent of children in the first year of formal schooling are vulnerable in at least one domain (e.g., physical, social, emotional, language, and communication), and 11 per cent in two. Early data indicates that the AEDC is a predictor of NAPLAN performance nine years later and with 8.1 per cent of early childhood providers operating with a staffing waiver due to a lack of qualified staff, early intervention is a difficult task.

School-based education exhibits many layers of segregation and stratification. The distribution of students from socio-educational disadvantage or requiring adjustment due to disability are not evenly distributed between sectors (government, catholic, and independent). Peer effects can influence outcomes as much as individual socio-economic status. Cultural context has a large effect (between 33 and 50 per cent) on student performance, and the further a school is located from major cities the lower level of student outcomes. Failure to control for segregation and stratification makes it impossible to identify the drivers of school improvement in different locations and better design interventions aimed at equity and inclusion.

Recommendation 4: Education reforms represent a whole of government (Commonwealth and State and Territory and across Departments) approach tied to building the necessary infrastructure with explicit accountability for improved outcomes within timeframes.

Voice of the profession

The education workforce is frequently charged with responsibility for dealing with many of society's ills. Education is seen as 'a' if not 'the' solution to most social issues and the result is that schools are constantly being asked to do more without having anything removed. Many of the decisions to add things to schooling take place without any engagement or consultation with educators – not education bureaucracies but the educators who work in schools. The result is frequent changes in curriculum documents, additional mandatory training programs, shifting accreditation requirements, updated and expansive administrative requirements, all with negligible impact on student outcomes. This not just intensified teachers' work but de-democratising the profession. TALIS data indicates that only 28.7 per cent of Australian teachers feel that their views are valued by policy makers. With declining educator well-being and in the context of a teacher shortage, it is timely to establish a forum for representatives from the profession to have a voice in decisions regarding the form, objectives, targets, and outcomes of schooling as articulated in the national agenda.

Recommendation 5. The Australian and state and territory governments establish a formal body where elected representatives from all school sectors can participate in decision-making regarding policy impacting on the operations of schools and school systems.

Data, evidence, research

Improving the equity and inclusiveness of education is not possible without data and evidence. However, you cannot improve that which you do not measure and monitor. An effective school education system needs sufficient data points and appropriate data linkage to understand how well it is performing and robust evidence to identify priority areas for planning, intervention, and policy. While the Measurement Framework for Schooling in Australia details nationally agreed performance indicators, inconsistencies across states and territories datasets means that crucial insights for informing policy at a national level are being lost. Data linkage is an urgent task for understanding the relationships between multiple factors and their impact on education and social outcomes to inform effective policy making, program design and research at a national scale.

Systems and schools that embed data-driven evaluation as a core professional responsibility have a greater impact on student outcomes. This has led to schools increasingly being asked to provide evidence of their impact. At the same time, despite an impressive track record, education research is under-funded (<$9M p.a. from the Australian Research Council). Despite the establishment of the Australian Education Research Organisation (AERO) seeking to position Australian educators at the forefront of education research, without increases in total funding available, it is unlikely that research of the scale and scope necessary to effectively inform policy can be conducted. A promising avenue for increasing the quality of evidence and data use in schools and systems is co-design. However, it requires strategic leadership and matching incentives (including funding mechanisms) to better enable a systemic approach to research use, knowledge translation and breaking down boundaries between stakeholders.

Recommendation 6: Governments (Australian and state and territory) prioritise data linkage capabilities to enable evidence-informed policy decisions and aid researchers and systems in their efforts to improve education outcomes of all Australians.

Recommendation 7: Education research funding needs to be expanded to address the scale and scope of data necessary to inform policy with matching incentives to integrate stakeholders in the design and conduct of projects.

Focus on teaching and learning

Pedagogical reform is a low-cost high-return approach to addressing distortions in a school system. Australian research (e.g., Quality Teaching Rounds) has demonstrated that targeted and tailored interventions can positively impact student outcomes and teacher well-being. Yet, 76 per cent of teachers describe their workload as unmanageable. Australian schools have more instructional hours (828) than the OECD average (713), with teachers engaged in far more administration and school management than higher performing systems (e.g., Finland, Estonia). Attempts to recognise quality teaching through accreditation have received little uptake with only 0.33 per cent of the workforce certified at Highly Accomplished or Lead. Addressing equity and inclusion requires attention to how systems are designed to focus on the instructional core of schooling and making sure that resources (human, physical, and financial) are targeted towards achieving the highest quality of teaching in every classroom.

Recommendation 8: Audit existing system and school structures and remove any administrative requirements on schools and staff that do not directly improve their capacity to deliver high quality instruction.

Summary

As the world re-sets to life under pandemic, the internal tensions for differentiation and external pressures for standardisation on education policy have never been greater. With increasing costs for public services at the same time as government revenue and household incomes falling, issues of educational equity, inclusion and excellence are amplified. The pressure to consolidate resources and pursue cost efficiencies will be felt most significantly by the poorest and most marginalised children and communities throughout the country. The stakes are high. Education is critical to human welfare, especially in times of rapid economic and social change. Schools are linked to greater social cohesion, a sense of community, better health outcomes, reductions in crime, employment, and population development.

Ensuring that funding and oversight focuses on the health of the system, with wraparound services supporting the workforce to have a voice and the necessary resources for high quality instruction give Australian school systems the best chance of delivering equitable and inclusive outcomes for all.


A tentative empirical model
UNSW
$EIEA = SC_{g\ sea} + SA_{f\ s\ e} + PA_{ao\ si}$
• Where EIEA is equitable and inclusive education in Australia, SC is school choice across geolocation g and socio-educational (dis)advantage sea, SA is school autonomy and particularly over fiscal f, staffing s, and educational e matters, and PA is public accountability linked to academic outcomes ao and social imp
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Building school education systems for equity and inclusion

Schooling in Australia aims to develop successful lifelong learners, confident and creative individuals, and active and informed members of the community so they can transition into further study and/or work and successful lives.
To meet this vision, Australian school education systems seek to engage all students, promote their participation, and deliver high-quality teaching of a world-class curriculum.

Aligning with the goals articulated in the Alice Springs (Mparntwe) Education Declaration[1] and the National School Reform Agreement (NSRA)[2], the Australian Government and State and Territory governments aim to meet this educational vision in an equitable and efficient manner.

The National Policy and Administrative Framework

Australia has a unique education policy architecture. Constitutionally, education is the responsibility of State and Territory governments. They have oversight of the delivery and regulation of schooling to all children of school age in their jurisdiction. State and Territory governments provide most of the funding for schools as determined in their respective legislative frameworks. This includes determining curricula, registering schools, regulating school activities, direct administration of government schools, and support for non-government schools consistent with the conditions outlined by their respective registration authorities.

The Australian Government and State and Territory governments work together to progress and implement national policy priorities such as a national curriculum, national statistics and reporting, national testing, and teaching standards.

This work is achieved through[3]:

- the Commonwealth Department of Education[4] contributes to Australia's economic prosperity and social wellbeing by creating opportunities and driving better outcomes through access to quality education and learning.
- the Education Ministers Meeting[5] is a forum for collaboration and decision-making on early childhood education and care, school education, higher education, and international education. Its members include all State and Territory government education ministers, and the New Zealand education minister, and is chaired by the Commonwealth education minister
- The Australian Education Senior Officials Committee (AESOC)[6] is the primary subcommittee of senior officials supporting the Education Ministers Meeting.
- The School Policy Group[7] reports to and provides high-level strategic policy advice to the AESOC on all school education components of the Education Council (Education Ministers Meeting) strategic reform framework and on any national education agreement. There is a matching Early Childhood Policy Group.
- The National School Resourcing Board, established in 2017 under s.128 of the Australian Education Act (Cth) 2013, to provide greater independent oversight of, and advice regarding Commonwealth funding to Australian schools.

The agenda is captured in:

- The National School Reform Agreement (NSRA) is a joint agreement between the Commonwealth, States and Territories to lift student outcomes across Australian schools.[8] The NRSA sets out national policy initiatives that all parties have agreed to implement across the life of the agreement.
- Bilateral agreements, required for each State and Territory by the Commonwealth, setting out state-specific actions to improve student outcomes. These set out minimum State and Territory funding contribution requirements as a condition of receiving Commonwealth school funding.
- The annual Report on Government Services (RoGS) by the Productivity Commission which provides information on the equity, effectiveness, and efficiency of government services in Australia.

Support in executing the agenda is undertaken by:

- Australian Institute for Teaching and School Leadership (AITSL)[9], a Commonwealth company formed to provide national leadership for the Commonwealth, State and Territory governments in promoting excellence in the profession. It has three focus areas: initial teacher education, quality teaching, and school leadership.
- Australian Curriculum, Assessment and Reporting Authority (ACARA)[10], established under Section 5 of the Australian Curriculum, Assessment and Reporting Authority Act (Cth) 2008, to improve the quality and consistency of school education through a national curriculum, national assessment, data collection and performance reporting. ACARA is responsible for the National Measurement Framework for Schooling in Australia.
- Australian Education Research Organisation (AERO)[11], established as a direct result of the 2019-2023 National School Reform Agreement. Formally incorporated in April 2021 and a ministerial-owned company, AERO is governed by an independent board and jointly funded by the Commonwealth and State and Territory Governments.
- Education Services Australia (ESA)[12], a ministerial not-for-profit company committed to improving outcomes by developing, sharing and deploying nationally owned technical data and assessment systems, digital teaching and learning resources, tolls and services, and information and communication technology services.

Key policy levers

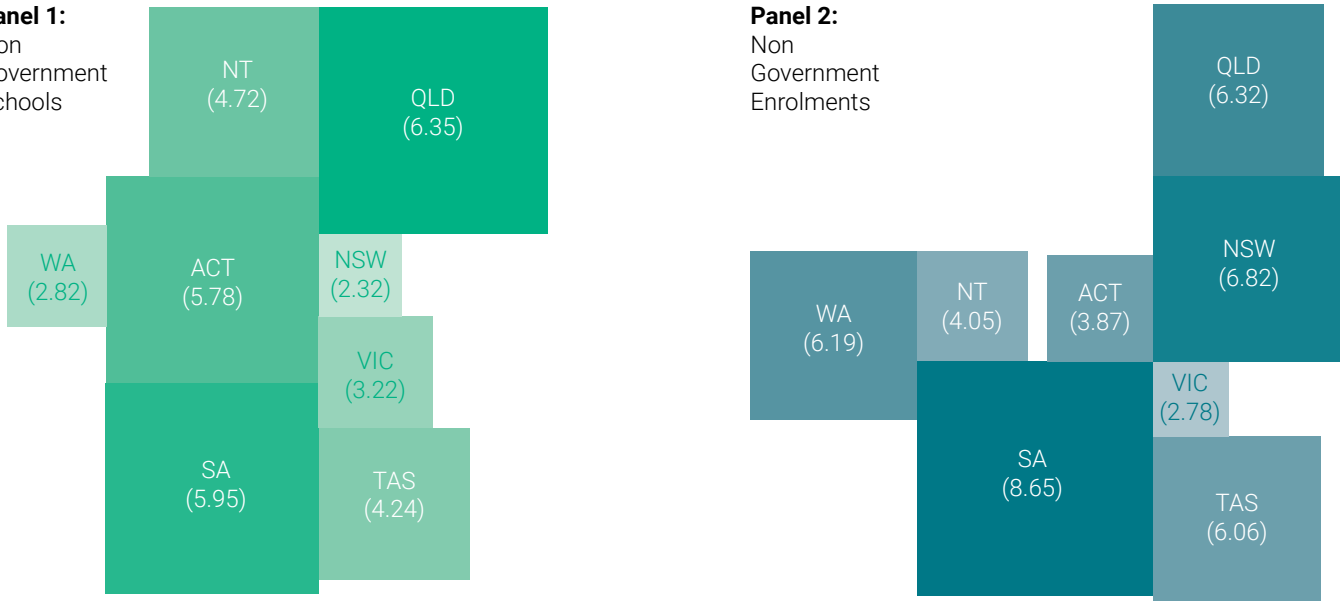
Choice, autonomy, and accountability have been central policy levers for governments seeking to improve outcomes from school-based education. As design features of education systems throughout the world for the past few decades, OECD analysis has shown that choice, autonomy, and accountability can explain large differences in student achievement across countries.[13] This is achieved when reforms and initiatives are targeted at improving outcomes and monitoring the health of the system for delivering on desired outcomes.

School Choice

Differentiation in provision has been embedded in Australian school-based education since its inception. Between-school segregation along social, economic and academic lines is pronounced,[14] and there are high levels of choice, privatisation, and competition.[15] Too often though, discussions about education default to the poisonous debate of public against private schooling[16] rather than how do we need to organise education to get desired outcomes.

Principal data indicates that 94.4 per cent work in schools competing with others for enrolments (OECD average is 76.9).[17] Reforms in the 1990s are frequently cited as the genesis of a proliferation of non-government schools in Australia.[18] However, analysis of Australian Bureau of Statistics (ABS) Schools data going back to 1956 shows that the expansion of non-government schools and enrolments began in 1977 and using standard forecasting models, the expansion since 1996 (abolishment of the New Schools Policy) has been below lower what would have been expected.[19] Nevertheless, the non-government sector has increased its market share of schools and enrolments in every state and territory since 1996 (see Figure 1).

Figure 1. Change (%) in non-government sector (schools and enrolment) market share, 1996-2021



Growth in the non-government sector has not been experienced equally among the diverse range of providers. For example, since 2008 Montessori (34.6 per cent) and Steiner (42.2 per cent) schools have grown at a rate greater than the aggregate independent sector (32.1 sector). At the same time, Catholic schools in major cities have lost 1.61 per cent market share, the equivalent of 47,197 students. The growth of niche providers like Steiner and Montessori, among others, is reflective of family desires for differentiation of provision, and changes in Australian Government funding allowing more independent schools to enter the low fee – high subsidy space traditionally dominated by the Catholic sector.

Choice has been and remains unevenly experienced based on geolocation and socio-economic status.[20] Using ABS Statistical Area 2 (2016) level data, government schools are present in 97.2 per cent of all SA2 throughout Australia. In contrast, 58.2 have a Catholic school, and 44.4 have an independent school. Of the total spread of SA2, only 25.7 (n=594) have a government, Catholic, and independent school. The more rural or remote the community the less likely they are to have choice in provision.

School Autonomy

On an international scale, autonomy-based reforms have been used by governments to allow schools to differentiate educational provision for the purpose of improved outcomes. Autonomy has been a key reform agenda throughout Australian states and territories since at least the 1970s.[21] Recent research has highlighted significant differences in principals' sense of autonomy depending on their jurisdiction and sector.[22]

OECD research stresses that greater localised control (as a proxy for autonomy) over curriculum and assessment can support equity, while autonomy based on competition and choice can lead to greater segregation and have 'adverse consequences for equity in learning opportunities and outcomes'.[23]

In the Australian context, there is a national curriculum and suite of standardised tests, reducing the autonomy of schools. However, there are multiple alternative curriculum frameworks assessed as equivalent to the national curriculum – the International Baccalaureate Primary Years Program (PYP) and Middle Years Program (MYP), Australian Steiner Curriculum Framework, and Montessori National Curriculum Framework.[24] These are not necessarily discrete curriculum frameworks, as they still need to demonstrate equivalence to the national curriculum.

Increasing autonomy at the school-level holds a common-sense appeal for improving education. The idea of localised decision-making should enable greater context-sensitive provision. However, as highlighted in the 2018 Gonski Report, while autonomy over the right matters can improve outcomes, there is also a risk that autonomy can add to the administrative workload of school-based staff as previously centralised tasks are devolved to the school-level.[25]

OECD TALIS data indicates that Australian primary principals spend only 14.7 per cent of their time on curriculum and teaching-related tasks and meetings, and lower secondary principals even less at 11.2 per cent.[26] To this point, there has been no empirically established pathway between autonomy and improved instructional leadership in schools.[27] Current initiatives trialling the employment of non-teaching staff to assist schools with administrative tasks do little to address the proliferation of non-teaching and learning related activities. If school autonomy is to improve outcomes, it needs to be focused on areas of operations with the greatest impact on student outcomes.

School Accountability

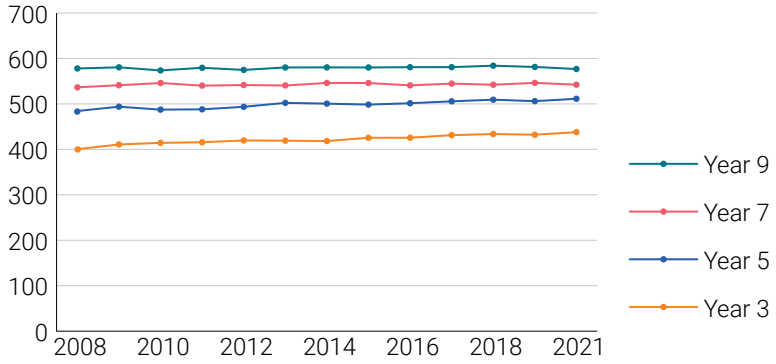
Despite increasing the quantity of information available on school outcomes through the MySchool website,[28] NAPLAN data on a national level has remained relatively stable (see Figure 2). Analysis conducted by the Australian Education Research Organisation (AERO) notes that 4 per cent of Year 7 students are achieving below the national minimum standard, and a further 13 per cent are at risk performing at the minimum standard. This increases to almost 9 and 19 per cent respectively by year 9.[29]

Increased public availability of school outcomes (e.g., NAPLAN, senior secondary school completion and certification) has done little to improve outcomes. It has led to a cascading effect of greater quantities of data being generated in schools to track and monitor student progress. In addition to adding to school leaders' and teacher workload, there is little control of the quality of the data, its analysis, or its impact on improving outcomes. Connecting reforms to activities that not just inform but impact outcomes is necessary.

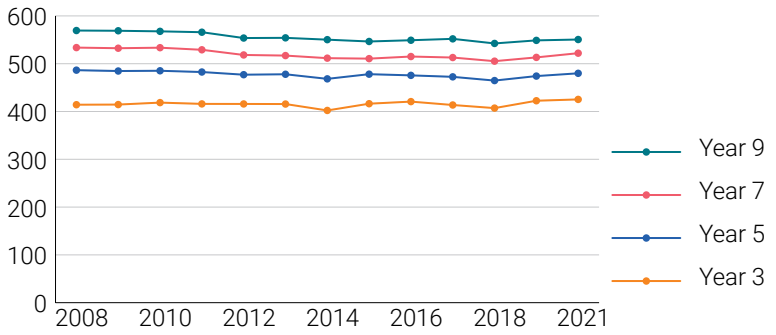
There are many issues at play regarding accountability and schooling. Some research has indicated that families often choose schools based on absolute achievement rather than their value-added.[30] This has implications for how families and schools engage with public accountability. At the same time, there is great diversity in what families want from schools. While many, if not all schools, make claims to developing non-academic outcomes, there is few that provide any data or evidence on whether they deliver on these social impacts.

Figure 2.
Average NAPLAN score (Australia), Year 3, 5, 7 & 9, 2008-2021

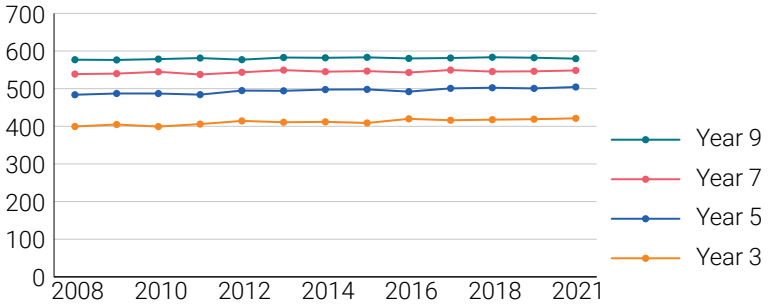
Panel 1: Reading



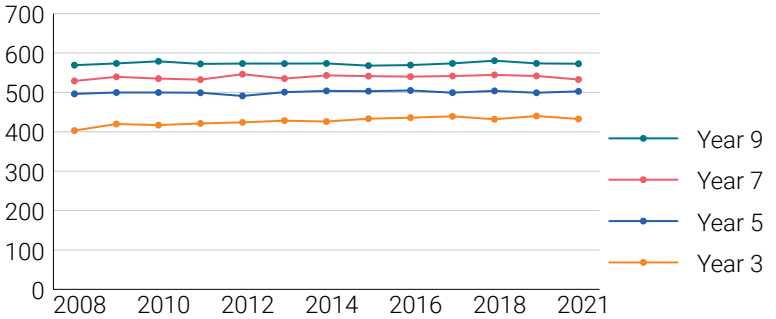
Panel 2: Writing



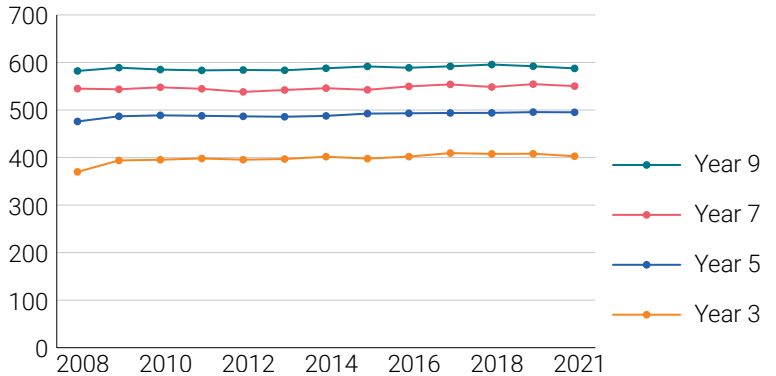
Panel 3: Spelling



Panel 4: Grammar and Punctuation



Panel 5: Numeracy



Summary

Improving the performance of the Australian school education system is of vital importance for national prosperity.[31] School choice has not improved outcomes and when coupled with the unique architecture of Australian education has led to many spillover effects in the distribution of students and schools. School autonomy has not led to significant differentiation in provision and instead amplified administrative work at the school-level compromising outcomes. Narrow and cascading accountability requirements have not improved outcomes and, in many cases, taken educators away from high impact activities. One stop policy solution (e.g., choice, autonomy, accountability) and an absence of details on how exactly they will improve outcomes have not, and cannot, deliver the changes desired in Australian education.

Delivering equitable and inclusive outcomes requires an integrated approach and an empirical model as a basis of threshold questions for potential of reforms. To meet this requirement, a proposed empirical model for equitable and inclusive education is Australia is:

$$EIEA = SC_{g\,sea} + SA_{f\,s\,e} + PA_{ao\,si}$$

Where EIEA is equitable and inclusive education in Australia, SC is school choice across geolocation $_{g}$ and socio-educational (dis)advantage $_{sea}$, SA is school autonomy and particularly over fiscal $_{f}$, staffing $_{s}$, and educational $_{e}$ matters, and PA is public accountability linked to academic outcomes $_{ao}$ and social impact $_{si}$. Empirical models provide a testable alternative to one-stop solutions and a means to analyse which trade-offs are most important for the delivery of equitable and inclusive education. Being testable and data-driven, empirical models are particularly attractive when theory (of all varieties) does not yield actionable insights or unambiguous answers. Based on analysis of existing policy levers, the above model is sensitive to the Australian context and sufficiently robust to deliver principled policy decisions aimed at equity and inclusion.

Intergenerational policy failure

Education is fundamental to national and individual economic and social prosperity. Based on 2019 OECD data, Australia (3.3 per cent) spends more than the OECD average (3.1 per cent) of Gross Domestic Profit (GDP) on primary to post-secondary non-tertiary / tertiary education.[32] The Australian Government is spending more on school-based education than at any point in history. Figure 3 displays the recurrent funding from Australian and State and Territory Government for the last ten reporting periods.

The growth in funding represented in Figure 3 is 37.24 per cent over the last decade ($51,463,182 to $70,627,325). Over the same period, the number students enrolled in Australian schools has grown by 14.49 per cent, from 3,510,875 to 4,019,739. Put simply, growth in funding is exceeding growth in sector size, but this is not translating into improved outcomes.

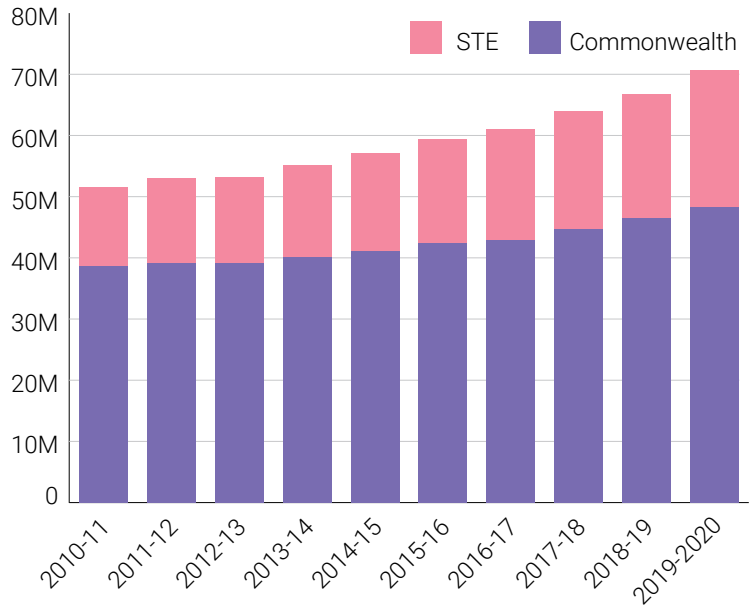
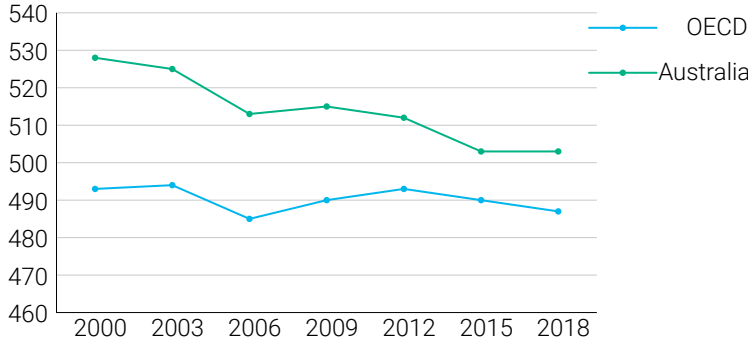
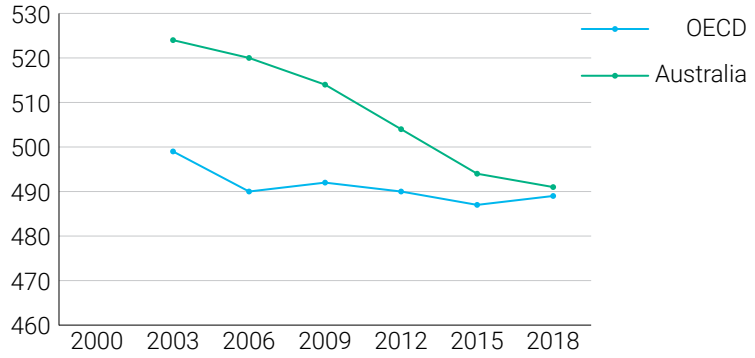


Figure 3. Real Australian, State and Territory Government recurrent expenditure, 2019-2020 dollars (source: Productivity Commission, Report on Government Services 2022)[33]

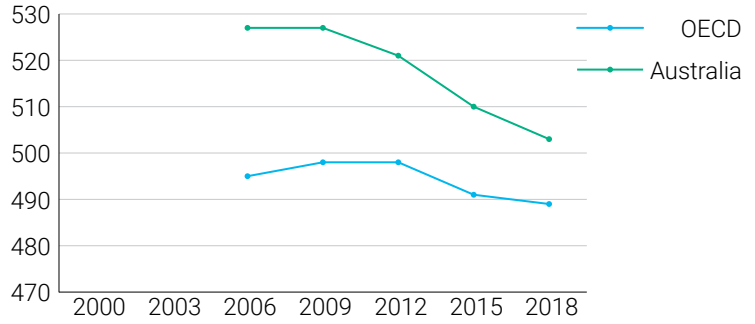
Panel 1: Reading



Panel 2: Mathematics



Panel 3: Science



Panel 4: Average Ranking across 3 tests

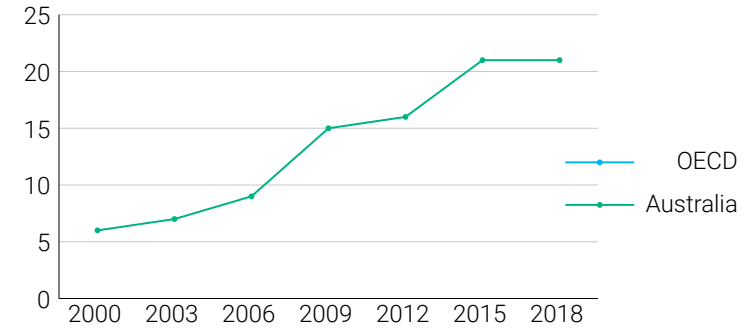


Figure 4. Australia's (—) performance in PISA reading, mathematics, and science against OECD average (- -) 2000-2018

At the turn of the century Australia was considered a leading provider of quality school-based education.[34] Increases in funding have not necessarily guaranteed stable or improved outcomes[35] and since 2000, Australian school-based education has displayed a worrying trend.[36] Figure 4 displays the decline in PISA scores. The most recent data (2018) is statistically significantly below its benchmark of 2000 for reading (difference = -26 [5.6], p=<.001), 2003 for mathematics (difference = -33 [4.0], p=<.001), and 2006 for science (difference = -24 [4.5], p=<.001). While reading and science remain above OECD average, 2018 mathematics results were comparable with the OECD average (491 – 489). For those with oversight of the provision of education nationally, this is a major problem.

While an appropriate level of funding is necessary to sustain an education system, it is how the financial resources are distributed within the system that matter when it comes to improving outcomes. The OECD notes:

School systems have limited financial resources with which to pursue their objectives and the design of school funding policies plays a key role in ensuring that resources are directed to where they can make the most difference.[37]

Since 2018 the Australian Government has distributed funding according to need and tied to the implementation of evidence-based quality reforms. Building on the Gonski reviews[38], central to existing funding arrangements is the 'Schooling Resource Standard' (SRS).[39] The SRS is constituted through a base amount for every student (in 2022, $12,462 for primary and $15,660 for secondary) with a further four student loadings (disability, Aboriginal and Torres Strait Islander, socio-educational disadvantage, and low English proficiency) and two school-level loadings (size and location) designed to provide additional funding and support for disadvantaged schools and their priority cohorts.[40] Those schools with current funding levels below SRS (primarily government schools) will transition to the target by 2023, and those currently funded over their target Commonwealth share will transition to it by 2029 at the latest.

Despite increasing funding, national and international performance indicators demonstrate that Australia is still not achieving equitable and inclusive education at scale. The failure of the Close the Gap strategy and the systemic nature of Aboriginal student underachievement[41] and those from other equity groups, indicates a critical need for a new approach. Frequent policy changes and shifts in agenda based on election cycles, amplified by the unique policy and administrative architecture of federalism have created inequities throughout school-based education. To address this issue requires attention and nuance to how funds are distributed within and across sectors in the pursuit of equity above all else. Based on this context it is proposed:

Recommendation 1: Total government (Commonwealth and State and Territory) funding to schools must be based on equitable distribution factoring in the capacity of the school to raise other funds, and the loading of school, student, and community educational (dis)advantage.

Australia is recognised as a nation dominated by policy incoherence and reform hyperactivity.[42] It has a distinctive environment where ideals of social justice and equity are sought within an environment of globalisation and competitive capitalist economics.[43] The cause of this situation is frequently attributed to the policy architecture of Australian federalism. The complexity of state and territory governments having constitutional responsibility for education and the key funding role of the Australian Government means we have neither a national system nor a state/territory system of school-based education.

Common critiques of federalism focus on overlap in responsibilities (e.g., funding of schools) and duplication as state and territory groups replicate national policies and initiatives (e.g., professional standards, curriculum). This imposes artificial divisions in a complex policy domain whose actions impact well beyond state or territory borders. There are reduced opportunities for engagement, surrendering some of the strengths of a federal system of government and the removal of important failsafe mechanisms, as each jurisdiction seeks to assert its independence and sovereignty. Achieving uniformity across eight jurisdictions is difficult, time consuming, and often reduced to the lowest common denominator.

The concurrency of Australian school education policy and oversight means that many education debates are at the fringes and based on small changes rather than more holistic reforms. By focusing on the small (and often local), there is a proliferation of initiatives too often tending to symptoms rather than causes of inequities. Unlike public health or the social services, the idea of de-implementation have not taken hold in education.[44] However the proliferation of initiatives mean blame is often focused on the small initiatives rather than the root cause of failure to bring about change and improvements in outcomes.

Federalism while often the target of issues in education also offers opportunities. Currently, no jurisdiction wants to be the first to admit there are problems or issues (even when large). This means systems can deteriorate substantially before action is taken (e.g., the attraction and retention of teachers or school leaders).[45] There is an opportunity for systemic oversight of the national school education provision with focus not on the performance of individual schools or even state and territory systems but a holistic approach to the health of the system at scale. Attention to, and action through evidence informed reforms and initiatives targeting the inputs, throughputs, and outputs of schooling nationally.

Recommendation 2: Systemic (federal and state / territory) oversight needs to focus on the overall health of the education system with reforms and initiatives targeting inequities in the inputs, throughputs, and outputs of schooling using evidence-based interventions.

The greatest within school factor impacting on student outcomes is the quality of teaching. A significant policy problem that has emerged nationally, and internationally, is a shortage of teachers. Multiple factors contribute to the existing shortage, but it is felt most significantly in hard-to-staff schools such as those located in rural and remote areas and socio-educationally disadvantaged areas. Put simply, our most needy students are the most likely to struggle to have a qualified and impactful educator in their classroom.

Substantial attention has been focused on Initial Teacher Education. Almost annual reviews have been undertaken focusing on the content of programs, entry standards, the literacy and numeracy skills of entrants, the days of school-based placements, among others. Fast track programs such as *Teach for Australia*[46] have been introduced, however the former one-year Graduate Diploma in Education (DipEd) which targeted career changers has been replaced (due to accreditation requirements) by the two-year Master of Teaching (MTeach). While it is possible to truncate the MTeach into one-and-a-half-years, the content replicates the 'education' half of a traditional under-graduate double degree (e.g., Bachelor of Teaching / Bachelor of Social Science). Two years to retrain is less attractive to career changers, who are often foregoing income while retraining. When combined with constant attacks on the quality of ITE programs and their graduates,[47] from both within and beyond education, there is little being done to address the attractiveness of teaching as a profession.[48]

An under-examined issue for the attractiveness of teaching as a profession is the viability of servicing costs of living in major cities. By the very nature, cities are densely populated and with that comes the need for schools. Looking at the median dwelling price nationally of $752,110 (as a 30 June 2022), and much higher in major cities (e.g., Sydney = $1,110,660; Melbourne = $798,198)[49;] there are difficulties building sufficient capital and servicing mortgages on a teacher salary (e.g., in NSW commencing at $73,737[50]).[51] Affordability of housing for teachers is an international issue,[52] however in Australia policies and projects to support key workers accessing housing are limited and sporadic.[53] This is partially an outcome of the unique policy architecture of Australian education, but when combined with ongoing attacks on the profession, and existing teacher shortages, the ability to live near the place where one works, or the drivability or commuting infrastructure means that workforce planning needs to take a multi-dimensional approach built on more than just raising the public profile of the profession.

Recommendation 3: Workforce planning programs need to be expanded to address the supply of housing (both rental and ownership pathways) and non-housing mechanisms (e.g., transport subsidies and income supplements) to reduce cost of living pressures on educators.

Beyond the school gate

Since the release of the Coleman Report in the USA,[54] there has been considerable questioning of how much the quality of schooling really matters, in comparison to outside of school factors, for student outcomes. In many cases this has led to focus on what can be controlled within the school (e.g., the quality of teaching). Germinal work by John Hattie indicates 50 per cent of variance in outcomes is attributed to outside of school factors.[55] While less easy to control for, improving the outcomes of schooling requires some attention to matters outside of schools.

The Australian Early Development Census (AEDC), conducted every 3 years (commencing 2012) conducted in the first year of formal schooling, provides information across five developmental areas (physical, social, emotional, language, and communication) with identification of students as on-track, at risk and vulnerable. Based on recent iterations of the AEDC (2015, 2018, 2021), 22 per cent of Australian children are vulnerable in at least one domain, and 11 per cent in two.[56] Early data indicates that the AEDC is a predictor of NAPLAN performance nine years later.[57] Improving the outcomes of schooling early intervention for equity groups, and this is made more difficult given the early childhood sector suffers similar workforce issues to schools, with current data indicating that 8.1 per cent of providers are operating with a staffing waiver due to their inability to find suitably qualified staff.[58]

This situation is likely to get worse in the coming years with initiatives targeting increased access to early childhood education for families.

A focus on what takes place prior to school does not take away from the need to address inequities in the organisation of schooling. There are many layers of segregation and stratification embedded in the existing structure of Australian school-based education.[59] These can lead to inequities in access and attainment. While substantial attention is directed at funding, this can often cover up the disparities within and across schools.

The further a school is located from a major city the lower the levels of student outcomes. Figure 5 shows the average 2021 NAPLAN results in Reading, Writing, and Numeracy for Years 3, 5, 7 and 9 based on Australian Statistical Geographic Standard (ASGS) categories of major cities, inner regional, outer regional, remote, and very remote. Using major cities as zero, the figure displays the outcomes gap and how distance from the metropolitan centres impacts on outcomes.

Research from the Gonski Institute for Education (GIE) has demonstrated that if the human capital gap between urban and non-urban Australia was closed, Australia's GDP could be increased by 3.3 per cent or $56B.[60] This is larger than the contribution of the entire Australian tourism industry, and one would need to quadruple the size of the Australian beef industry to achieve the same economic improvement. Schools are a major part of closing the gap between metropolitan and regional, rural, and remote outcomes. But it will not be achieved through more of the same.

A Randomised Control Trial (RCT) conducted in regional NSW by the Economics of Education Knowledge Hub at UNSW Sydney showed the large effect of cultural context on performance in standardised reading tests.[61] Significantly, this RCT demonstrated that cultural context represents 33 per cent of the rural-urban gap and 50 per cent of the Indigenous – Non-Indigenous gap. In controlling for cultural context, it is possible to identify the drivers of school improvement in different locations and better design interventions aimed at equity and inclusion.

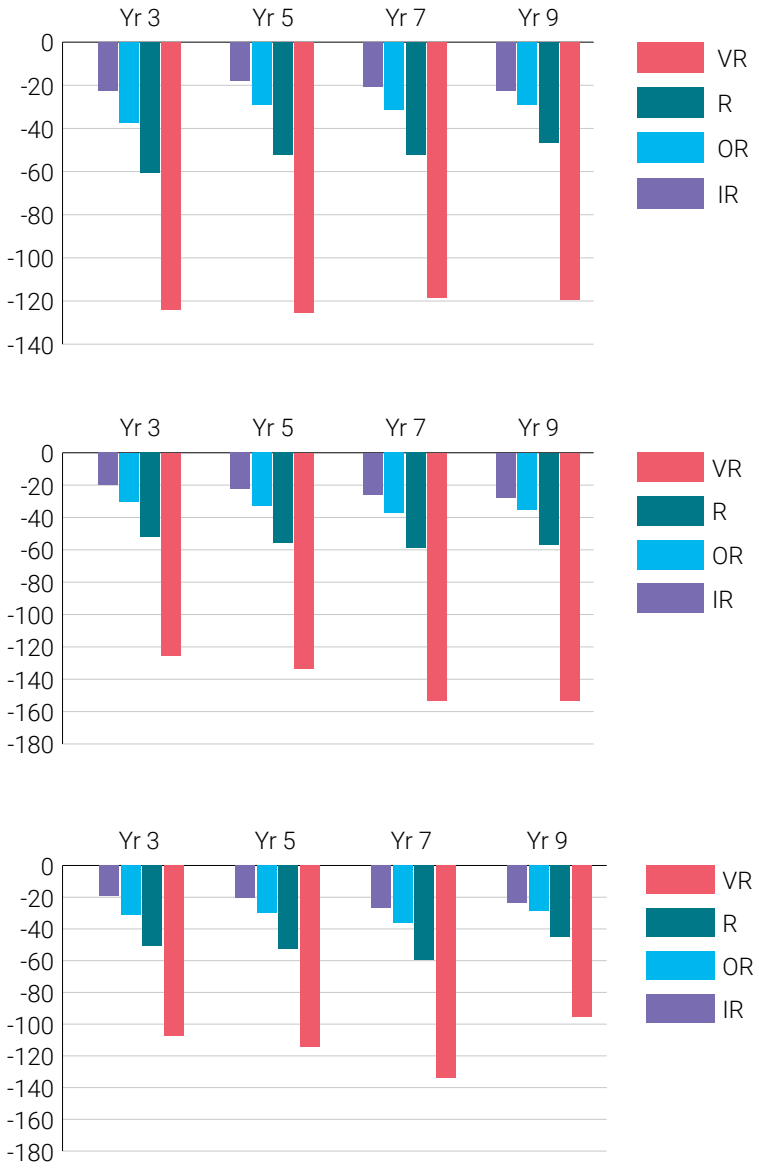


Figure 5. Difference from Major Cities mean score on NAPLAN (Reading, Writing & Numeracy) Year 3, 5, 7 & 9 by geolocation, 2021

RoGS data indicates that students with greater levels of socio-educational disadvantage are not evenly distributed between sectors (government, Catholic and independent). Across all jurisdictions and over time, the non-government sector has enrolled approximately 40 per cent of the load of the bottom quartile of socio-educational advantage compared to government schools. Nationally, government schools have 30.8 per cent of their enrolments from the bottom quartile compared to 12.6 per cent in the non-government sector.

Similarly, the distribution of students who receive an educational adjustment due to disability as a proportion of all enrolled students is not evenly distributed. At an aggregate level, the government (20.8), Catholic (19.1), and independent (19.6) sectors have similar totals. However, drawing from the Nationally Consistent Collection of Data on School Students with Disability (NCCD) categories of extensive, substantial, supplementary, and support with quality differentiated teaching practice[62] there are distinctions across the sectors. Of their aggregate total, the government sector has 27.4 per cent classified as 'extensive' or 'substantial'. This is compared to 20.9 per cent for the Catholic and 16.8 for the independent sector.

For the independent sector, 42.9 per cent of their student only require quality differentiated teaching practice (32.7 for government and 27.2 for Catholic sectors). While caution is to be exercised in these comparisons given some inconsistencies in reporting across jurisdictions, based on available data it appears that government schools educate a higher percentage of high needs students.

International and Australian research has shown that a large proportion of the negative effects of outside of school factors are amplified through the organisation of schooling at scale. Differences in the social composition, culture and climate of a school can enhance or constrain what students bring to school.[63] Peer effects, such as school-level socio-economic status, can influence outcomes as much as individual student socio-economic status. Recent analysis has shown that low SES students are twice as likely to achieve minimum benchmarks in a high SES school than a low SES school and that the concentration of disadvantaged students into low SES schools multiples the effects of social disadvantage.[64] Among English-speaking countries, Australia has the second highest school socio-economic effects.[65]

Education provides important social outcomes for communities. Health, social cohesion, reduced crime, heightened economic activity are among the impacts of education. Creating the conditions for the greatest number to benefit from education has been an enduring project. Decades of higher education policies and initiatives have aimed to expand university access for equity groups.[66] However, the proportion of university students from under-represented backgrounds has barely shifted. Considerable public investment has not delivered. Since 2010, the Australian Government has invested close to $1.5B in higher education equity programs yet the proportion of students from under-represented backgrounds has barely shifted (see Figure 6).

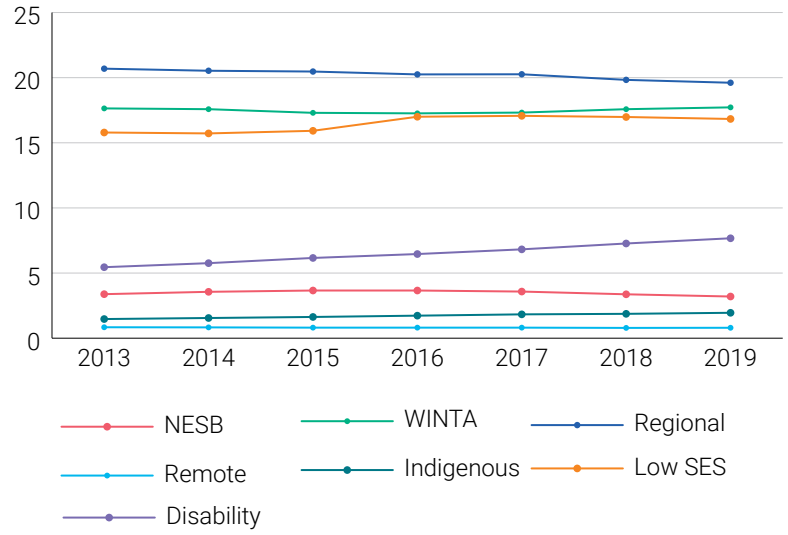


Figure 6. Participation (all students) per cent, equity groups, 2013-2019. [Source: https://www.ncsehe.edu.au/national-data/)[67]

Tertiary education enables people to keep pace with evolving technologies and the changing nature of work. Ensuring equitable access to higher education and inclusive supports and systems once students enrol will prevent the risk of groups falling behind the rest of the country and world. Reductions in government funding, shifts in student profile,[68] and casualisation of the workforce among others,[69] are significantly altering traditional ideas of university study in Australia. As with early childhood education, and the organisation of schooling, equitable and inclusive access requires a suite of wraparound services and reforms to improve access and attainment. This would require a co-ordinated response across Australian and state and territory governments aimed at improving outcomes. Without such changes, claims of aspirations for greater equity and inclusion are little more than tokenism.[70]

Recommendation 4: Education reforms represent a whole of government (Australian and state and territory and across Departments) approach tied to building the necessary infrastructure with explicit accountability for improved outcomes within timeframes.

Voice for the profession

Schools are often charged with responsibility for dealing with many of society's ills. Education is seen as 'a' if not 'the' solution to most social issues and the result is that schools are constantly being asked to do more without having anything removed. De-implementation is rarely exercised in education. Most significantly, many of the decisions to add things to schooling take place without any engagement or consultation with educators. This consultation is not about governments engaging with education bureaucracies (e.g., those increasingly filled with public servants and not necessarily those with school-based experience), but the educators who work in schools with students and communities or their elected representatives.

Frequent changes in curriculum documents, additional mandatory training programs, shifting accreditation requirements, updated and expansive administrative requirements, all with negligible impact on student outcomes have not just intensified teachers' work but de-democratising the profession.[71] There is little if any evidence that changes in the system are the result of consultation with those working in schools. OECD TALIS data indicates that only 28.7 per cent of Australian teachers feel that their views are valued by policy makers.[72] This perception of limited educator voice in policy comes at the same time as declining teacher well-being[73] and in the context of substantial teacher shortages.[74]

The loss of educator voice is experienced at many levels in the administrative framework of Australian school education. Currently neither Independent Schools Australia (ISA) or the National Catholic Education Commission (NCEC) have direct representation beyond the level of School Policy Group (SPG).[75] There is a belief, whether based on real action or perception, that state and territory departments and Ministers are strongly biased towards the government sector. The implication being that non-government schools, those catering for approximately one third of students, have no direct input into the decisions made at AESOC or the Education Ministers Meeting where decisions regarding the form, objectives, targets, and outcomes of schooling as articulated in the NRSA are decided.

With a change of government and the NSRA currently under review,[76] it is timely to establish a forum for representatives from the profession to undertake a 'National Conversation on the Role of Education'. This is a proposal for an educator voice to government. A means for educators (those working in schools not the bureaucracies) to provide advice on policies and input on matters that are important for the organisation of schooling, specifically working conditions, well-being, and ultimately student outcomes. Such a forum could utilise existing parliamentary infrastructure like the Parliamentary Friends of Education[77] to raise the voice of the profession to guide policy decisions.

Recommendation 5. The Australian and state and territory governments establish a formal body where elected representatives from all school sectors can participate in decision-making regarding policy impacting on the operations of schools and school systems.

Data, evidence, and research

Improving the equity and inclusiveness of education is not possible without data and evidence. However, you cannot improve that which you do not measure and monitor. An effective school education system needs sufficient data points and appropriate data linkage to understand how well it is performing and robust evidence to identify priority areas for planning, intervention, and policy.

Currently, the *Measurement Framework for Schooling in Australia*[78] details the nationally agreed (at Education Council) key performance indicators for schooling. Reflecting the *Alice Springs (Mparntwe) Education Declaration*, the Measurement Framework sets out the data to be included in the *National Report on Schooling*. Some jurisdictions have created supplementary measurement indicators and inconsistencies across states and territories datasets means that crucial insights for informing policy at a national level are being lost. Data linkage is an urgent task for improving equity and inclusion through quality data and evidence at a national scale.

Data linkage is a technique that connects pieces of information from multiple sources to create a new dataset. The result is a more comprehensive picture of how different factors (e.g., person, family, place, event) interrelate. There has been a long history of data linkage in Australia,[79] but creating at scale linkages across jurisdictions has been problematic. Previous attempts at introducing a Unique Student Identifier to enable data linkage and tracking has been stalled due to complex legal and privacy matters within and across jurisdictions.[80] However, understanding the relationships between multiple factors and their impact on education and social outcomes over an extended period is necessary for effective policy making, program design, and research.

Recommendation 6: Governments (Australian and state and territory) prioritise data linkage capabilities to enable evidence-informed policy decisions and aid researchers and systems in their efforts to improve education outcomes of all Australians.

Systems and schools that embed data-driven evaluation as a core professional responsibility have a greater impact on student outcomes.[81] This has led to schools increasingly being asked to provide evidence of their impact.[82] The cascading effect is individual teachers being asked to generate substantial data on a regular basis to track and monitor student progress. However, school leaders and teachers rarely have formal training in data science,[83] mean there is a disconnect between what educators are asked to do and what they are trained to do. This creates issues for not just workload, but the quality of data generated and used (see Box 1).

Box 1. The Q Project

A five-year partnership between Monash University and the Paul Ramsey Foundation, the Q Project's goal is 'to understand and improve high-quality use of research evidence in Australian schools in order to enhance the quality of teaching'.[84] Working in close collaboration with policy-makers, school leaders, teachers, evidence brokers, researchers and other key stakeholders the projects focuses on the quality of evidence and the quality of its use as a professional learning challenge.

An initial framework has been developed based on two core components (appropriate research evidence, and thoughtful engagement and implementation), three individual enablers (skillsets, mindsets, and relationships), three organisational enablers (leadership, culture, and infrastructure), and systemic influence.[85]

Research is not a preferred form of evidence for Australian educators.[86] There is however, an impressive track record of Australian education research,[87] despite it being significantly under-represented in funding from the Australian Research Council – attracting less than $9M annually across all schemes over the past decade and with success rates below the national average.[88] This is considerably different to Canada, where education research has much higher success rates through the Social Sciences and Humanities Research Council.[89] Therefore, while AERO has been established to position Australia's educators at the forefront of education research, without increases in total funding available, it is unlikely that research of the scale and scope necessary to effectively inform policy can be conducted. What is required is robust research demonstrating improved outcomes (without compromising existing performance), stakeholder buy-in, and scalability. This work needs to be sensitive to context and beyond any immediate political influence or timelines.

A promising avenue for increasing the quality of evidence and data use in schools and systems is co-design.[90] An example is the *Building alternative indicators for schooling* project led by Professor Scott Eacott at UNSW Sydney. This involves a school (or schools) developing a suite of indicators based on their purpose and then systematically building data points to evidence the extent to which it is delivering on its purpose. Apart from generating evidence of non-academic outcomes, the work focuses on capacity building of staff and building data infrastructure. Co-design holds potential for breaking down boundaries between stakeholders but requires strategic leadership and matching incentives (including funding mechanisms) to better enable a systemic approach to research use and knowledge translation.

Recommendation 7: Education research funding needs to be expanded to address the scale and scope of data necessary to inform policy with matching incentives to integrate stakeholders in the design and conduct of projects.

Focus on teaching and learning

Pedagogical reform is a low-cost high-return approach to addressing distortions in a school system.[91] Analysis of world leading school systems has demonstrated that they focus on getting the right people to become teachers, develop them into effective instructors, and ensure that the system is able to deliver the high-quality instruction to every child.[92] Substantial attention nationally has been directed at initial teacher education, with many reviews undertaken in recent decades.[93] A much used catch cry is that the quality of an education system cannot exceed the quality of its teachers.[94] However, in focusing on individual teachers less attention is granted to the quality of teaching and the conditions in which educators work.

Teaching and learning are the core business of schools. Building education systems for equity and inclusion requires attention to how structures support the pedagogical work of teachers. That is, we need to build systems and schools to focus on the instructional core of schooling and makes sure resources (human, physical, and financial) are targeted towards achieving the highest quality of instruction in every classroom. Without doing so, it will be impossible to reduce inequities. Enhancing the capacity of the system for quality teaching will take a re-calibration of professional learning (see Box 2), career progression, and workload conditions.

Box 2. Building capacity for quality teaching in Australian schools

Funded by the Paul Ramsay Foundation ($17.2M) and partnering with the NSW Department of Education, this initiative seeks to build teachers' capacity to improve the quality of teaching and student outcomes by scaling up the empirically tested Quality Teaching Rounds (QTR) approach to teacher development.

QTR is a ground-breaking approach to teacher professional development, with demonstrated impact on quality of teaching, teacher morale and school culture.[95] It empowers teachers to enrich student learning through a collaborative, teacher-driven framework that enables participants to analyse and improve their practice.[96] The approach applies across all subjects and year levels and builds the confidence and capacity of teachers at all career stages.[97]

To date, more than 1,200 schools have engaged with the QTR, and there has been the establishment of the *Quality Teaching Academy*.[98] The professional learning through the Academy is not just evidence informed but has been subjected to rigorous evaluation in large-scale students in schools. Participation in QTR has been demonstrated to increase student outcomes by as much as 25 per cent above a control group.[99]

Recognising and rewarding quality teaching has proven difficult. Levels of higher accreditation among the teacher workforce have not received significant uptake throughout Australia. Data from AITSL indicates that 185 teachers were nationally certified at Highly Accomplished (n=135) / Lead (n=50) in 2021.[100] This brings the total of nationally certified teachers to 1,025 (High Accomplished = 712; Lead = 313) since 2008. The latest ACARA school profile dataset indicates there are 307,507 (full-time equivalent) teaching positions in Australian schools. With 1,025 accredited at higher levels, that represents 0.33 per cent of the workforce. One criticism is that the process of accreditation is time consuming for candidates with little return on that investment.101 Of those teachers accredited at HALT, 42 per cent indicate that they do not have sufficient time and opportunity to lead, initiate or plan professional or collaborative learning activities post-certification.[102]

Workload issues and time to focus on teaching and learning is a significant matter for Australian educators. In a recent survey, 76 per cent of teachers described their workload as unmanageable, with long working hours (including weekends and holidays) and with impacts on families and personal lives.[103] It is worth noting that Australian schools have far more annual instructional hours (828) than the OECD average (713), and other frequent comparators such as Finland (589), and Estonia (609).[104] The weekly instructional hours of Australia teachers (19.9) is not too different from the OECD average (20.6) nor that of Finland (20.7) and Estonia (20.9). There are considerable differences in the time spent on general administrative work (Aus=4.1; OECD=2.7; Fin=1.1; Est=1.8) and participating in school management (Aus=2.4; OECD=1.4; Fin=0.3; Est=0.6). Australian educators are spending more time on non-teaching and learning related activities. The quality of teaching is the most impactful within-school factor for improving outcomes. Achieving greater equity and inclusiveness in Australian schools is dependent on freeing educators up from non-teaching and learning activities and building the necessary supports to focus their work on the quality of instruction.

Recommendation 8: Audit existing system and school structures and remove any administrative requirements on schools and staff that do not directly improve their capacity to deliver high quality instruction.

Summary

Education is charged with serving as a catalyst for more equitable and inclusive societies. It is at the forefront of social and political debate with constant reforms being proposed to improve outcomes – of all kinds. Designing systems balancing standard policy levers of choice, autonomy, and accountability is more difficult than it appears. Governments under fiscal pressure and/or facing under-performance frequently deploy one-stop solutions (e.g., markets) without detailed plans for how exactly improvements will be achieved or at what costs. Existing evidence demonstrates that Australian school systems need to do something different to address stagnant (e.g., NAPLAN) or declining (e.g., PISA) outcomes and enduring inequities.

An empirical model to achieve greater equity and inclusion through school provision is:

$$EIEA = (SCg_{sea} + SAf_{se} + PA_{ao\,si})*QT$$

Where EIEA is equitable and inclusive education in Australia, SC is school choice across geolocation $_{g}$ and socio-educational (dis)advantage $_{sea}$, SA is school autonomy and particularly over fiscal $_{f}$, staffing $_{s}$, and educational e matters, PA is public accountability linked to academic outcomes $_{ao}$ and social impact $_{si}$, and it is all moderated by the Quality of Teaching (QT).

Australian school systems behave as they are designed in law. The above model offers the basis for a more principled way of prioritising the competing demands of public investment on education. Ensuring that funding and oversight focuses on the health of the system, with wraparound services supporting the workforce to have a voice and resources for high quality instruction it is possible to achieve the aspirational targets of government, systems, and the community, and not simply leave it to chance.

Endnotes

1 See: https://www.dese.gov.au/alice-springs-mparntwe-education-declaration

2 See: https://www.dese.gov.au/quality-schools-package/national-school-reform-agreement

3 This structure is in a state of flux following the federal election, and the Administrative Arrangements Order issued on 23 June 2022, https://www.pmc.gov.au/sites/default/files/publications/administrative-arrangements-order-23-June-2022.pdf

4 https://www.dese.gov.au/

5 https://www.dese.gov.au/education-ministers-meeting

6 See: https://www.directory.gov.au/portfolios/education-skills-and-employment/australian-education-senior-officials-committee-aesoc

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