

SAVING MONEY BY SPENDING: SOLVING ILLITERACY IN AUSTRALIA

WHAT'S WRONG, HOW TO GET A RETURN
ON INVESTMENT BY FIXING IT, AND
WHICH STATES ARE ON THE RIGHT PATH



EQUITY ECONOMICS

 **CODERE ! D** Dyslexia
Network

ABOUT US



EQUITY ECONOMICS



EQUITY ECONOMICS

Equity Economics is a leading consulting firm, providing analysis, policy development, design and evaluation services to government, private sector, and non-government clients.

We specialise in economic and social policy, and international development. We combine technical economic skills with policy and design expertise, helping our clients contribute to a more inclusive, equitable society. Our work addresses the persistent challenge of social and economic disadvantage through new and practical solutions. We work in collaboration with our clients and are believers in life-long learning. We are committed and in for the long haul.

CODE READ DYSLEXIA NETWORK

Code REaD Dyslexia Network is a not-for-profit charity working to create a world where people impacted by dyslexia are acknowledged through early identification, understanding and inclusion, supported with evidence-based teaching and accommodations, and empowered with access to opportunity.

Code REaD's mission is to raise awareness about dyslexia, support and empower those with dyslexia and their families, and work with government and other decision makers to improve the education system and workplaces for those with dyslexia.

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The opinions in this report are those of the authors and do not represent the views of any experts consulted. The authors are responsible for any errors or omissions.

ACKNOWLEDGEMENT OF COUNTRY

Equity Economics acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Owners of Country throughout Australia and their continuing connection to both their land and seas. We also pay our respects to Elders – past, present, and emerging – and generations of Aboriginal and Torres Strait Islander peoples now and into the future.

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EXECUTIVE SUMMARY

IN AUSTRALIA, WHERE LITERACY IS CONSIDERED A BASIC HUMAN RIGHT ESSENTIAL FOR PARTICIPATION IN SOCIETY, MILLIONS OF AUSTRALIANS LACK BASIC READING SKILLS. IT IS A SILENT EPIDEMIC HOLDING BACK FAMILIES, COMMUNITIES AND OUR ECONOMY.

This paper sets out the current state of literacy in Australia, compares the performance of states and territories, and outlines what needs to be done to shift the tide and empower our most vulnerable children to reach their full potential.



WHAT IS THE PROBLEM?

Too many Australian adults and children can't read. Almost half of Australian adults struggle with reading. This has a devastating impact on their lives. It is an impassable barrier to opportunity and success.

Unfortunately, our younger generation is facing similar challenges. Over four in 10 15-year-olds in Australia did not attain the Australian National Proficiency Standard in reading in the Programme for International Student Assessment (PISA), with rates declining over past decades.

Aboriginal and Torres Strait Islander children, students from disadvantaged backgrounds and from non-metropolitan areas are less likely to be literate than their peers. In 2022, Year 9 students from these cohorts were around three years of schooling behind the average Australian student in terms of their National Assessment Program – Literacy and Numeracy (NAPLAN) reading scores.

WHAT NEEDS TO BE DONE?

The core skills for reading - phonemic awareness, phonics, fluency, vocabulary and comprehension - have been identified through over forty years of multidisciplinary research in cognitive psychology, neuroscience, linguistics, speech-language pathology and education. However, those skills are not always made part of schools' curriculum and instruction, nor is there necessarily systemic investment across state and territory education systems to support schools in changing from long held practices which may not be informed by research and science.

For all school children to benefit from an evidence-based approach to literacy instruction there must be a substantial investment in **five key areas**:



Implementing high-quality evidence-based curriculum for early literacy instruction. To ensure the quality of curriculum materials, an independent body should be responsible for establishing a rigorous quality assurance mechanism



Supporting pre-service and in-service teachers with training and coaching in research backed explicit and structured literacy instruction covering the five key skills for reading. The Australian Professional Standards for Teachers, developed by the Australian Institute for Teaching and School Leadership (AITSL), should be strengthened so that they clearly emphasise the professional knowledge and evidence-aligned instructional practices required for teaching reading and writing, in order for teachers to meet accreditation requirements and be proficient, accomplished or leading educators



Introducing national age-normed progress monitoring tools to identify children who are struggling as they move through school. At a minimum, all jurisdictions should mandate the Year 1 Phonics Screening Check, with best practice suggesting there should be screening all the way from preschool to entry to high school



Providing a multi-tiered system of support with high quality evidence-based instruction for all students and additional support (through small group tutoring and one-on-one intervention) for struggling students so they can catch up with their classmates



Adopting targets to reduce the proportion of students who do not meet basic levels of literacy. Governments should prioritise the collection, analysis, and dissemination of data related to students with disabilities.

STATE-BY-STATE COMPARISON

OUTCOMES

We compare the performance of each state and territory in terms of outcomes in international and national assessments, including overall achievement, achievement over time, student progress (growth) and ensuring all students, regardless of background, become proficient readers.

It is clear from our analysis that no state or territory is excelling across all measures. There is substantial room for improvement for all jurisdictions.

While some states and territories, such as the Australian Capital Territory (ACT) and Western Australia, consistently outperform others in terms of achievement, these states don't necessarily perform the best in terms of progress over time or on equity measures. Other states that consistently perform poorly on assessments, such as the Northern Territory, don't always perform worst across the board. For example, the Northern Territory outperforms other states and territories for student progress in primary level reading over time.

POLICYMAKER ATTEMPTS AT IMPROVEMENT

We have compared jurisdictional attempts to improve literacy outcomes against the **five recommended actions**.

South Australia and New South Wales have invested in system-wide reforms to embed evidence-based approaches to literacy instruction and provide a benchmark for other jurisdictions. Tasmania has announced a significant literacy reform agenda with the aspiration of achieving 100 per cent functional literacy and Queensland will also introduce a new reading commitment.

Western Australia has invested in professional development and progress monitoring and in lifting educational outcomes for Aboriginal and Torres Strait Islander students and students with low socio-economic status backgrounds. The Northern Territory is open to change but is yet to make investments which are commensurate with those made by South Australia and New South Wales.

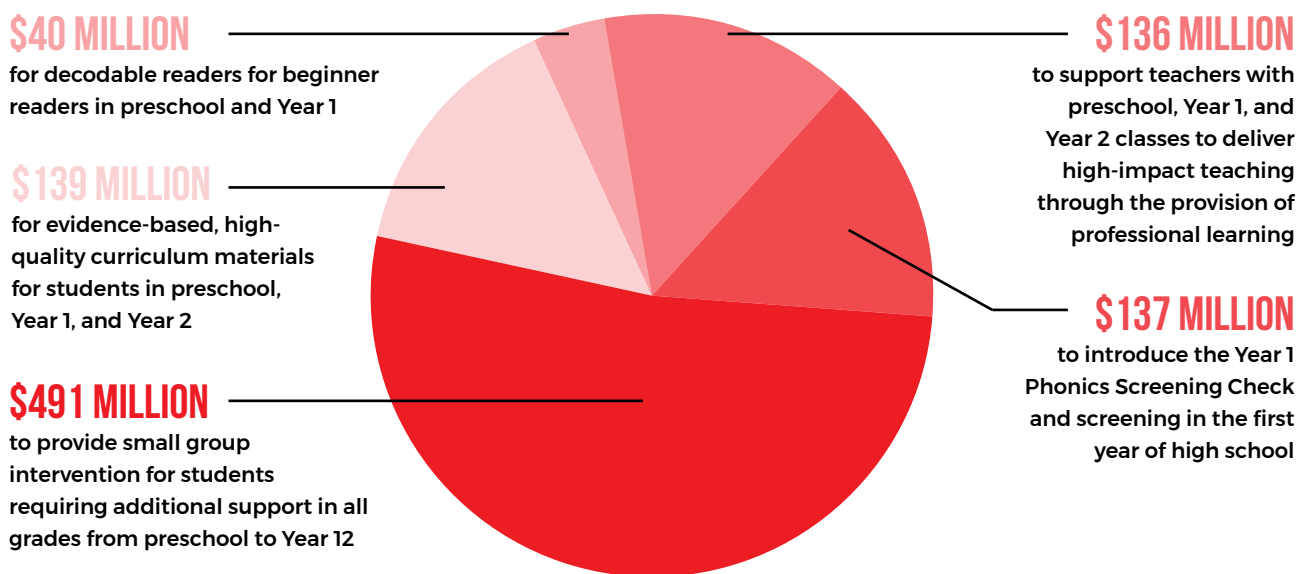
Other jurisdictions such as the ACT and Victoria have high levels of school autonomy leaving decisions about curriculum, teacher training, screening tools and intervention up to the discretion of principals, school boards and teachers who aren't always well supported or trained to make evidence-aligned decisions. Jurisdictions such as Victoria and the ACT seem to favour a 'balanced literacy' approach, which may not adhere to the research base on literacy instruction, nor to the requirements of the Australian Curriculum.

All jurisdictions will need to consider their literacy targets in light of new NAPLAN proficiency targets which have been released in 2023. Any jurisdiction embarking on system wide reforms should develop a clear evaluation framework at the outset which accounts for achievement, progress over time and equity outcomes.

WHAT WILL IT COST?

We estimate that the cost of implementing our five recommendations to ensure all Australian students have access to evidence-based reading instruction is \$942 million and will deliver a 13x return on investment of \$12 billion.

The estimated costs in 2023-24 are



THE ECONOMIC AND SOCIAL COST OF DOING NOTHING IS HIGHER

Poor literacy sentences individuals to a life of social isolation, limited income and compromised health. It is a barrier to opportunity that robs people of reaching their full potential.

Failing to equip everyone with basic literacy skills has detrimental consequences for Australia's economy and overall well-being. The economic impact of illiteracy on the Australian economy may be as high as \$44 billion annually. Low levels of literacy are associated with reduced employment opportunities, lower lifetime earnings, higher hospitalisation rates, and difficulties navigating the healthcare system. Children with lower levels of literacy are more likely to end up in the lowest income bracket in the future. This perpetuates a cycle of reliance on government assistance and escalates costs within healthcare, housing, employment, and justice systems.

An inability to read proficiently hinders people from actively participating in their communities and political processes. It also leads to poorer mental health and increased involvement in criminal activities.

The impact extends across lifetimes and generations. Nobody wants this for their children nor their community.

WHAT IS THE PROBLEM?



ALMOST HALF OF AUSTRALIAN ADULTS STRUGGLE WITH READINGⁱ

The Organisation for Economic Co-operation and Development (OECD) survey, the Programme for International Assessment of Adult Competencies (PIAAC) is designed to assess adult skills over a broad range of abilities, including simple reading skills, drawing from real-life situations (see Appendix A).¹

The most recent PIAAC survey in 2012 found while Australia performed well internationally, millions of Australians still struggle with daily tasks that require reading and writing.²

Over 2.3 million Australian adults lack the basic literacy skills to complete necessary everyday tasks.

OVER 2.3 MILLION AUSTRALIAN ADULTS LACK THE BASIC LITERACY SKILLS TO COMPLETE NECESSARY EVERYDAY TASKS.

Approximately 620,000 Australians aged 15 to 75 (3.7 per cent) have literacy below PIAAC level 1, which means they have very basic or no reading or writing skills at all. Many would not be able to find a piece of information in a simple chunk of text.

A further 1.7 million Australian adults have literacy at PIAAC level 1 (10.4 per cent), meaning they have very basic reading and writing skills and would struggle to find and understand information. They would likely have difficulty understanding the instructions on medication or finding and applying for jobs online.ⁱⁱⁱ³

ⁱ This report focuses on reading to assist with clarity of presentation of data, noting that the ability to spell and write effectively is also important.

ⁱⁱ Examples are based on Equity Economics' analysis of literacy proficiency levels and PIAAC sample questions.

Over four in 10 adults in Australia would likely struggle to read and understand this report.

Almost half the Australian adult population (44.2 per cent) are at PIAAC level 2 or below. They are not able to construct meaning from larger chunks of more complicated text, draw conclusions across multiple pieces of information, or easily disregard irrelevant content. This means many Australians cannot understand data in detailed charts or graphs, or write or understand professional documents, such as legal documents, financial reports, or technical manuals.

This has huge implications not only for quality of life for millions of Australians, but it also holds back our economy and our productivity.⁴

AUSTRALIA'S LITERACY RATES ARE NOT IMPROVING AMONG YOUNG PEOPLE

Unfortunately, things are not improving for younger people in Australia. The OECD PISA test assesses the skills and knowledge of 15-year-olds.⁵ The most recent assessment found Australia performs well globally. Australia's average PISA reading score is 503 points compared with the OECD average of 487 for reading.ⁱⁱⁱ However, many students are still underperforming. Australian students are not achieving the proficiency level of reading literacy that they should be, and it is worsening. In 2000, less than one in three (31 per cent) students were below

the Australian National Proficient Standard in reading^{iv}, compared to 2018 where over four in 10 (41 per cent) students did not attain the standard.

Since PISA began Australia's rankings among OECD countries for reading have dropped, falling from fourth in 2000, to sixteenth in 2018.⁶

INEQUALITY IN EDUCATIONAL OUTCOMES IS HIGH

Challenges are exacerbated for children from marginalised backgrounds who are less likely to achieve minimum standards of literacy than more advantaged students, further amplifying their hurdles to success.

In PISA, student performance in reading is strongly associated with socio-economic status. The most disadvantaged students are on average 2.7 years of schooling behind the most advantaged students (and 1.4 years of schooling below the average student).⁷

In 2022, Year 9 students including Indigenous students, those with parents with lower levels of education, or those in remote areas were around three years of schooling behind the average student in terms of their NAPLAN reading scores.^v

Poor levels of literacy for disadvantaged students have ongoing negative impacts for future employability and wages, which further entrench inequality and intergenerational disadvantage.

iii In comparison to other OECD countries, Australia performs similarly to countries including New Zealand (506), the United States (505) and the United Kingdom (504) but significantly lower than countries such as China (555), Canada (520), Finland (520) and Ireland (518).

iv The Australian National Proficiency Standard represents a 'challenging but reasonable' expectation of student achievement with students needing to demonstrate more than elementary skills. The Australian proficient standard for PISA is Level 3. Internationally, the OECD has identified Level 2 as the level of proficiency on the PISA performance scale at which students demonstrate reading literacy competencies that will enable them to actively participate in life situations. 80% of Australians attained this level.

v The average NAPLAN score for a Year 9 student in reading for 2022 was 577.6. For Indigenous students the average score was 515 (3.17 years behind the average student), for those with parental education equivalent to Year 11 or below the average score was 522 (2.9 years behind the average student), and for students from remote or very remote areas the average score was 539.8 and 473.3, respectively (2.1 and 4.5 years behind the average student). Calculated based on equivalent year levels developed by the Grattan Institute (Goss et al).

WHAT NEEDS TO BE DONE?

To ensure Australian schools are systematically and consistently implementing evidence-based learning, Equity Economics has identified five areas where investment is needed

1

CONSISTENT IMPLEMENTATION OF CURRICULUM.

High quality evidence-based curriculum materials covering the five key skills for reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension)

2

BEST PRACTICE TRAINING AND PEDAGOGY.

Professional development for teachers in explicit teaching practices and the five key skills for reading

3

CONSISTENT SCREENING AND PROGRESS MONITORING.

Age-normed national screening and progress monitoring tools to identify children who are struggling as they move through school. At a minimum, all jurisdictions should mandate the Year 1 Phonics Screening Check, with best practice suggesting there should be screening all the way from preschool to entry to high school

4

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND.

Provision of an appropriate multi-tiered system of support framework with evidence-based small group and one-on-one tutoring for struggling readers delivered by appropriately trained staff

5

APPROPRIATE ACCOUNTABILITY.

Public commitment and targets to ensure children will become proficient readers and meet minimum benchmarks.

1. CONSISTENT IMPLEMENTATION OF THE CURRICULUM

The Australian Curriculum outlines the expectations for what Australian students should be taught. Version 9 of the curriculum was released in 2022. All states and territories have agreed to implement it.⁸ The new curriculum places a strong emphasis on early reading skills, particularly focusing on phonics-based knowledge. References to 'predictable texts' and the 'three-cueing system' have been removed.

The cueing system is a teaching method that encourages children to guess unfamiliar words using cues such as word meaning, sentence structure and syntax, letters and sounds.⁹ Children are provided with predictable readers that rely on context and visual cues (including pictures) to help students guess unknown words. Research has shown the three-cueing system is not as effective for beginner readers, especially those who struggle or are at risk of falling behind.¹⁰ Nevertheless, it remains widely used because it is a central pillar of 'balanced literacy'^{vi,11}

To be implemented appropriately, the Australian Curriculum requires schools to

purchase decodable readers which teach children to sound out words, rather than to guess them. However, some schools claim they lack the necessary resources or expertise to employ these readers effectively.

While the Australian Curriculum requires a focus on phonics, this is not the only essential skill required for reading. The five key skills essential to the acquisition of word recognition and language comprehension for reading are

- **Phonemic awareness:** the ability to recognise and manipulate individual speech sounds
- **Phonics:** understanding the associations between graphemes and their corresponding sounds
- **Fluency:** the capacity to read accurately, quickly, and expressively
- **Vocabulary:** understanding the meaning or meanings of words
- **Comprehension:** the ability to derive and create meaning from written text.¹²

The changes to the Australian Curriculum represent a major shift in the way children should be taught to read and cannot be easily implemented by individual schools without support and resourcing. To ensure the quality of curriculum materials, an independent body should be responsible for establishing a rigorous quality assurance mechanism.

BOX 1: EDREPORTS QUALITY ASSURANCE FOR CURRICULUM MATERIALS IN THE UNITED STATES (US)

EdReports is a non-profit organisation in the US, established in 2015, aimed at assisting teachers and school leaders in identifying high-quality curriculum materials.¹³ It conducts thorough reviews of comprehensive curriculum materials, including textbooks and web-based resources, and publishes the results. The reviews are conducted by experienced teachers, who receive over 25 hours of training before joining a review team. Teams evaluate materials based on detailed and evidence-based criteria for quality and usability in the classroom. For example, the 100-page guide for reviewing early years' literacy curriculum materials helps assess whether they meet clear, evidence-based requirements, such as providing systematic and repeated instruction for students to hear, say, and read every new sound-letter combination they learn. EdReports has recruited and trained more than 700 teacher reviewers and has published over 970 reviews of English, Math, and Science curriculum materials. It has identified about 400 comprehensive curriculum materials that meet its quality standards. EdReports collaborates with various US states, adapting its review process to help them identify high-quality materials that align with their specific curriculum requirements.

vi Balanced literacy encompasses various practices, but some common approaches include using cueing and texts which are levelled according to background knowledge and sentence complexity rather than controlled for spelling patterns.

2. BEST PRACTICE TRAINING AND PEDAGOGY

Reports such as the National Inquiry into the Teaching of Literacy emphasised the need for teachers to provide explicit and direct instruction in phonics for students to develop foundational reading proficiency.¹⁴ However, the Quality Initial Teacher Education (QITE) Review found many teaching graduates finish their Initial Teacher Education programs underprepared for the practical aspects of teaching reading.¹⁵

The recent report from the Teacher Education Expert Panel has recommended that Initial Teacher Education must cover essential content areas, including

- **Understanding the brain and learning:** This content aims to provide teachers with insights into why specific instructional practices are effective and how to implement them successfully
- **Effective pedagogical practices:** This encompasses explicit modelling, scaffolding, formative assessment, as well as literacy and numeracy teaching strategies. These practices support student learning by aligning with how the brain processes, stores, and recalls information.¹⁶

Education Ministers have agreed in principle to the reforms outlined by the Panel, which will assist future teachers¹⁷, however, in-service teachers will also require support. A survey conducted with 284 Australian elementary teachers has revealed a low level of consensus about what elements of instruction are useful in classrooms, and how time should be apportioned to different tasks.¹⁸ Participants indicated that their most frequent source of knowledge about reading instruction came from their own personal research, with only a few mentioning university teacher education

as a primary source of expertise. A significant majority of respondents considered decoding skills/phonics to be important. However, only 46 per cent of teachers in Foundation and Year 1, where decoding instruction is typically emphasised reported dedicating any time to phonics instruction, with an even smaller subgroup (17 per cent) spending more than 10 minutes per day on it. This contradicts claims that phonics instruction is well-integrated into elementary teaching in Australia.

While it is critical that teachers have flexibility to tailor lessons in the most effective manner for their students, it is also important that there is consistency across classrooms, and that teachers are kept up to date with the latest science-led evidence on literacy instruction.

To support effective teaching practices, teachers and principals should receive professional development focusing on high-impact teaching strategies and the key skills for reading. This should incorporate active learning and collaboration, provide models of effective practice, offer coaching and expert support tailored to individual needs, and allow for sustained duration to practice, implement, and reflect on new strategies. These recommendations are based on rigorous studies linking professional development, teaching practices, and student outcomes.¹⁹ This is particularly true for Student Support Officers, who are often the least trained and most poorly paid staff members, who support the highest need students.

BOX 2: COACHING TEACHERS IN PHONICS: ENGLAND

A study conducted by the London School of Economics evaluated the effectiveness of a national scheme to provide coaching for teachers in English schools in systematic synthetic phonics, following the English Government's requirement to teach phonics as the main reading strategy.²⁰ The program included funding for a specialist coach for local authorities. The evaluation found the program was cost effective in improving early literacy acquisition among young students, with significant and long-term impact on students, even after the literacy coach had left the school. It also resulted in successful outcomes for students with literacy deficits, non-native English speakers, and disadvantaged students.

The Australian Professional Standards for Teachers, developed by AITSL, serve as the regulatory framework for teachers' Initial Teacher Education, professional learning, practice, and engagement.²¹ They set out the requirements for the accreditation of all Initial Teacher Education programs.²² They also outline the key elements of quality teaching across four career stages: Graduate, Proficient, Highly Accomplished, and Lead. These standards define what constitutes teacher quality and provide a framework for knowledge, practice, and professional engagement throughout teachers' careers. Graduating from an accredited Initial Teacher Education course and achieving both provisional and full registration requires a demonstration of meeting the teacher standards. The process for demonstrating this varies between jurisdictions. The standards should be strengthened so they clearly outline the knowledge required for reading and writing instruction to meet registration and accreditation requirements.

3. CONSISTENT SCREENING AND PROGRESS MONITORING

Most education systems operate in a reactive “wait to fail” manner, waiting until children show significant difficulties with reading before intervening. It is obvious that this is not an ideal approach. It takes four times as many

resources to resolve a reading difficulty by Year 4 than it would have taken in Year 1.²³

By implementing screening tools from preschool to Year 2, and continuously monitoring progress throughout primary school and on entry to high school, educators can proactively identify children at risk of reading difficulties and implement early interventions to prevent or minimise long-term reading problems.

The Year 1 Phonics Screening Check is a short check that teachers can use to identify children who may not be learning phonic decoding to an age-appropriate standard so additional support can be provided. South Australia was the first Australian jurisdiction to roll out the Year 1 Phonics Screening Check in 2018 on a universal basis with great success. The 2022 South Australian Phonics Check results show state-wide improvement in the ability of students to decode and blend letters into words. In 2018, only 43 per cent of all students in South Australia met the expected achievement level for the check. Four years later 68 per cent met the benchmark. This is a remarkable improvement of 25 percentage points.²⁴

In 2021, New South Wales mandated the use of the Phonics Screening Check.²⁵ Tasmania has also announced all schools are required to use the check.²⁶ However, there is still significant variation in the application of screening instruments used across other

regions such as Western Australia²⁷, Victoria²⁸, and the Northern Territory. Jurisdictions such as the ACT and Queensland do not currently have any screening in Year 1 at all.

To ensure uniformity across the country and gather comprehensive data at a national level, it is essential to implement standardised universal screening. This would enable the collection of data that could be analysed based on geographical location, individual schools, and demographic backgrounds. The reporting procedures would keep parents informed about their child's development in comparison to benchmarks and would also be important for families who move interstate.

Early identification is vital because the target window for effective intervention is in the early years of schooling. The optimal period for intervention is preschool or first grade, yet many struggling students are not identified until around the third or fourth grade.²⁹ Delayed identification and intervention can hinder students' ability to catch up with their peers and necessitate additional learning support throughout their schooling and learning loss across the curriculum,

as well as complex behavioural and emotional consequences.³⁰ At a minimum, all jurisdictions should mandate the Year 1 Phonics Screening Check.

Furthermore, continuous assessment throughout primary school and into high school is essential to monitor students' literacy skills as they progress through different grade levels. Nationally up to one in five students start high school three or more years behind their peers having scored at or below the national minimum standards (NMS) for reading. New research has suggested that students should be tested when starting secondary school to identify those that need further support.³¹

Drawing parallels to preventative health approaches, where individuals are screened for early signs of preventable health conditions to minimise risks, implementing a similar model in education would allow teachers to identify markers for reading difficulties early on and provide appropriate interventions. This shift from a deficit-based approach to a preventative model would significantly improve outcomes for struggling readers.

BOX 3: HIGHLIGHTING BEST PRACTICE EVALAIDE IN FRANCE

In 2018 France implemented universal reading and mathematics screening through the EvalAide program, which screens children in their first and sixth years of primary school.³²

At the beginning of their first year, students are assessed in various areas, such as their ability to manipulate phonemes and syllables, understand words and text orally, identify letters in the alphabet and their sequence, and correspond phonemes with graphemes. Halfway through Year 1, they are re-tested on these skills, as well as their ability to write syllables and whole words and read aloud.

The development of this standardised screening program drew inspiration from successful international initiatives in Finland, Sweden, Singapore, and England.

The program follows a 'Response to Intervention' approach, which means struggling students are identified early on, allowing them to receive the necessary support to thrive academically. The screening process takes place at the beginning of Year 1, giving teachers ample time to intervene and provide support tailored to the needs of children identified as at risk for potential reading and mathematics difficulties. This assessment is conducted up to three times, with screenings also taking place halfway through Year 1 and in Year 2.

Additionally, screening measures are administered during Year 6 to evaluate the overall system and determine if students are meeting grade-level expectations. This assessment helps identify older students with reading difficulties who may require extra assistance.

CATALYST PROGRAM IN CATHOLIC SCHOOLS IN THE ACT AND GOULBURN

In 2020, Catholic Education Canberra and Goulburn (CECG) launched the Catalyst program, a system-wide transformation of instructional approaches across 56 schools in the ACT and Goulburn aimed at improving literacy.³³ CECG recognised system wide change was required in order to lift overall performance and this needed to be supported by a centralised, coordinated, and funded program, which could not be fully achieved by individual schools within existing budgets. The program has two goals: ensuring every student is a competent reader and; making high-impact teaching practice visible in every classroom.



Image source: Catholic Education Canberra Goulburn

Catalyst has significantly invested in screening tools to identify children at risk of not reaching grade level literacy standards. In 2021, all schools implemented a compulsory Year 1 Phonics Check to identify children who have not sufficiently retained information on letter-sound relationships. Universal screening for literacy skills has now been rolled out in primary schools from Kindergarten to Year 2, with schools provided access to tools that also allow screening in Years 3 to 6. This data is used to identify children who require intervention.

Early screening means children with specific learning disabilities can be identified and provided with timely support and funding

If children with learning disabilities are consistently identified early, schools can more easily access additional support for them through the Commonwealth funded Schooling Resource Standard (SRS).

The SRS estimates how much total public funding a school needs to meet its students' education needs.³⁴ The standard includes a loading calculation for disability drawn from the Nationally Consistent Collection of Data on School Students with Disability (NCCD). The NCCD is an annual collection of information about Australian school students with disability. There are four categories of disability: physical; cognitive; sensory; and social/emotional. The cognitive category includes: total or partial loss of the person's bodily or mental functions and; a disorder or malfunction that results in the person learning

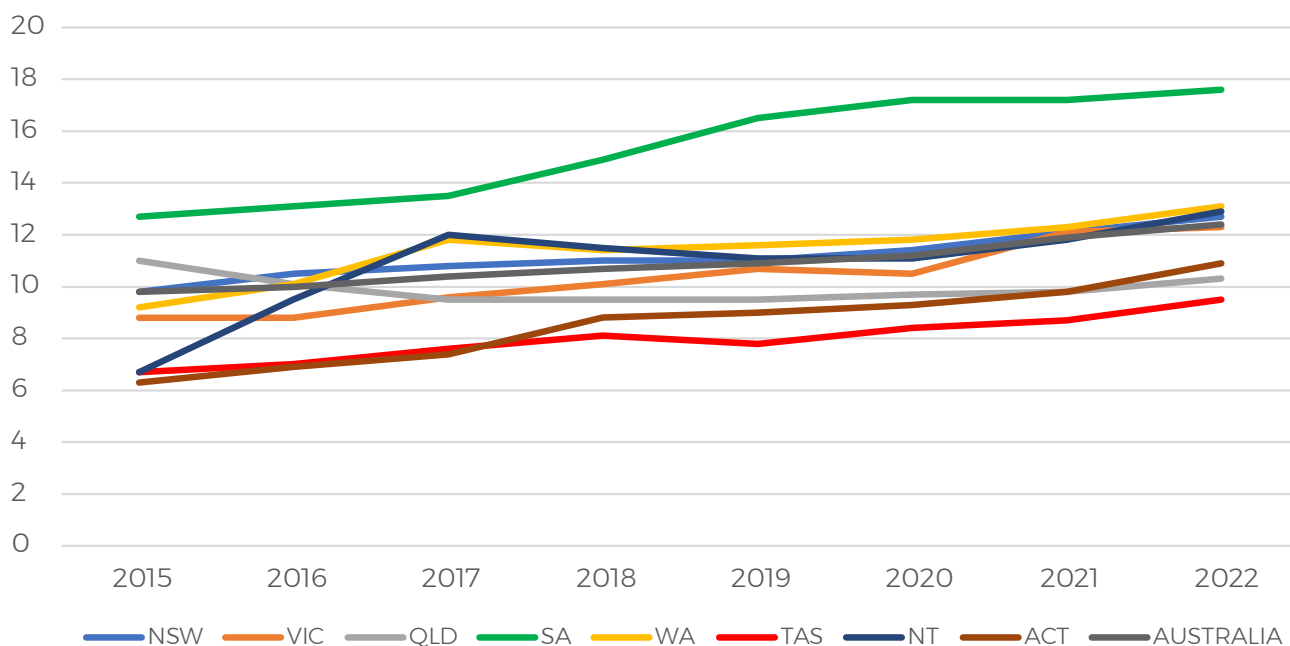
differently from a person without the disorder or malfunction. Specific learning disabilities like dyslexia fall within the cognitive category.

Analysis of data on school students with disability by Equity Economics reveals the average proportion of students across Australia falling into the NCCD cognitive category in 2022 as a percentage of total enrolments is 12.4 per cent, but there is significant variation across the states and territories.³⁵

South Australia has consistently had a higher proportion of students falling in this category than the national average and numbers have increased in the period following the introduction of the Year 1 Phonics Check.^{vii} This would suggest that the check is not only identifying struggling readers, but also helping to identify students with cognitive disabilities. This means they can be provided intervention support earlier, profoundly influencing their lives.

vii Several other jurisdictions have seen an increase in the percentage of students falling in the cognitive category including the Northern Territory and the Australian Capital Territory.

Figure 1.1: Proportion of total enrolments falling into the cognitive category under the Nationally Consistent Collection of Data 2015-2022



Source: Equity Economics analysis of ACARA school students with disability

4. EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

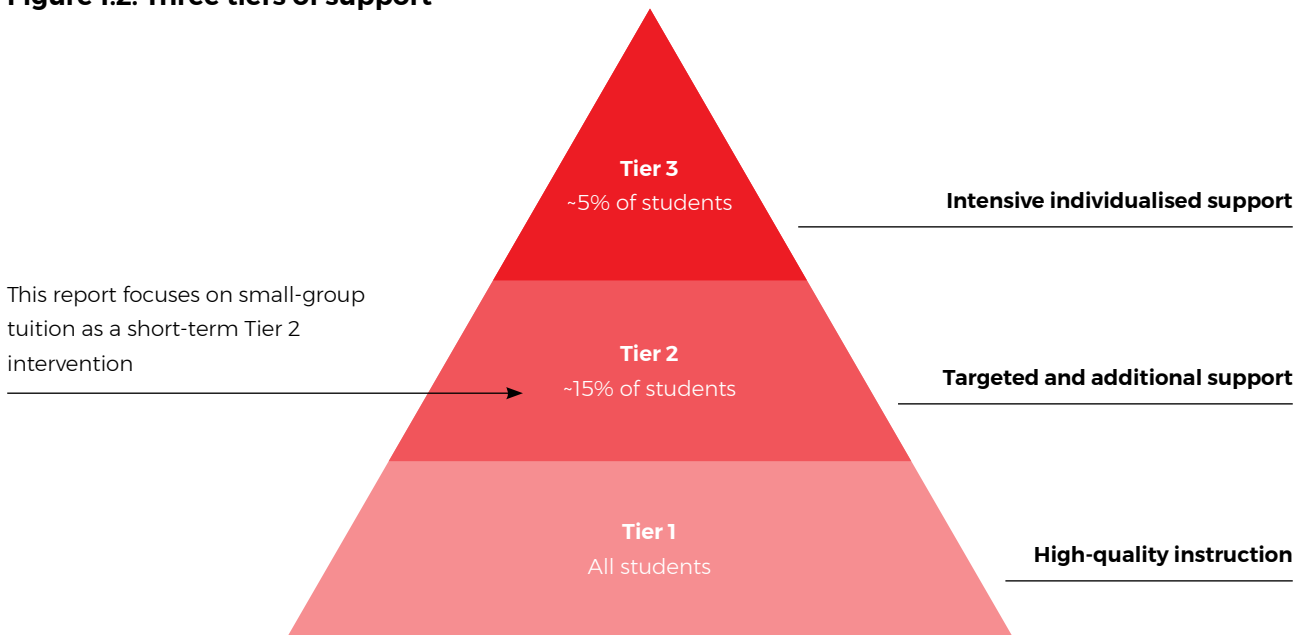
When students are identified as falling behind, they need to be provided adequate support to catch up. A multi-tiered system of support framework^{viii} involves providing all students with high-quality classroom instruction while also offering targeted additional teaching to some students who require extra support for brief periods.³⁶

There are three tiers of teaching support available under the model, with the intensity increasing depending on the needs of each student.

- **Tier 1:** Learning gaps are prevented from arising in the first place by providing high-quality universal instruction for all students (around 80 per cent of students)
- **Tier 2:** Targeted and additional support, usually in small groups, is provided to students who are at risk of falling behind (typically around 15 per cent of students)
- **Tier 3:** Intensive support, often on a one-on-one basis, is provided to students who do not respond adequately to Tier 2 interventions (usually around five per cent of students).

viii 'Multi-tiered system of support' is an umbrella term including both academic and behaviour supports. 'Response to intervention' is the academic arm.

Figure 1.2: Three tiers of support



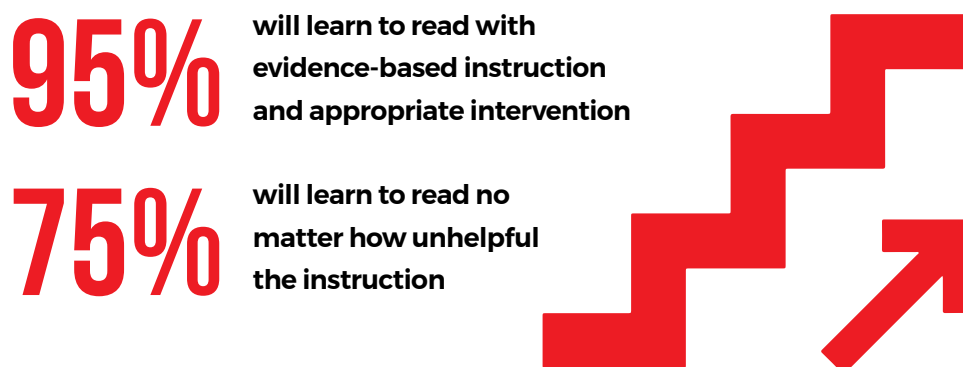
Source: de Bruin (2023)

One of the key features of the multi-tiered system of support framework is that teachers continuously monitor their students to determine when they need more or less extra help. By doing so, they can identify learning gaps early on and provide appropriate support.

The evidence suggests that with consistent use of effective instruction at Tier 1 for the

whole class, and implementation of evidence-based intervention at Tier 2 for those who require additional support, 95 per cent of students could meet academic benchmarks.³⁷ In the absence of this evidence-based approach, only 75 per cent of children will learn to read.³⁸ However, it will not be 75 per cent across all sub-groups. This figure will be much lower for many marginalised/at-risk equity groups.

Figure 1.3: The impact of evidence-based instruction and intervention on academic benchmarks:



The Australian Council of Educational Research conducted a survey in 2022 involving school leaders, teachers, and consultants, focusing on students in Years 7 to 9 who lacked foundational literacy and numeracy skills.³⁹ While some schools had established strategies in place, others seemed to handle it in an ad hoc manner, based on student preference, teacher availability, personal expertise, and competing issues such as curriculum requirements, student well-being, and attendance in other subjects. Around 58 per cent of schools stated they provided specific additional support in literacy, while an additional 34 per cent said they did so occasionally. However, challenges affecting the provision of support were common, including lack of funding (64 per cent), shortage of qualified or experienced

staff (61 per cent), and a lack of available staff (59 per cent). These issues tended to be more prevalent in government schools and in regional and remote areas. Teachers also expressed concerns about inadequate funding for professional learning and insufficient time available for undertaking such learning. Overall, about 41 per cent of respondents indicated that they were not very confident or not confident at all in their school's approach to supporting students with foundational literacy and numeracy difficulties.

The Productivity Commission and Grattan Institute have recommended schools (and jurisdictional governments) consider the introduction of intensive targeted support measures, noting that small group tuition can enhance reading outcomes by up to four months.⁴⁰

BOX 4: HIGHLIGHTING BEST PRACTICE – OREGON RESPONSE TO INSTRUCTION AND INTERVENTION PROJECT

The Oregon Response to Instruction and Intervention (ORTII) project, funded by the Oregon Department of Education, focuses on improving literacy outcomes through a multi-tiered system of support approach.⁴¹ ORTII comprises coaches who work with school districts to build and sustain comprehensive literacy instructional systems. The coaches provide technical assistance, support implementation, and ensure targeted, effective instruction for all students. The project involves administering universal screeners, selecting evidence-based curricula, and identifying students with learning difficulties. The goals of ORTII include developing leadership skills, providing professional development, supporting high-quality instruction, promoting data-based decision-making, establishing assessment systems, aiding in specific learning disability identification and increasing awareness.

ORTII has provided training and technical assistance to over 100 school districts in Oregon since 2005 and has proven to be effective in improving reading outcomes. Most participating districts have experienced an increase in the percentage of proficient readers and a decrease in the number of students needing intensive reading support.

5. APPROPRIATE ACCOUNTABILITY

It is unacceptable that a significant proportion of students in Australia leave school without acquiring the necessary reading skills for their future work and everyday life and that disadvantaged students are overrepresented in this group. Almost all children can be taught to read at a level constrained only by

their reasoning and listening comprehension abilities.⁴²

Having clear and measurable targets is crucial for improving literacy levels in Australia. The importance of measures and targets in education is widely recognised. The 2019 Alice Springs Education Declaration emphasises meaningful and transparent measures to enhance educational outcomes.⁴³ Quality data and information empower educators,

students, parents, and governments to evaluate progress, engage in education, and ensure accountability.

The Productivity Commission has advised that all States and Territories should set targets for reducing the percentage of students who do not attain basic literacy and numeracy skills.⁴⁴ This recommendation aims to demonstrate a strong commitment to providing equal education opportunities for all students and encourage accountability.

Governments should make a commitment to students, parents, and the broader community that all school students will attain proficiency in reading. This commitment should be reinforced by specific targets to decrease the proportion of students who fall below proficiency levels in Years 3, 5, 7, and 9.

Governments should prioritise the collection, analysis, and dissemination of data related to students with disabilities, ensuring that it is readily accessible to educators, policymakers, and parents.

BOX 5: HIGHLIGHTING BEST PRACTICE – THE MISSISSIPPI MIRACLE

The Mississippi Miracle is the story of how Mississippi rose from having some of the US's lowest performing reading scores to its most improved.⁴⁵ In 2013, Mississippi fourth graders ranked towards the bottom of the nation for reading proficiency. Six years later, Mississippi had risen to second in the nation once adjusted to allow for comparison with demographically similar peers.⁴⁶ The state achieved more growth in reading than any other state.⁴⁷ The miracle is that Mississippi has successfully implemented education reform that has led to significant improvements in reading scores for students across the state, particularly for marginalised groups like African American and Hispanic students.



The key elements of the Mississippi Miracle include the reorganisation of the state education department to focus on literacy and rigorous standards, a big investment in teacher training in research backed strategies such as phonemic awareness and phonics, and two laws passed in 2013 that appropriated state dollars to fund preschool education and required all third graders to pass a 'reading gate' assessment or risk being held back. In practical terms, this meant reading assessments at the beginning, middle and end of the school year, along with quarterly reports detailing both student progress levels and specific strategies being used to help those still struggling.

Mississippi's accountability model deliberately focused on the bottom 25 per cent of students, with the goal of improving outcomes for the students who were struggling the most. Rather than targeting students based on race, income, or geography, the focus was on the 25 per cent of students performing at the lowest levels in each school. This approach helped avoid stigmatising individual students or specific teachers or schools and created a culture of advancement and accountability in every school, regardless of location or demographics. The results of this approach have been positive, with reading levels for Black and Hispanic students in Mississippi improving as strongly as white students in some far wealthier states.

OUTCOMES



In evaluating state and territory outcomes in literacy, we examine performance across three sub-criteria: Achievement, Progress over time and Equity considerations.

SUB-CRITERION 1: ACHIEVEMENT

1.1 Most recent performance of 15-year-olds in reading in PISA (2018)

1.2 Performance of Year 9 students in reading in NAPLAN. Data from 2022 is drawn on to allow comparison of performance over time. 2023 NAPLAN data has new proficiency benchmarks which do not allow time series comparisons

In this section we also discuss state and territory performance on PIAAC (2011-2012) as it gives a holistic picture of adult literacy. However, due to the age of the data and this paper's primary focus on improvements at a school level, we have excluded this data from the state-by-state comparison

SUB-CRITERION 2: PROGRESS OVER TIME

2.1 Achievement trends in PISA reading results (evaluated as the average cycle change in the proportion of 15-year-old students who attained the Australian National Proficient Standard in reading)

2.2 Achievement trends in NAPLAN reading results (evaluated as the average annual change in the proportion of Year 9 students who attained above the NMS in reading)

2.3 Student progress (growth) in NAPLAN between Years 3 and 5 as measured by Grattan Institute using data from 2010-2016. Note student progress between Years 7 and 9 is excluded from the analysis due to data only being available for five states and territories

SUB-CRITERION 3: EQUITY CONSIDERATIONS

3.1 PISA's proxy measure of equity, i.e., the percentage variation in reading performance explained by a measure of Economic, Social and Cultural Status (ESCS)

3.2 The increased likelihood of Year 9 Indigenous students and students whose parental education is Year 11 or below (a proxy measure of socio-economic status) performing at or below the NAPLAN NMS in reading, compared with the average student in their state

WHAT WE DID

For each sub-criterion jurisdictions were ranked from one to eight based on comparative performance across the jurisdictions. Rankings were then aggregated to give a top-level ranking against each of the three main criteria.

The top two performing states for each criterion are marked with a yellow dot, the middle performing four states are marked with a grey dot, and the poorest performing states are marked with a red dot.

It bears mentioning that a yellow dot is a relative measure of performance, not an absolute one. A state or territory that receives a yellow dot can still have substantial room for improvement, it is simply the best-performing state or territory relative to poorer performing states or territories.

It is also important to note that as well as there being multiple different assessments that measure literacy outcomes, there are also a variety of data points and methods of interpretation and analysis. Consequently, results in terms of best and worst performing states or territories can differ based on methodology.

THE OVERALL RESULTS

Table 1 outlines the overall results in terms of each jurisdiction's relative performance for overall performance, as well as for each sub-criterion.

There is work to be done to improve across all jurisdictions. It is clear from our analysis that no single state or territory consistently performs best or worst across all areas. Most states and territories perform best and worst across at least one sub-category, and no state excels across all sub-categories.

For example, while some states and territories, such as the ACT and Western Australia, consistently outperform others in terms of performance on national and international assessments, these states don't necessarily perform the best in terms of progress over time or ensuring all students, regardless of background, become proficient readers. Other states that consistently perform poorly on assessments, such as the Northern Territory, don't always perform worst across the board. For example, the Northern Territory outperforms all other states and territories for student progress in primary level reading over time.

Taking all criteria into consideration, Victoria and Western Australia are top performers, with New South Wales and Tasmania needing the most substantial improvement.

All jurisdictions need to achieve better outcomes.

TABLE 1: STATE-BY-STATE PERFORMANCE ON OUTCOMES

Criteria	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
ACHIEVEMENT								
1.1 PISA: % students who did not attain NMS in reading 2018								
1.2 NAPLAN: % students at or below NMS in reading 2022								
PROGRESS OVER TIME								
2.1 PISA: average % change in NMS								
2.2 NAPLAN: average % change above NMS								
2.3 student progress in NAPLAN (Year 3 to 5)								
EQUITY CONSIDERATIONS								
3.1 PISA: % variation in performance explained by ESCS								
3.2 & 3.3 NAPLAN: relative performance of subgroups								

KEY

- Top performing jurisdictions
- Middle performing jurisdictions
- Poorest performing jurisdictions

Note: It is important to note that rankings are dependent on the method of analysis used and may vary if other assumptions or data are included or used. The overall outcome for each jurisdiction is not directly based on the absolute number of dots each jurisdiction receives, but on an average of relative rankings across all sub-categories. Consequently, a state or territory may end up as a best performer despite not having the highest number of dots. For example, Victoria is a best performer overall despite having received fewer yellow dots than other states as it receives a higher ranking across all sub-categories on average.

COMPARING STATE AND TERRITORY PERFORMANCE

The following section includes detail on state and territory performance against three sub-criteria.

SUB-CRITERION 1: ACHIEVEMENT

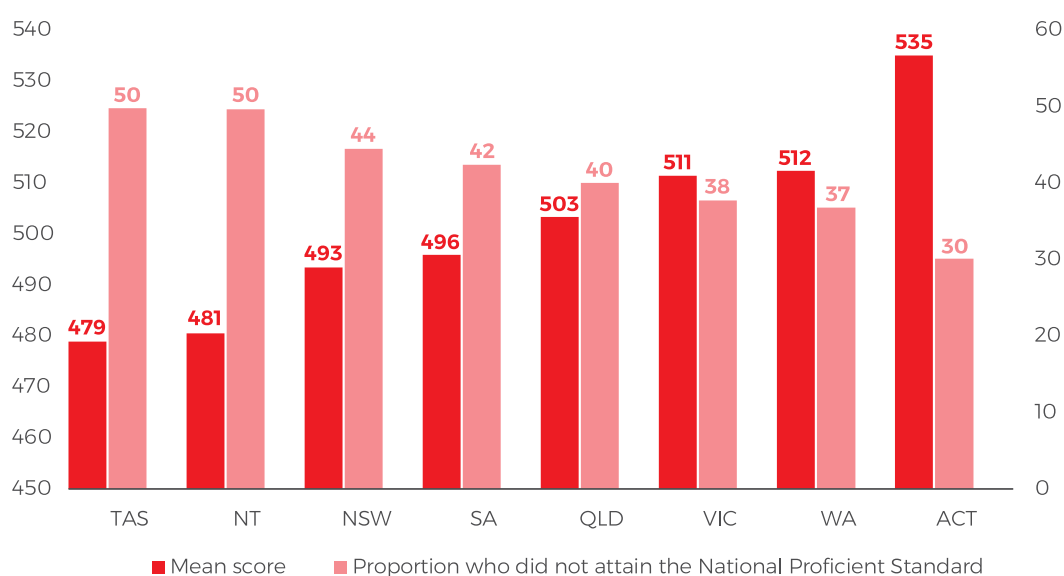
The most common method for literacy evaluation is student achievement in national or international assessments at a point in time. For our analysis, we consider current performance in the 2018 reading assessment in PISA (for 15-year-olds) and 2022 reading assessment in NAPLAN (Year 9, approximately 14-15-year-olds). We also include a discussion on performance in the 2011-2012 PIAAC assessment (for 15-74-year-olds), although it is not included in the state-by-state comparison due to the age of the data. We find that performance varies across states and territories, with some consistently outperforming others – particularly the ACT. While some states seem to perform better than others, it is important to note there are unique demographic factors underlying performance, such as socio-economic status, which are not considered in the achievement criterion. These are considered in later categories.

PISA and NAPLAN provide a comparison of literacy performance between states and territories by focusing on a particular cohort of students within a particular age range. PISA and NAPLAN are both standardised assessments used to evaluate student performance, but they differ in their scope and purpose. NAPLAN focuses on foundational skills in literacy and numeracy, which are essential for other areas of learning and daily life.⁴⁸ PISA measures 15-year-olds' ability to apply their knowledge and skills to real-world situations and challenges, including reading, mathematics, and science.⁴⁹

STATE AND TERRITORY PERFORMANCE IN PISA

Figure 2.1 depicts the mean score and proportion of 15-year-old students who did not attain the Australian National Proficient Standard in reading in PISA. The ACT, Western Australia and Victoria are the top three jurisdictions for performance in PISA. Tasmania, the Northern Territory and New South Wales perform the poorest.

Figure 2.1: Mean score and proportion of students who did not attain the Australian National Proficient Standard for Reading in PISA, by state or territory 2018



Source: Equity Economics analysis of Thomson et al (2019)

STATE AND TERRITORY PERFORMANCE IN NAPLAN

Figure 2.2 depicts the mean score and proportion of Year 9 students at or below the NMS in reading in NAPLAN. As with PISA, the ACT, Western Australia, and Victoria are the top three jurisdictions for performance in NAPLAN. The Northern Territory, Queensland and Tasmania perform the poorest.

It is worth noting that the ACT is the only jurisdiction to achieve an average NAPLAN Year 9 mean score appropriate for a child in Year 9.^{ix} The mean scores for South Australia, New South Wales, Victoria, and Western Australia are equivalent to what would be expected of a student in Year 8. Year 9 students in Queensland and Tasmania are performing at the level that would be expected for a student in Year 7, and the mean score for the Northern Territory is equivalent to a student halfway through Year 5.

Figure 2.2: Mean score and proportion of Year 9 students at or below the NMS for Reading in NAPLAN, by state or territory 2022



Source: Equity Economics analysis of ACARA NAPLAN results, 2022

STATE AND TERRITORY PERFORMANCE IN PIAAC

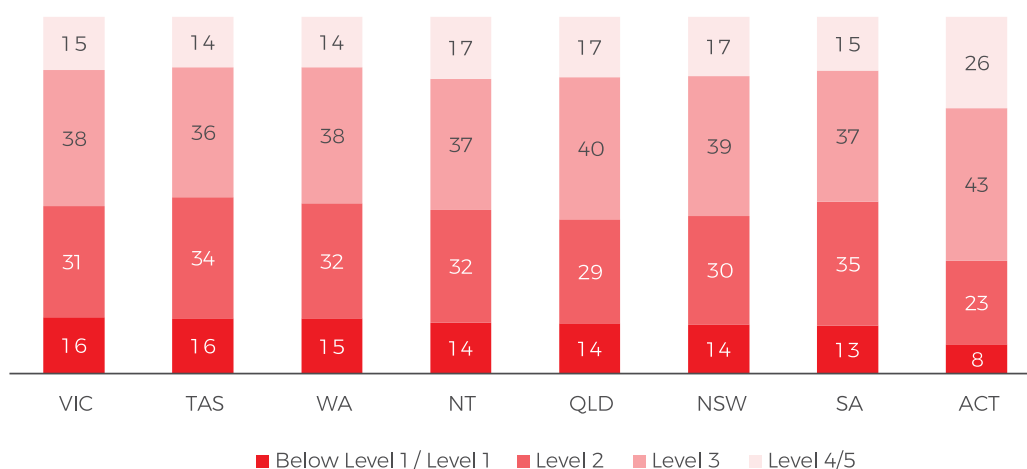
Though an old measure, it is worth a discussion on state and territory performance in PIAAC as it gives an overall measure of all adult literacy, rather than just at school level. However, we exclude the data from the state-by-state comparison due to its age, wider cohort, and because it is unlikely to strongly reflect the current education system.

^{ix} Calculated using ACARA 2022 NAPLAN results published in 2023 and methodology from Goss et al (2018).

In terms of PIAAC, level 2 is considered the minimum level of proficiency to effectively participate at work and in society. Tasmania has the highest proportion of 15-74-year-olds reading at a level 2 or below (50 per cent), meaning half of the state's population has inadequate reading skills for daily life. South Australia has the second highest proportion (48 per cent).

In terms of the proportion of those performing below level 3, the ACT is a higher performing jurisdiction noting it still has one in three 15-74-year-olds at this level. It is also important to note that as PIAAC is looking at a broad population, results are easily influenced by factors such as the age of the population or the proportion of non-English speaking migrants. This is another reason we have left PIAAC out of the state-by-state score card calculation.

Figure 2.3: Proportion of 15-74-year-old population by PIAAC literacy level, by state or territory 2011-12



Source: Equity Economics analysis of Australian Bureau of Statistics (2013)

SUB-CRITERION 2: PROGRESS OVER TIME

Progress over time has been evaluated in two ways:

- Achievement trends: How the results of a given year level change over time, e.g., Year 9 performance over 10 years
- Student progress: How much the same cohort of students learns as they move through school, e.g., as a student moves from Year 3 to Year 9

ACHIEVEMENT TRENDS OVER TIME: PISA AND NAPLAN

Student achievement can be measured by examining performance of any year/age level over time. Examining PISA results indicates Australia has been moving backwards in terms of reading proficiency over the past two decades, with 2018 results showing significant decline compared with previous years' assessments.

This decline can be seen across all states and territories in Figure 2.4, both in terms of falling mean scores and an increasing proportion of students failing to meet the Australian National Proficiency

Standard in reading in PISA. By comparison, NAPLAN reading results have remained much more consistent over the past 14 years, with smaller declines on average in the percentage of students at or below the NMS (see Figure 2.5).

The Australian Education Research Organisation (AERO) has examined why PISA shows significant declines in reading, while NAPLAN and other international tests show either growth or stability and has not been able to find a single cause for the difference in trends.⁵⁰

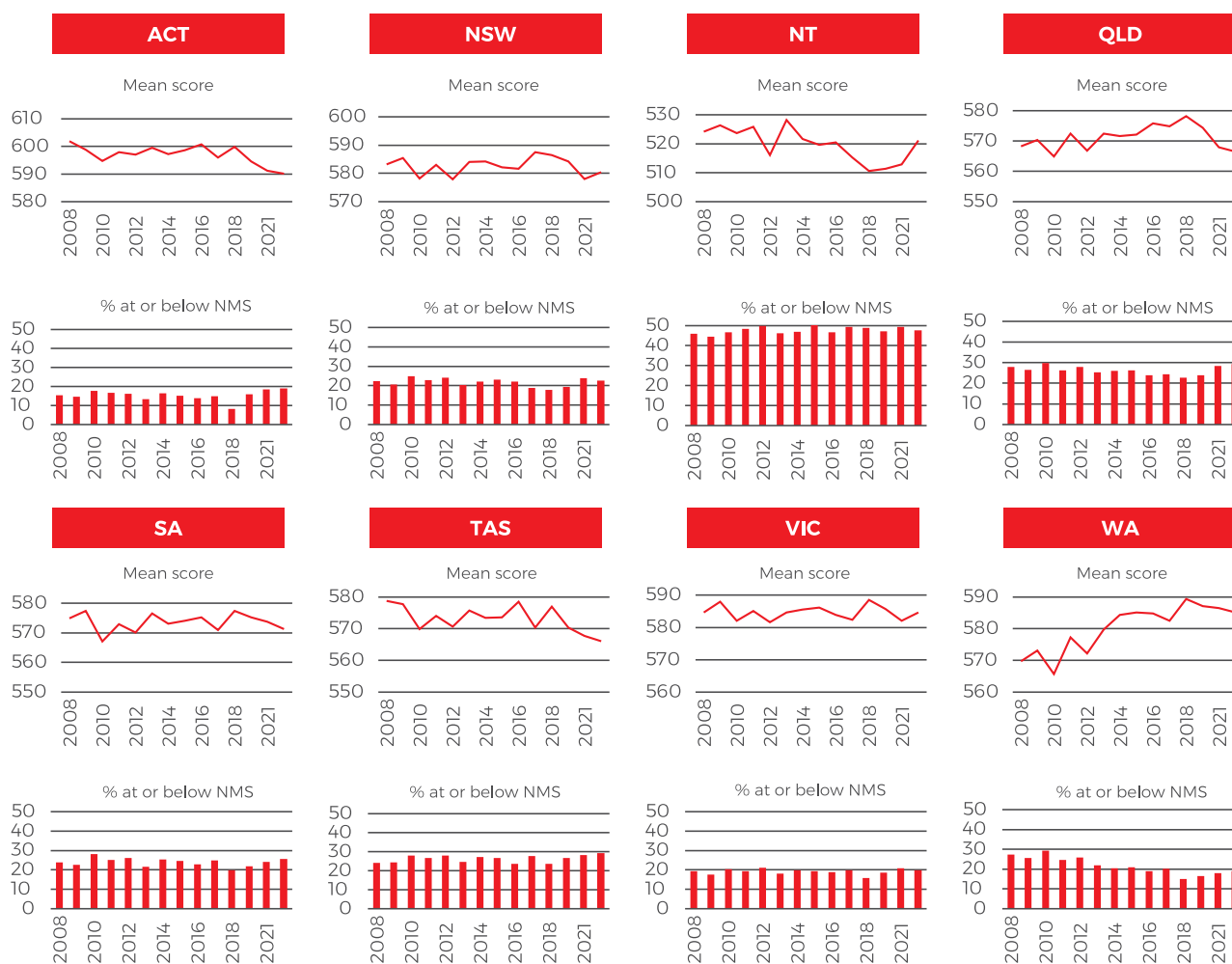
Figure 2.4: Mean score and proportion of students who did not attain the Australian National Proficient Standard in reading in PISA, by state or territory



Source: Thomson et al (2019) for PISA and ACARA (2022) for NAPLAN

NOTE: FOR READABILITY ALL VERTICAL AXES ARE NOT THE SAME SCALE FOR MEAN SCORE. CARE SHOULD BE TAKEN IN COMPARING JURISDICTIONS

Figure 2.5: Mean score and proportion of students at or below Year 9 NMS in reading in NAPLAN, by state or territory



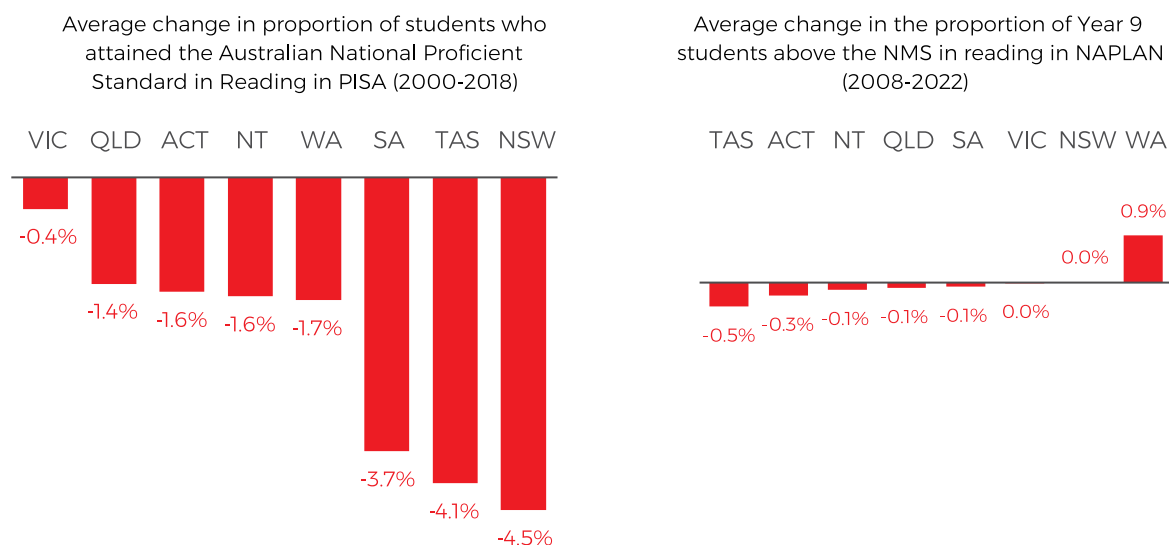
Source: Thomson et al (2019) for PISA and ACARA (2022) for NAPLAN

NOTE: FOR READABILITY ALL VERTICAL AXES ARE NOT THE SAME SCALE FOR MEAN SCORE. CARE SHOULD BE TAKEN IN COMPARING JURISDICTIONS

As assessment results can vary year on year, for the state-by-state comparison we have chosen to compare the average cycle change in the proportion of students attaining the Australian National Proficient Standard in reading in PISA since 2000, and the proportion of students above the NMS in Year 9 for reading in NAPLAN since 2008, which aligns to available data for both measures. These figures are calculated by taking the average of year-on-year change in performance for the available period.

Figure 2.6 demonstrates that performance on PISA has been decreasing on average over time for all states and territories, with the largest average annual declines for New South Wales and Tasmania, and the smallest decline in Victoria and Queensland. Western Australia is the only state to have improved its performance on average over time for NAPLAN.

Figure 2.6: Average cycle change in proportion of students who attained proficiency standards on PISA and NAPLAN, by state or territory



Source: Equity Economics analysis of Thomson et al (2019) for PISA and ACARA (2022) for NAPLAN

STUDENT PROGRESS (GROWTH) THROUGH SCHOOL (IN NAPLAN)

Student progress can be measured by looking at how a specific cohort of students improve over time. Student progress measures what a school system adds to a child’s learning, holding other factors (like socio-economic status) constant.

The importance of student progress is increasingly being recognised by state and territory governments who are developing specific progress measures, such as the Victorian Curriculum and Assessment Authority’s relative growth measure which helps determine whether student progress is adequate relative to others with similar levels of prior achievement.⁵¹

In 2018, the Grattan Institute published a state-by-state comparison of student progress in NAPLAN results from 2010-2016, arguing that student progress gives more information about the value a school adds, whereas achievement trends (*year level results over time*) can be more reflective of the influence of student background. For this reason, we have chosen to include Grattan’s analysis in our reporting.

In its analysis, Grattan takes into consideration two key issues: 1) the non-linear rate of student learning over time in NAPLAN by using an “Equivalent Year Levels” approach and 2) taking into consideration the influence of student family background. In comparing student progress by state, they find that the best states make up to four months more progress across two years of schooling compared to the worst at the primary school level, and up to six months by the secondary level.

Specifically, they find that in terms of reading, the states with the most primary school progress from Years 3 to 5 are the Northern Territory and Queensland, with the least progress being made in the ACT, South Australia and New South Wales. For secondary school reading progress, the Northern Territory and New South Wales are the top performers and the ACT is the bottom

performer. However, data for Queensland, Western Australia and South Australia was excluded from the analysis due to differences at that time between states about whether Year 7 was considered primary or secondary school. Consequently, for our aggregate analysis we have chosen to include only student progress in primary school reading. Relative NAPLAN progress from Year 7 to Year 9 can be found in Appendix B.

Figure 2.7: Relative NAPLAN Progress from Year 3 to Year 5, Grattan calculations



Source: Goss et al (2018)

SUB-CRITERION 3: EQUITY CONSIDERATIONS

It is important to ensure that all individuals can read effectively, regardless of background or socio-economic status. Equity not only ensures fairness, but it also increases social cohesion and stability and contributes to economic productivity.

The extent of the relationship between the socio-economic background of students and their literacy achievement differs across states and territories. In evaluating the impact of background characteristics on reading proficiency we rely on the equity indicators in the PISA and NAPLAN assessments.

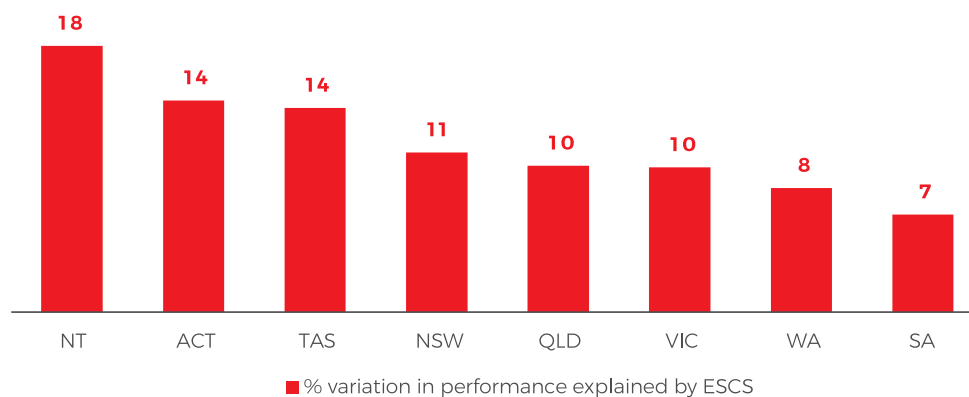
STATE AND TERRITORY EQUITY PERFORMANCE IN PISA

In PISA, the key proxy for equity is the strength of the relationship between socio-economic background and performance i.e., the degree to which differences in reading proficiency are explained by a measure of Economic, Social and Cultural Status (ESCS).⁵² The ESCS is a composite score based on the highest occupational status of parents, the highest educational level of parents in years of education and home possessions as a proxy for family wealth. A higher percentage variation in performance explained by ESCS means socio-economic status plays a larger role in achievement. The strength of this relationship is shown by state and territory in Figure 2.8.

The most equitable states are those where socio-economic status plays a smaller role in achievement. On this basis South Australia and Western Australia are the strongest performers

and the Northern Territory and ACT are the poorest performers. The relationship between socio-economic status and reading performance in the Northern Territory, ACT and Tasmania is worse than the OECD average of 12 per cent. This is despite Tasmania and ACT being at different ends of the spectrum of disadvantage, with Tasmania enrolling the highest proportion of disadvantaged students (38 per cent) compared with the ACT which enrolls the lowest (10 per cent).

Figure 2.8: Impact of economic, social, and cultural status (ESCS) on PISA reading performance, by state or territory, 2018



Source: Thomson et al (2020)

STATE AND TERRITORY EQUITY PERFORMANCE IN NAPLAN

For the purpose of this report the focus of an examination of equity in NAPLAN outcomes is on the performance of Aboriginal and Torres Strait Islander students and those whose parents have an education level at Year 11 or less (a proxy for socio-economic disadvantage). We find that both sub-groups perform more poorly than many of their peers. Figure 2.9 below shows the percentage of students at or below the NMS for reading including:

- all students
- Indigenous students and
- students with parental education of Year 11 or below.

The Northern Territory has the highest levels of students performing at or below standard in all cohorts. The ACT and Victoria have the lowest percentage of Indigenous students and students with lower parental education falling at or below the NAPLAN NMS. Victoria has 39 per cent of Indigenous students and 43 per cent of students with lower parental education overrepresented in this group, which indicates these students are not receiving appropriate instruction.

It is important to note the ranking of states and territories using this approach for NAPLAN is different to that used in PISA. While both examine the impact of measures of socio-economic disadvantage on performance, the approaches used are very different in that they measure different things (including differing measures of socio-economic status). Thus, the two measures are not directly comparable.

Figure 2.9: Percentage of students at or below NAPLAN Year 9 NMS in reading, by subgroup and state or territory, 2022

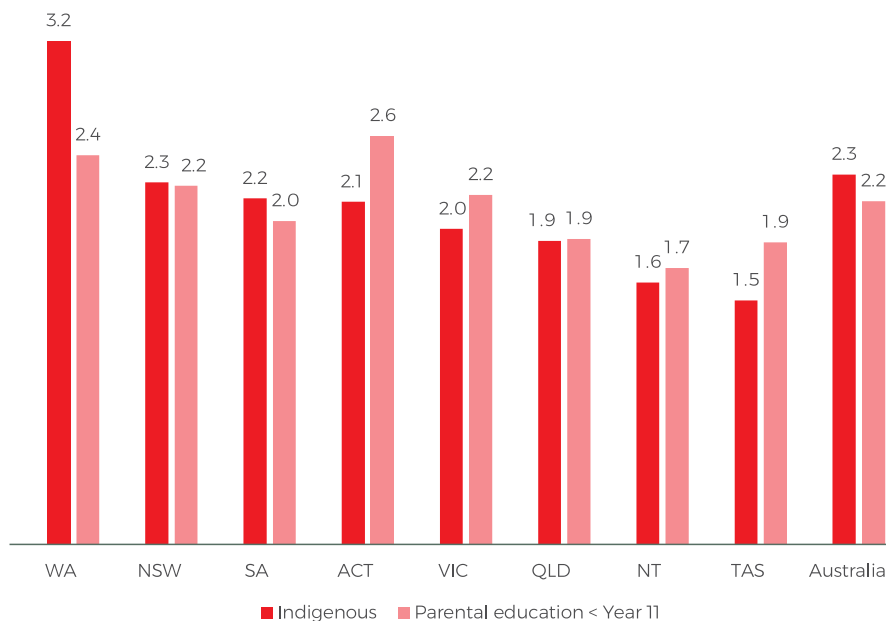


Source: Equity Economics analysis of ACARA NAPLAN results, 2022

In order to measure equity of outcomes, this report compares Indigenous students and students with parental education of Year 11 or below compared to the state average (see Figure 2.10). For Australia as a whole, Indigenous students, and students with lower parental education are over twice as likely to be at or below the NMS. This indicates the classroom instruction they receive is inadequate and may be perpetuating disadvantage instead of alleviating it.

In Western Australia, Year 9 Indigenous students are over three times more likely to perform at or below NMS for reading as compared to the average student in that state. By contrast, in Tasmania they are one and a half times more likely to perform at or below the standard. In the ACT, students with parental education Year 11 or less are 2.6 times more likely to perform at or below the standard than the average ACT student.

Figure 2.10: Ratio of sub-group performance at or below Year 9 NMS to performance of the average student in that state or territory, by subgroup, 2022



Source: Equity Economics analysis of ACARA NAPLAN results, 2022

POLICYMAKER ATTEMPTS AT IMPROVEMENT

In evaluating state and territory policymaker attempts at improvement, we consider attempts at improvement through system-wide investments in implementing evidence-based practice across curriculum, pedagogy, and accountability tools.

WHAT WE DID

As with outcomes, jurisdictions were compared across a range of sub-criterion. The top two performing states receive a yellow dot, the middle performing four states receive a grey dot, and the poorest performing states receive a red dot.

Consistent with the five identified areas for improvement, the sub-criteria for policy attempts at improvement are as follows

2.1

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM (RECOMMENDATION 1)

High quality evidence-based curriculum materials are centrally funded and provided for teachers and students in the five key skills for reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension)

2.2

USE OF BEST PRACTICE TRAINING AND PEDAGOGY (RECOMMENDATION 2)

Provision of centrally funded professional development in explicit teaching practices and the five key skills for reading

2.3

CONSISTENT SCREENING AND PROGRESS MONITORING (RECOMMENDATION 3)

Universal application of the Year 1 Phonics Screening Check to find those children who are struggling to learn to read and preferably age-normed progress monitoring screening tools in other year levels

2.4

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND (RECOMMENDATION 4)

Provision of evidence-based small group tutoring for struggling readers delivered by appropriately trained staff and preferably also one-on-one intervention for students requiring significant support

2.5

APPROPRIATE ACCOUNTABILITY (RECOMMENDATION 5)

Public commitment and targets to ensure children will become proficient readers and meet minimum benchmarks

The following section outlines jurisdictional attempts at implementing the five sub-criteria. Assessments have been based on

- Correspondence from state and territory education ministers and officials
- Publicly available information from state and territory education departments' annual reports, budget papers and websites
- Media reports
- Interviews with principals, teachers and peak bodies (to supplement information where there was limited publicly available information).

The rankings provided are based on the information available. Rankings are derived from informed subjective assessments and intended to provide an indication of the comparative investment made by states in education reforms aimed at enhancing literacy outcomes. The rankings are not measures of the overall effectiveness or success of a jurisdiction's education system. The rankings do not intend to endorse or discredit any specific education system, institution, or government. The rankings should not be misconstrued as absolute, definitive measures of a jurisdiction's educational performance or potential. The primary purpose is to foster informed discussion and promote awareness regarding education reforms and literacy improvement efforts.

THE OVERALL RESULTS

As with outcomes on national and international assessments, it is clear from our analysis that there is still significant investment required across states and territories to ensure schools are systematically and consistently implementing evidence-based learning, and all children are best positioned to become proficient readers.

We find that South Australia and New South Wales have invested in system-wide reforms to embed evidence-based approaches to literacy instruction and provide a benchmark for other jurisdictions, consequently they are the best performers in terms of policy maker attempts at improvement.

Tasmania has also recently announced a significant literacy reform agenda with the aspiration of achieving 100 per cent functional literacy (with detail yet to be announced around funding and implementation) and Queensland has also announced a reading commitment. Western Australia has made a significant investment in lifting educational outcomes for Aboriginal and Torres Strait Islander students and has philanthropic partnerships to support students with low socio-economic status backgrounds. The Northern Territory is open to change but has very low targets for Aboriginal and Torres Strait Islander students.

Other jurisdictions such as the ACT and Victoria have high levels of school autonomy leaving decisions about curriculum, teacher training and screening tools up to the discretion of principals, school boards and teachers who aren't always well supported or trained to make evidence-aligned decisions.

TABLE 2: STATE-BY-STATE PERFORMANCE ON POLICYMAKER ATTEMPTS AT IMPROVEMENT

Criteria	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
	CURRICULUM							
2.1 Consistent implementation of evidence-based curriculum								
	TRAINING & PEDAGOGY							
2.2 Use of best practice training and pedagogy								
	SCREENING & PROGRESS MONITORING							
2.3 Consistent screening and progress monitoring								
	INTERVENTION							
2.4 Effective intervention for students who are falling behind								
	ACCOUNTABILITY							
2.5 Appropriate accountability								

KEY

- Top performing jurisdictions
- Middle performing jurisdictions
- Poorest performing jurisdictions

Note: 2.1 & 2.2. Rankings are based on the limited publicly available information and intended to provide an indication of which jurisdictions have made greater or less investment in education reforms to lift literacy outcomes.

2.3 - The primary indicator for this ranking is implementation of the Year 1 Phonics Screening Check or equivalent

2.4 - No ranking has been provided for intervention as there is insufficient publicly available information on the delivery of Tier 1, Tier 2 and Tier 3 intervention, alignment with evidence-based practice and delivery by appropriately trained staff

2.5 - No ranking has been provided for accountability given jurisdictions will be establishing new targets with the release of new NAPLAN proficiency bands in 2023

COMPARING STATE AND TERRITORY PERFORMANCE

SOUTH AUSTRALIA: THE LIGHTHOUSE STATE



LITERACY GUARANTEE

South Australia may be the most effective jurisdiction at seeking out those children at risk of not reaching grade level literacy standards and of employing the evidence-based classroom practices that will allow them to progress. Five years ago, the South Australian Government established a Literacy Guarantee Unit to oversee the provision of high-quality curriculum materials for schools, professional development for teachers and screening tools to identify students at risk of not reaching grade level standards.⁵³

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

South Australia has aligned literacy learning to the five key skills required for reading. The Department has produced, delivered, and supported the implementation of resources including curriculum guidebooks, best advice papers, scope and sequence documents and curriculum planning guides. This approach aligns to Version 9 of the Australian Curriculum, which will be implemented from 2024.

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

A core part of the Literacy Guarantee Unit involves overseeing a team of literacy coaches who provide intensive support to teachers, focusing on teachers with students in preschool to Year 2. The Government has made a significant financial commitment to support provision of literacy coaches with over \$36 million committed in the eight-year period from 2018-19 to 2025-26. The Education Department also has an extensive suite of professional learning covering the key components of reading including an annual literacy summit with local, national, and international researchers.

CONSISTENT SCREENING AND PROGRESS MONITORING

South Australia has a recommended sequence of early reading assessments to monitor students' phonological awareness, phonics, and fluency. Schools are encouraged to cease use of Running Records and to use DIBELS.^x

The Phonics Screening Check has been implemented for Year 1 students in South Australian Government schools since 2018. When the check was first introduced schools received funding for a three-day release for all teachers of Year 1 students to provide one day of professional learning, one day to implement the check and one day to analyse and respond to the results. As the expertise and experience of teachers has grown and the teaching of quality systematic synthetic phonics has become normal classroom practice, this release time has been reduced to one day to implement the check. The South Australian Government has supported implementation of

^x A Running Record provides a score of word reading accuracy, an analysis of errors and self-corrections made, and an evaluation of reading strategies used. Running Records are a cornerstone of Reading Recovery, a discredited literacy intervention program developed by the late Marie Clay and does not identify why errors are occurring. DIBELS (Dynamic Indicators of Basic Early Literacy Skills) is a set of procedures and measures for assessing the acquisition of literacy skills, developed by the University of Oregon. They are designed to be short (one minute) fluency measures that can be used to regularly detect risk and monitor the development of early literacy and early reading skills in kindergarten to eighth grade. <https://dibels.uoregon.edu/about-dibels>

the Year 1 Phonics Screening Check with over \$15 million in the eight-year period from 2018-19 to 2025-26.

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

Equity Economics understands a team of expert literacy coaches provides intervention support directly to identified schools based on the results of universal assessment.

APPROPRIATE ACCOUNTABILITY

According to Budget Papers targets will be set for the percentage of Year 3, 5, 7, and 9 students achieving NMS in reading once new NAPLAN proficiency standards are updated with four levels of achievement for each year replacing the previous 10-band structure.⁵⁴



NEW SOUTH WALES: SYSTEM-WIDE INVESTMENT IN LITERACY

SYSTEM-WIDE APPROACH

The New South Wales Government has invested in a system-wide approach to assist schools to change their syllabus for preschool to Year 2 to align with evidence-based practices to literacy instruction. The syllabus incorporates the five key skills for reading and has been supported by a significant investment in decodable books for beginner readers. The former Education Minister said at the time "the NSW Government is committed to making evidence-based decisions, and if that means we need to change our approach or update our policy, we will do that".⁵⁵

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

New South Wales Government has mandated a change to its preschool to Year 2 syllabus. The syllabus now explicitly incorporates essential reading components such as oral language, phonemic awareness, phonics, fluency, vocabulary, and comprehension.⁵⁶ In addition, the government committed \$4.3 million for the purchase of decodable books for beginner readers. The then Education Minister described this as one of the largest deployments of reading material in the state's history. The introduction of high-quality decodable readers was seen as a means to enhance the curriculum and provide schools with the necessary resources to support students as they learn to read.

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

Professional learning resources that incorporate phonics instruction alongside oral language, phonological awareness, vocabulary, fluency, and comprehension have been developed by the NSW Education Department's literacy team.

CONSISTENT SCREENING AND PROGRESS MONITORING

The Department has assessments for reading which include universal application of the Year 1 Phonics Screening Check and phonics diagnostic assessment. Best start assessments have been rolled out for pre-school and Year 7 students so that teachers know each student's level of literacy and numeracy on entry to primary and secondary schools.⁵⁷

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

The NSW Centre for Effective Reading is a specialised service that offers targeted assistance to primary school students in rural and remote areas who face challenges with reading, as well as their teachers.⁵⁸ The Centre operates through four hubs located in Dubbo, Wagga Wagga, Manly, and Westmead, providing direct assessment and intervention services to eligible students. The key functions of the Centre encompass assessment and diagnosis, intervention strategies, professional learning and support for teachers, and research and development activities related to effective reading practices.

The COVID Intensive Learning Support Program (COVID ILSP) offers small group tuition to students who required additional assistance in primary, secondary, and specialist schools.⁵⁹ Small group tuition involves supplementary teaching and support for groups of two to five students, reinforcing classroom instruction and focusing on literacy and/or numeracy tailored to students' learning needs. The program provided funding to schools to hire extra educators to deliver the tuition. The program began in 2021 and the new NSW Labor government in 2023 made an election promise to make it permanent.⁶⁰

APPROPRIATE ACCOUNTABILITY

The New South Wales Government is seeking to increase the proportion of public school students above the NMS for reading from 79.1 per cent to 87.9 per cent.⁶¹



TASMANIA: ASPIRING TO 100% FUNCTIONAL LITERACY

MINIMUM GUARANTEE FOR LITERACY

Following a major review process around literacy involving the establishment of a Literacy Advisory Panel, the Premier of Tasmania has announced significant changes with the objective of achieving 100 per cent functional literacy.⁶² The panel has recommended the government adopt a minimum guarantee for literacy with monitoring systems to ensure the approach is being followed.

1. All schools should adopt a structured and explicit approach to the teaching of literacy. Principals will be held accountable for leading implementation in their schools and reporting on progress. Practices that do not align with the minimum guarantee will be discontinued.
2. Tier 1 reading instruction for all students should use evidence-based practices incorporating oral language, vocabulary, phonological awareness, phonics, comprehension, and fluency.
3. The National Year 1 Phonics Screening Check will be administered in all schools to guide interventions, supported by professional development in systematic phonics instruction.
4. A Multi-Tiered System of Support will be implemented, recognising the need for additional time and support for some students, with decisions on support based on rigorous assessments and progress monitoring. Tier 2 and Tier 3 interventions will be provided to students requiring extra support, aiming to transition them back to Tier 1 instruction.

The Premier has confirmed that details and further announcements will be made before the end of the year in response to the recommendations of the Panel. To date, \$6.5 million has been announced.⁶³

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

The Premier has committed to rolling out structured literacy to all schools to ensure reading and writing skills are taught in a logical sequence. This will involve the explicit teaching of oral language, phonological awareness, phonics, fluency, vocabulary, and comprehension.

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

Teachers, instructional coaches, and school leaders will be provided with training, professional learning and mentoring on evidence-based teaching of literacy.

CONSISTENT SCREENING AND PROGRESS MONITORING

The Premier has announced that all schools will now be required to use the National Phonics Screening Check in Year 1. The Expert Panel has also recommended the development of a consistent state-wide phonological awareness screening program to be administered to all children any time before the end of term one in preschool to identify children who would benefit from additional language and literacy support and ensure priority access to support for those children.

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

No reference to intervention was made in the Premier's media release although it is a key component of the Expert Panel's Minimum Guarantee.

APPROPRIATE ACCOUNTABILITY

The Premier has announced that by 2026 all primary schools should be able to demonstrate they are implementing the elements of evidence based structured literacy. Progress towards this goal will be monitored and reported on publicly. The long-term objective is to have 100 per cent functional literacy.



WESTERN AUSTRALIA: CONFRONTING DISADVANTAGE

THE KIMBERLEY SCHOOLS PROJECT

The Kimberley Schools Project (KSP) provided \$25 million of Royalties for Regions funding from 2018-2022 to address low education outcomes in the Kimberley.⁶⁴ An additional funding commitment of \$11.7 million was made in 2022 to extend the program for a further five years.⁶⁵ The KSP program logic is based on the notion that achieving a positive change in literacy outcomes can be accomplished by: analysing student data, ensuring teachers implement evidence-based literacy instruction, offering coaching, and maintaining high expectations for students.⁶⁶ There is a strong focus on direct and explicit instruction. In practical terms, this means teachers break down the content into manageable segments, use clear and unambiguous language, provide practice opportunities, ensure mastery of each skill, and regularly assess and monitor students' reading achievement. A large bank of resources is provided to support teachers and the instructional approach is consistent across the region of 24 schools to support students who regularly move between schools. The program is premised on the ideas that the methods required are no different to those required in metropolitan areas. However, in remote community schools, a more intensified version is required to address challenges such as low attendance and pre-existing educational vulnerability.

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

The Western Australian Government has released a revised curriculum for implementation in 2024 to align with the Australian Curriculum.⁶⁷ The curriculum has changed 'predictable texts' to 'authentic texts'. It should be noted that there is some debate about the meaning of authentic texts.⁶⁸ Educators involved in the update to the Australian Curriculum have said that in no circumstances is the word authentic intended to mean predictable. Authentic means rich picture books and non-fiction books on a range of topics. Until children can decode for themselves, these books should be read aloud.

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

The Fogarty Foundation was established in 2000 by philanthropists Brett and Annie Fogarty, working with the support of the Western Australian Department of Education and Catholic Education Western Australia. The focus of the Foundation is on improving student outcomes in low socio-economic schools by building the capacity of leadership teams to make evidence-based decisions through a three-year mentoring program. The Foundation has worked with 136 schools since establishment. All schools have seen improvements in student outcomes, including behaviour and attendance data and around 60 per cent of schools have seen a significant improvement in academic outcomes. The Foundation also hosts week-long teaching intensives for educators on high impact teaching strategies.⁶⁹

The Western Australian Government's Centre for Excellence in the Explicit Teaching of Literacy is aimed at enhancing primary school students' literacy skills.⁷⁰ The program is conducted in partnership with a university and selected high performing schools and focuses on studying the teaching approaches of exemplary educators who have achieved notable and sustained improvements in students' reading and writing abilities. Through the internship program, teachers have the opportunity to observe highly effective educators in action and share their knowledge with their colleagues.

CONSISTENT SCREENING AND PROGRESS MONITORING

In 2022, the Western Australian Government announced \$2.5 million over five years for a phonics initiative to support the assessment of students' phonics skills in public primary schools. While there is limited public information on the initiative, Equity Economics understands a range of systematic, synthetic phonics programs are recommended that range from free to commercially available assessments to monitor students' early reading achievement.

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

Equity Economics understands the Western Australian Government is currently developing a policy on a multi-tiered system of support.

APPROPRIATE ACCOUNTABILITY

The Western Australian Government has set targets for the proportion of Year 3, 5, 7 and 9 students achieving proficiency in reading.⁷¹ The targets fluctuate, based on previous years' actuals rounded to the next integer. The targets will change with the new NAPLAN proficiency bands.



VICTORIA: SCHOOL AUTONOMY DICTATES APPROACH TO READING

HESITANT TO PROVIDE GUIDANCE ON READING INSTRUCTION

Victoria has the most autonomous public school system in Australia.⁷² The Victorian Education Department has come under recent scrutiny for preventing the publication of a study that explored the implementation of structured explicit literacy instruction in six primary schools.⁷³ These schools independently adopted a new approach to reading, incorporating regular progress monitoring, early intervention for struggling students, and the use of decodable texts. The department's decision to block the report's publication was said to be based on the concern that it could impact open and honest communication in future discussions. One of the report's authors suggested the department's reluctance to support the report's findings may be attributed to Victoria's policy of school autonomy, where schools have the responsibility for their own operations and performance. While schools have a high level of autonomy, at a system level the Victorian Government seems to preference a balanced literacy over a structured literacy approach.

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

Victoria appears to have adopted a less prescriptive approach than jurisdictions such as New South Wales and South Australia, giving schools and teachers significant autonomy to select their literacy programs. This creates a lot of variability within and between schools. Phonics might be taught explicitly in one classroom or school with a scope and sequence and in others only within the context of storybook reading. According to media articles, there are few schools in Victoria that deliver a systematic synthetic phonics method of instruction, though this number is likely to be increasing over time.⁷⁴

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

The Victorian Education Department's guidance to teachers about reading instruction is provided through the Literacy Teaching Toolkit.⁷⁵ The toolkit notes that a one-size-fits-all approach to the teaching of reading is reductive and does not equitably serve all students. That toolkit emphasises reading comprehension. There is reference to systematic and explicit teaching of phonological awareness and phonics, and also to modelled reading, shared reading, guided reading, and independent reading. The toolkit is therefore, predominantly aligned with balanced literacy instruction, which is an ill-defined pedagogy that is open to wide interpretation at a sector, school, and classroom level.⁷⁶

CONSISTENT SCREENING AND PROGRESS MONITORING

Victoria has introduced a phonics component as part of its English Online Interview.⁷⁷ The phonics component is supported by a \$11.3 million investment. However, it has been criticised as a "superficial" box ticking response, without authenticity in aligning advice and support to schools and teachers on reading instruction with best available evidence.⁷⁸ The phonics assessment consists of 10 words, as opposed to the more common 40-word tests, which critics say is insufficient to assess mastery of phonics and does not allow for national comparison. It also includes a Running Records focus as does the Literacy Teaching Toolkit.⁷⁹

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

The Tutor Learning Initiative provides small-group tuition in literacy and numeracy to around 200,000 primary and secondary students each year who have been affected by the pandemic.⁸⁰ The Victorian Government has committed to providing an additional \$258.4 million to extend the Initiative in 2023.⁸¹

The Middle Years Literacy and Numeracy Support (MYLNS) initiative provides intensive teaching support to Year 10 students in government secondary schools who are at risk of finishing school without the literacy and numeracy skills they need for future work, education, and training. The funding is for secondary schools to release experienced teachers as numeracy and/or literacy improvement teachers to work directly with Year 10 students prioritised for support.⁸²

According to dyslexia advocates, there are at least 185 schools that are using either Reading Recovery or levelled literacy interventions which are not based on evidence-based intervention best practices.⁸³

APPROPRIATE ACCOUNTABILITY

The Victorian Government has targets for the percentage of students above the bottom three bands for reading in Year 3, 5, 7 and 9.⁸⁴ As with some other jurisdictions the targets decrease the longer students remain in school. The targets will update with the new NAPLAN proficiency bands.

NORTHERN TERRITORY: OPEN TO CHANGE BUT LOW EXPECTATIONS FOR ABORIGINAL AND TORRES STRAIT ISLANDER STUDENTS



LEARNING FROM THE LIGHTHOUSE STATE

The Northern Territory Department of Education recognises the improvement South Australia has experienced following introduction of the Year 1 Phonics Screening Check and has been provided with the South Australian resources, professional learning, and training documents. In Term 1, 2023 the department's senior leadership team planned to visit South Australia to learn more from the South Australian curriculum team.

The Northern Territory has very low targets for Aboriginal and Torres Strait Islander students.

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

Most schools use a combination of structured literacy and meaning based approaches (such as the three-cueing system).⁸⁵ Around 35 per cent of schools use Read Write Inc, a systematic synthetic phonics program and/or Freshstart reading intervention program. However, schools sometimes teach beginning reading by using only a meaning-based approach that includes predicting unknown words. Processes are yet to be developed to be certain that schools are delivering structured literacy approaches. There are no additional central funds to support purchasing of decodable readers. Principals are responsible for school budgets. The Northern Territory Government anticipates that as more teachers become knowledgeable about the need for transition and Year 1 students to read decodable texts the greater investment in decodable readers (and the Year 1 Phonics Screening Check).

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

All teachers in the Northern Territory have access to an optional eight-part professional learning series on the science of reading^{xi}. The series covers oral language, morphology, vocabulary, phonological phonemic awareness and phonics, comprehension, syntax and writing and spelling.

CONSISTENT SCREENING AND PROGRESS MONITORING

Government schools implement the Foundations of Early Literacy Assessment of the Northern Territory (FELA NT) with all transition students in semester 1 each year. FELA NT is designed to monitor a student's mastery of the alphabetic code. Implementation of the assessment, including training of teachers to administer it, is managed by the Department of Education. It is recommended that schools retest in term 4 to reflect student growth. All students not at expected level are monitored and assessments are administered in Years 1 and 2.

xi The science of reading refers to a body of evidence that encompasses multi-disciplinary knowledge from education, linguistics, cognitive psychology, special education and neuroscience.

The Year 1 Phonics Screening Check is a recommended assessment for Year 1 students in Northern Territory Government schools. Support for participating schools is provided by the department. In 2022, a group of early adopters from Northern Territory Government schools implemented the Year 1 Phonics Screening Check in term 3.

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

Schools are encouraged to develop a whole school response to intervention approach. Principals make decisions about resource allocations including programs, resources, and staff to provide learning support and interventions.

APPROPRIATE ACCOUNTABILITY

According to budget papers, the Northern Territory Government has targets for the percentage of students achieving NMS in reading in Years 3, 5, 7 and 9.⁸⁶ There is a significant difference in the reading targets for Aboriginal and Torres Strait Islander students compared to the rest of the population. In 2022-23 the Year 3 target is 95 per cent for non-Aboriginal students and 58 percent for Aboriginal and Torres Strait Islander students. By Year 9 the target for Aboriginal and Torres Strait Islander students drops to 36 percent compared to 87 per cent for non-Aboriginal students. This is a 51-percentage point difference in expectations. New targets will be set based on the new NAPLAN proficiency targets.



QUEENSLAND: A NEW COMMITMENT TO READING

In 2025, Queensland will introduce a new reading commitment which will feature explicit phonics instruction, learning support officers to provide individualised targeted support and new courses for teachers and teachers aides. Equity Economics was informed by peak bodies and advocates that teachers in Queensland are interested in receiving training in evidence-based reading instruction aligned to the Australian Curriculum but have been hampered by the costs of training.

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

Recent media reporting indicates a significant shift in reading instruction will be introduced in Queensland with a focus on explicit phonics instruction, targeted support for students and professional development for educators.⁸⁷ There is limited detail on this at the time of reporting.

The Queensland Government noted to Equity Economics that the Australian Curriculum has removed all associations with the three-cueing system and predictable texts with a strengthened focus on phonics.^{87b} The Department of Education is currently developing a suite of materials to support the effective teaching of reading through the updated curriculum, which reflect contemporary cognitive research on best-practice for reading instruction. Anecdotally, Equity Economics understands there are still some schools using a balanced literacy approach with three-cueing and levelled readers.

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

The Department of Education is developing materials for the updated curriculum including professional learning. The Queensland Government does not currently centrally fund release time for professional learning as this is a school-based decision. Queensland state schools have a total of 25 hours dedicated to staff professional development, spread across five days throughout the year. Out of the 25 professional development hours, a minimum of 15 hours can be allocated to three student free days.

Professional development is expensive (as are the costs for relief staff if teachers access professional development when students are present). Queensland has a number of rural and remote schools where it is not always possible to find relief staff.

The Reading and Writing Disorders Advisory Service connects school leaders, educators, parents and caregivers with advice, information and support on prevention, identification, and intervention for young people with reading difficulties and disorders, with a focus on dyslexia and language disorders. The team is staffed by speech language pathologists.⁸⁸ The service is focused on improving student outcomes through building capability and knowledge, leading to changes in practice.

CONSISTENT SCREENING AND PROGRESS MONITORING

The Queensland Government does not mandate or endorse universal screening. Principals, in consultation with their school community make decisions about assessment and monitoring tools. Equity Economics understands Running Records are used in a number of Queensland public schools. According to media reports, the Queensland Government has opposed introduction of a Phonics Screening Check.⁸⁹

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

The Queensland Government has made it clear that disability funding includes dyslexia which can be imputed based on teacher observation rather than a medically diagnosed disability.⁹⁰

Equity Economics understands there is a good deal of variability in the approach to intervention. Some schools do provide Tier 2 and Tier 3 intervention but not always delivered by appropriately trained staff.

APPROPRIATE ACCOUNTABILITY

The Queensland Government does not currently have targets for reading as it is awaiting the update to the NAPLAN NMS. Previous targets were set for the number of students in Years 3, 5, 7 and 9 at or above the NMS in reading.⁹¹



ACT: LAGGING BEHIND

As with some other jurisdictions, there are high levels of school autonomy in the ACT with decisions about curriculum and performance falling within the control of school principals and school boards. The Education Minister has made it clear the ACT Government will not introduce the Year 1 Phonics Screening Check and said there is no one-size-fits-all approach to literacy education.

Catholic schools in the ACT have been supported by a system-wide investment in evidence-based literacy instruction.⁹² In 2019, prior to the introduction of a significant reform program across Catholic schools, ACT schools in the Government and Catholic sectors were performing at similar rates in comparison to similar students in the rest of the country. While Catholic schools have lifted the performance of Year 3 students over the last four years, Government schools have not achieved the same levels of improvement.

CONSISTENT IMPLEMENTATION OF EVIDENCE-BASED CURRICULUM

There is limited publicly available information about how children are taught to read in ACT schools, but it is understood balanced literacy is popular across many schools. The ACT Government has committed to implement the Australian Curriculum in 2024 but has not provided any additional funds to support schools in implementing the curriculum. In response to

a report by Equity Economics on reading instruction in ACT schools, the ACT Education Minister said “I think there are sciences to reading and there’s a number of approaches that need to be taken with delivering literacy and numeracy education within our schools... There’s no one-size-fits-all approach”.⁹³ The ACT teacher’s union rejected Equity Economics’ report saying debate over teaching failed to consider students’ socio-economic status, while also saying teachers face a high workload in order to differentiate curriculum.⁹⁴

USE OF BEST PRACTICE TRAINING AND PEDAGOGY

Foundational teachers (in pre-school to Year 2) appear not to have access to professional learning that delivers the knowledge they require (for example in phonics and explicit instruction) as well as assistance in how to translate and apply that knowledge in the classroom. One teacher told Equity Economics “while all ACT public primary schools argue that they use the evidence-based ‘10 Essential Instructional Practices in Literacy’ to inform reading instruction, the professional development surrounding these practices is far from satisfactory. Teachers are expected to fill knowledge gaps by sourcing, completing and often paying for their own professional development.”

CONSISTENT SCREENING AND PROGRESS MONITORING

The ACT Government has been very clear that it will not mandate the Year 1 Phonics Screening Check. The Minister is quoted in media as saying she is concerned by the idea as Canberra students are tested when they start school and because there is a fear the data could be used to create league tables.⁹⁵

EFFECTIVE INTERVENTION SUPPORT FOR STUDENTS WHO ARE FALLING BEHIND

Our consultations with teachers, parents and speech pathologists indicate that intervention programs in ACT schools lack consistency, fidelity, and staffing, resulting in inadequate support for struggling students, and some parents (who can afford it) having to pay for private tutoring or switch schools.

APPROPRIATE ACCOUNTABILITY

Multiple reports have identified deficiencies in the use of performance data across ACT schools and also at a system level.

WHAT WILL IT COST?

WHAT INVESTMENT IS REQUIRED FOR EVERY STUDENT IN AUSTRALIA TO ACCESS EVIDENCE-BASED READING INSTRUCTION?

To implement evidence-based reading instruction nationally, Equity Economics estimates an initial investment of \$942 million is required in 2023-24 with

- \$139 million for an evidence-based, high-quality curriculum for students in pre-school, Year 1, and Year 2
- \$40 million for decodable readers for beginner readers in pre-school and Year 1
- \$136 million to support teachers with pre-school, Year 1, and Year 2 classes to deliver high-impact teaching through the provision of professional learning
- \$137 million to introduce the Year 1 Phonics Screening Check and a check in the first year of high school
- \$491 million to provide small group intervention for support students requiring additional support in all grades from pre-school to Year 12.^{xii}

These costs are based on

- investments made by the Governments of South Australia and New South Wales
- modelling of small group intervention undertaken by the Grattan Institute⁹⁶
- commercial curriculum materials
- professional development expenses, including for relief staff.

Many of the costs associated arise from the need for specific resources and professional training, which are one-off costs paid during the first year of delivery. Some jurisdictions, sectors and schools have already made investments along these lines so it should be noted that the marginal cost of implementation would be lower than these estimates. Noting this, these estimates represent a starting point for investment and do not represent the full effort required to deliver high-quality evidence-based literacy instruction in schools. For example, there will be additional costs to roll out screening from pre-school to Year 2 and at other critical points such as entry into high school, and for one-on-one intensive support for students in schools.

THE RETURN ON INVESTMENT IS HIGH

The long-term benefits of investing in evidence-based practices for literacy instruction (\$12 billion in lifetime earnings) significantly outweigh (by 13 times) the investment (\$942 million in 2023-24).

By implementing evidence-based reading instruction Australia can create a robust reading ecosystem that ensures no child is left behind. In the long term this will foster a well-educated workforce, equipped with critical thinking and communication skills, ready to take on the challenges of the modern world.

xii Numbers may not add due to rounding.



THE ECONOMIC AND SOCIAL COST OF DOING NOTHING IS HIGHER

WHILE CONSIDERABLE PROGRESS HAS BEEN ACHIEVED IN GLOBAL AND NATIONAL LITERACY IN THE PAST SEVEN DECADES, PRESENT DAY LITERACY CHALLENGES CONTINUE TO DETRIMENTALLY IMPACT OUR ECONOMY, AS WELL AS THE LIVES OF THE INDIVIDUALS WHO FACE SIGNIFICANT CHALLENGES EVERY DAY.

The economic and social impacts of low literacy across the lifespan include

- Worsened employment and labour market outcomes
- Poorer health and health expenditure outcomes (both in terms of physical and mental health)
- Negative impacts on other important forms of literacy (such as physical and mental health literacy, digital literacy, financial literacy, and media literacy)
- Social and emotional impact
- Reduced productivity
- Ongoing intergenerational disadvantage
- Crime and justice outcomes.

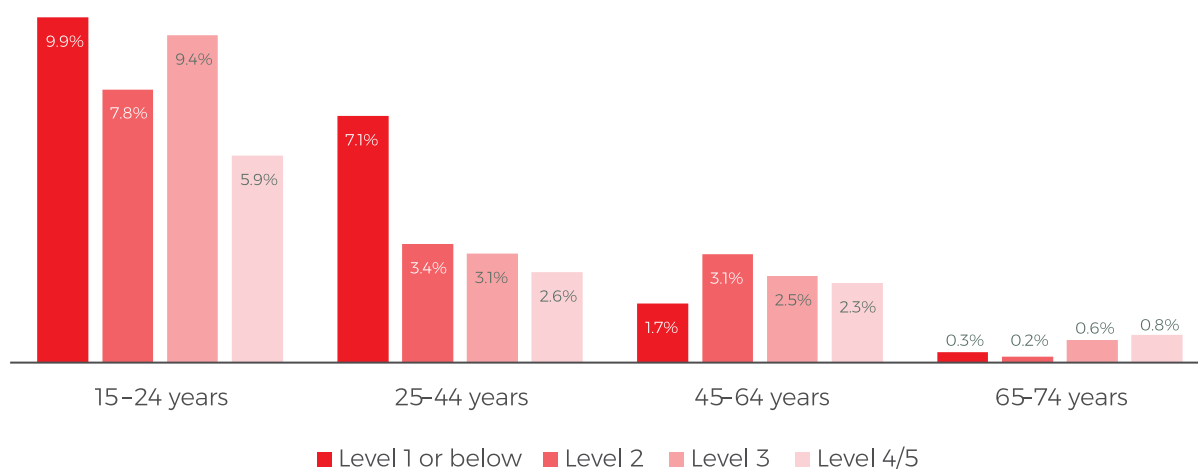
In 2022, the World Literacy Foundation estimated the cost of illiteracy for developed nations at two per cent of GDP.⁹⁷ Given Australia's GDP of \$2.2 trillion, illiteracy can be estimated to be costing the Australian economy up to \$44 billion a year.⁹⁸

ECONOMIC DISADVANTAGE: IMPACTS ON EMPLOYMENT

People with lower levels of literacy have significantly worse employment outcomes than those with higher levels of literacy – they are more likely to be unemployed, receive lower wages, and more likely to drop out of the labour market entirely.

A 1998 longitudinal study of Australian young people from 1980-1994 found low literacy levels in school are associated with youth unemployment, with effects continuing through to the age of 33.⁹⁹ Most recent ABS PIAAC data reveals a similar impact, where 15-44-year-olds with the lowest levels of literacy have much higher levels of unemployment than those with higher levels of literacy. The story is particularly stark for people in their most productive employment years, 25-44, with the unemployment rate of those with a literacy level of 1 or below being over twice as high as everyone else.

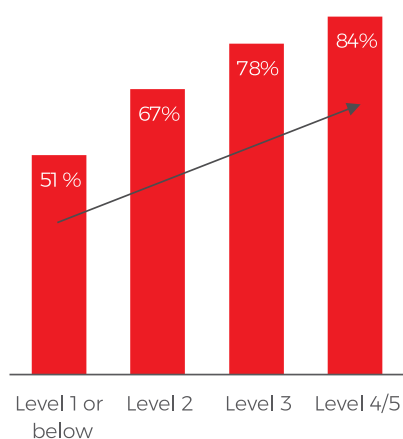
Figure 3.1: Unemployment rate by age and PIAAC literacy level



Source: Equity Economics analysis of Australian Bureau of Statistics (2013)

Literacy is a predictor of whether people engage in the labour market at all. Labour force participation is 33 percentage points lower for those with a literacy level of 1 or below (51 per cent) compared to those with a literacy level of 4/5 (84 per cent). Non-labour market participation occurs for a variety of reasons, including caring responsibilities, undertaking education or training, but also long-term discouragement. Long-term unemployment, and a lack of opportunities, can cause people to become discouraged, stop actively seeking employment, and drop out of the labour market entirely.

Figure 3.2: Labour force participation by PIAAC literacy level

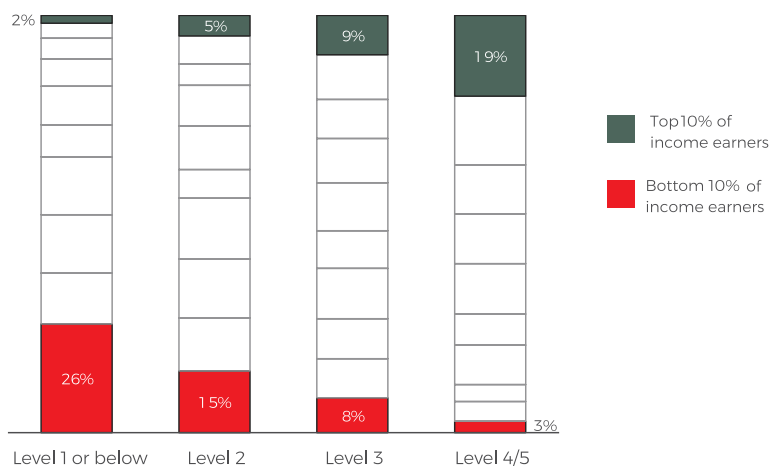


Source: Equity Economics analysis of Australian Bureau of Statistics (2013)

Similarly, people with lower levels of literacy, have lower levels of income across the lifespan. Based on the PIAAC results, the Productivity Commission has estimated that the average wage of a worker with a literacy level of 1 or below equates to only 60-70 per cent of the income of a worker with a literacy level of 4/5. As literacy level decreases, people are also more likely to be in lower income groups and less likely to be in higher income groups.

Individuals with the highest literacy are ten times more likely to be in the top 10% of income earners than those with the lowest level of literacy. By contrast, those with the lowest level of literacy are nine times more likely to be in the lowest 10% of income earners.

Figure 3.3: Weekly income (deciles) by PIAAC literacy level



Source: Equity Economics analysis of Australian Bureau of Statistics (2013)

Poorer labour market outcomes not only impact the individual but also have broader economic impacts in terms of lost productivity and increased reliance on welfare. For example, in 2008 the United Kingdom National Literacy Trust found that men who improve their literacy rates are less likely to be on state benefits (6 per cent cf. 19 per cent).¹⁰⁰

HEALTH AND HEALTH EXPENDITURE OUTCOMES

Low literacy has negative impacts in terms of 1) the physical and mental health of individuals and 2) national health outcomes and expenditure, as individuals' ability to obtain, understand and use health information and services is highly related to their ability to read and write generally.

“Because knowledge about health and health systems is primarily taught in schools, education and general literacy levels have a strong bearing on individual health literacy. Several studies have identified that those with lower educational attainment generally have poorer health literacy. Consequently, highly educated individuals tend to find it easier to find and appraise health information, as well as being better able to navigate the Australian health system” – Australian Medical Association.¹⁰¹

In 2018, the ABS measured self-reported responses to a range of health literacy questions, finding only 26 per cent of people find it always easy to navigate the healthcare system and that eight per cent of people find it difficult to understand health information.¹⁰² In 2006, the ABS asked people a range of questions aimed at testing their understanding of health and found that only 41 per cent of Australians aged 15-74 had a high enough level of health literacy to allow them to meet the complex demands of everyday life.¹⁰³

Low health literacy is driven in part by an inability to read and understand information such as medication labelling, written information from a health professional, public health information or even opening hours of the local doctor – each requires a certain level of general literacy skills.

In turn, low health literacy has been associated with poorer health outcomes and poorer use of health care services including

- increased hospitalisations
- greater use of emergency care
- poorer ability to understand health messaging
- poorer ability to use medication and understand labels
- poorer mental health and disease outcomes
- links to poor health behaviour such as higher rates of smoking and lower levels of physical activity
- poorer overall health status and higher mortality for the elderly
- a risk of shame hampering access to adequate care.¹⁰⁴

A systematic review of the health literature demonstrates that people who read at lower levels are generally 1.5 to three times more likely to have an adverse health outcome than people who read at higher levels.

This not only impacts life and health at an individual level, but also the broader population. A 2003 study by the American Medical Association found that poor health literacy cost the American economy up to \$73 billion a year.¹⁰⁵ A meta review of 2,340 papers estimated the additional costs

of limited health literacy at around three to five per cent of total health care costs per year, with additional expenditures per person per year of US\$143-\$7,798 in 2009.¹⁰⁶

Based on Australia's 2020-21 health expenditure of \$220.9 billion, limited health literacy may be expected to contribute to around \$11 billion of Australia's health care costs.¹⁰⁷ This does not include the additional upstream and downstream costs because of poor health literacy.

IMPACTS OF LOW LITERACY ON OTHER ASPECTS OF LIFE

Health literacy is not the only form of literacy that is impacted by poor general reading and writing literacy. Low literacy has negative impacts on a range of other forms of literacy that are essential for individual success in everyday life, including

- **DIGITAL LITERACY.** Digital literacy is the ability to successfully use and navigate digital technologies such as the internet, smart phones, and other digital tools. It is increasingly being required for individuals to access social networks, pay bills, make appointments, find vital life information, for health or simply navigate safely in online environments. Australia's 2021 digital inclusion index found that Australians who are most highly excluded from digital technology are also most likely not to have completed a secondary education.^{xiii,108}
- **FINANCIAL LITERACY.** Financial literacy is the ability to understand financial concepts that allow individuals to make informed decisions or manage their own finances – such as opening a bank account, budgeting, paying bills or receiving income from employment. Research has found that people with higher financial literacy have greater financial well-being and less financial concerns.¹⁰⁹ In PISA 2018, students were asked a range of financial literacy questions in addition to reading and mathematics questions. Financial literacy was found to be strongly correlated with reading and math performance. Around 71 per cent of the financial literacy score of Australian school children reflects skills that can be measured in either the mathematics or reading assessments.¹¹⁰
- **MEDIA LITERACY.** Media literacy is the ability to critically interpret and evaluate messages from media such as television, newspapers, websites, or social media. A lack of media and digital literacy can make it easier for people to fall victim to misinformation. Research demonstrates that less educated people are at greater risk of low media literacy with only 22 per cent of people with low levels of education having high levels of media use compared with 46 per cent of people with high levels of education.¹¹¹
- **CIVIC LITERACY.** Civic literacy is the knowledge and understanding necessary for informed and active participation in civic life – this includes an understanding of law, rights, institutions, and democracy. Illiterate individuals struggle to know their rights and are less able to effectively engage in informed discussions or public debate, contribute to community development or even vote. For example, studies show that people who have participated in literacy programs are more politically involved than illiterate persons. They are more likely to vote, engage in union activities or participate in community activities.¹¹²

xiii PISA considers digital literacy as so important that in 2025, the assessment will introduce a Learning in the Digital World assessment that will measure students' capacity to engage in an iterative process of knowledge building and problem solving using computational tools.

SOCIAL AND EMOTIONAL IMPACT ON INDIVIDUALS

ONE THING IS MORE IMPORTANT TO TRAUMATISED CHILDREN THAN ANYTHING ELSE. MORE IMPORTANT THAN THERAPY, MORE IMPORTANT THAN SOCIAL PROGRAMS, MORE IMPORTANT THAN ANYTHING ELSE... THE SINGLE MOST POWERFUL PREDICTOR OF THEIR ABILITY TO OVERCOME THE TRAUMA AND SURVIVE THEIR CIRCUMSTANCES IS THE ABILITY TO READ. IF THEY CAN READ, THEY HAVE A CHANCE TO FIND SUCCESS IN SCHOOL AND OVERCOME ALL THOSE TERRIBLE THINGS IN THEIR LIVES. IF THEY CAN'T, SCHOOL WILL ONLY BE ANOTHER SOURCE OF PAIN AND FAILURE ADDED TO ALL THE OTHER SOURCES OF PAIN AND FAILURE.

– Don Meichenbaum (one of the world's leading experts on trauma and violence, and one of the most influential mental health professionals of the last century)¹²⁴



A lack of adequate literacy skills contributes to a person's social and economic vulnerability, and consequently their over-all wellbeing. Research demonstrates an association between poor reading and people's images or ideas about themselves.¹¹³ Low reading ability has also been found to be a risk factor for inwardly focused behavioural problems stemming from anxiety and depression.¹¹⁴

In particular, low levels of literacy have negative impacts for

- **SELF-ESTEEM AND MORALE.** Low literacy is often associated with low self-esteem as well as emotions such as shame, inadequacy, or powerlessness. Those with low literacy are often dependent on others for assistance in daily tasks, which can further erode self-confidence. They also experience social judgement and stigmatisation.
- **SOCIAL INTERACTION AND COMMUNITY INVOLVEMENT.** Literacy is essential for community involvement, it allows individuals to access information about community events, participate in online communities, understand advertising of local events, read opening hours of cafes or

public transport times, or even simply send emails or text messages to friends and family or engage in effective conversation. At a school level, 2018 PISA data shows low performers are less likely than middle and higher performers to agree that other students seem to like them (81 per cent cf. 87 per cent and 90 per cent, respectively); that they belong at school (63 per cent cf. 70 per cent and 78 per cent, respectively); or that they feel like an outsider (32 per cent cf. 25 per cent and 22 per cent, respectively). They are also more likely to feel lonely (23 per cent cf. 18 per cent and 17 per cent, respectively).

- **PERSONAL DEVELOPMENT AND EDUCATION.** Literacy is a fundamental building block of education, without that basic building block, individuals are unable to progress. Without the ability to read, people cannot access knowledge or educational material such as books, texts, or online articles. Literacy skills are also essential to successfully articulating ideas or what has been learned.

ADDITIONAL CONSEQUENCES FOR THE ECONOMY

While low literacy has direct impacts for individuals in terms of worse labour market outcomes, health, and other outcomes they also create costs, and lost opportunities, for the broader economy. For businesses, lost productivity, and profitability from low levels of literacy can come in the form of

- Less efficient or productive workers
- Difficulty recruiting adequately skilled workers (particularly as Australia moves further towards a knowledge economy)
- Higher error costs
- Issues arising from miscommunication
- Occupational health and safety incidents

In 2013, a survey by Australian Industry Group of employers found 93 per cent of employers identify negative business impacts from low literacy and low numeracy skills - with 21 per cent reporting inadequate work completion, 18 per cent reporting time wastage and 12 per cent reporting materials wastage. A further eight per cent reported difficulty recruiting workers and seven per cent having ineffective work teams because of low literacy and numeracy.¹¹⁵

As well as reduced business productivity, low literacy also generates costs to society and the economy in terms of

- Reduced education outcomes
- Poorer health outcomes and associated costs
- Reduced social cohesion and lower social capital
- Increased intergenerational disadvantage and reduced educational mobility
- Higher costs of crime

INTERGENERATIONAL DISADVANTAGE

Education plays a key role in intergenerational mobility - the extent to which a person's ability to improve their life outcomes is determined by their parents' circumstances.

The literacy children experience at home has direct impact on their literacy success at school, and throughout their lives.¹¹⁶ Low literacy skills create challenges for parenting: parents may be unable to read to their children, assist with homework or other educational activities – perpetuating intergenerational low literacy and disadvantage. Reading activities in the home have been found to have significant positive influences on students' reading achievement, attitudes towards reading and classroom attentiveness.¹¹⁷

For example, in NAPLAN 2022 results, students with parents with an education level of Year 11 or below, were three years behind the average student.^{xiv118}

Intergenerational literacy has flow on implications in terms of socio-economic disadvantage, with those with parents with lower socio-economic status, and lower levels of literacy also having lower levels of labour force participation and income.

IMPACTS ON CRIME

There are complex interactions between crime and literacy, which take into consideration confounding factors such as socio-economic status, income, age, etc. However, there are many studies which have found a basic relationship between lower educational outcomes and crime.¹¹⁹

Globally, it is estimated that around 60-80 per cent of prisoners have reading and writing skills below basic levels. In the US, while illiteracy sits at around 21 per cent, 60 per cent of incarcerated adults, and up to 85 per cent of minors in juvenile custody are functionally illiterate.¹²⁰

Literacy rates are also lower among young offenders and prisoners in Australia. In New South Wales, it is estimated that around 30 per cent of prisoners are functionally illiterate. The Western Australian Government found around 80 per cent of all prisoners are at or below the expected reading level of an 11-year-old. In South Australia, young offenders are found to perform poorly compared to their peers with many not having mastered basic literacy skills. Almost two in three (63 per cent) of people in Australian prisons have an education level of Year 10 or below.¹²¹

International studies have found that adolescents with lower reading scores are more likely to participate in violent behaviours, carry or take a weapon to school, be in a physical fight, drink alcohol or demonstrate problem behaviour. Individuals with poor literacy and numeracy skills are more likely to be stopped and questioned by police, even after other risk factors are considered.¹²²

Other studies have examined the impact of literacy campaigns on crime reduction. In 2022, a review of an Aboriginal and Torres Strait Islander community-controlled adult literacy campaign in six rural and remote communities in New South Wales found an up to 50 per cent reduction in crimes among program participants.¹²³

xiv Calculated using ACARA 2022 NAPLAN results published in 2023 and methodology from Goss et al (2018).

CONCLUSION



THIS REPORT HIGHLIGHTS THE CRITICAL ISSUE OF LITERACY IN AUSTRALIA, WHERE MILLIONS OF INDIVIDUALS LACK BASIC READING SKILLS.

Low literacy rates affect both adults and children, hindering their opportunities and success. The challenges are particularly acute for Aboriginal and Torres Strait Islanders and disadvantaged students. This lack of reading proficiency has far reaching consequences for individuals, communities and the economy.

As it stands, there is no guarantee every child in Australia has access to a school that applies research science on literacy instruction. South Australia and New South Wales are lighthouse states implementing system wide evidence-based literacy approaches. Tasmania and

Queensland have also committed to a literacy reform agenda. Other jurisdictions, however, like the ACT and Victoria, provide high levels of school autonomy, leaving curriculum, teacher training, and screening decisions to individual schools and principals, who might lack proper support or training to make evidence-aligned choices.

To ensure every child can access their right to read this report recommends all schools implement evidence-based curriculum, provide effective training for teachers, introduce appropriate screening and progress monitoring, and offer intervention support for struggling students.

In addition, national leadership and collaboration is required for nation building initiatives to lift literacy rates including the tasking of an independent body with providing quality assurance of curriculum materials, strengthening professional standards for teachers and linking this to accreditation requirements, national screening to identify struggling students and adopting

targets to reduce the proportion of students who do not meet basic levels of literacy.

This requires system wide collaboration - at scale - between Commonwealth and State and Territory Governments, as well as involvement from non-government school sectors, school boards, teachers, parents, and the wider Australian community.

Failure to make this investment will result in Australia continuing to have an education system that condemns a large percentage of children to reading failure, entrenches intergenerational disadvantage, and promotes the soft bigotry of low expectations.

APPENDICES

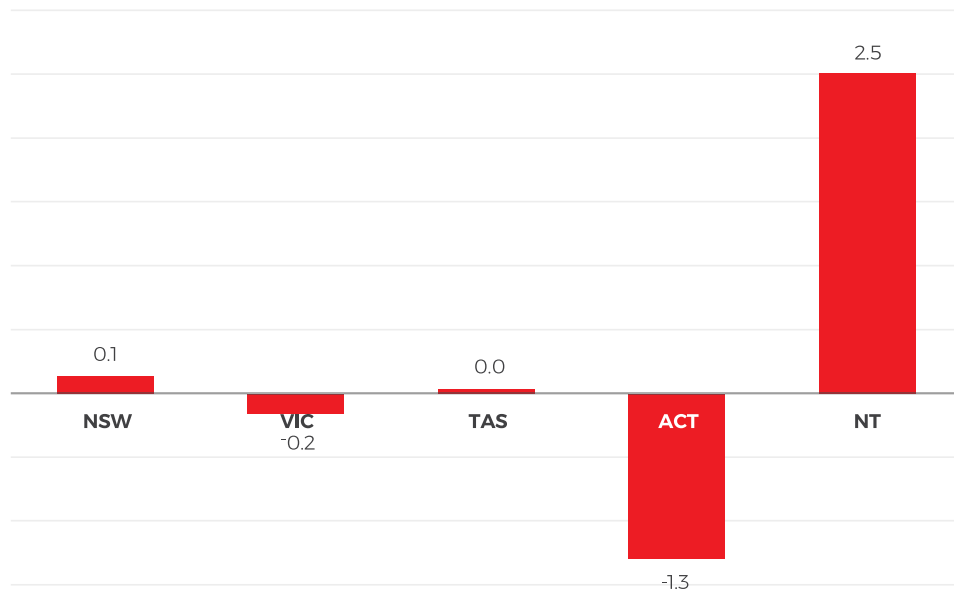
APPENDIX A: AUSTRALIA'S PIAAC OUTCOMES

PIAAC level	Percentage of Population	Estimated number of People	Description
Below level 1	3.7%	620,000	People have very basic or no reading or writing skills at all. Many would not be able to find a piece of information in a simple chunk of text.
Level 1	10.4%	1.7 million	People have very basic reading and writing skills and would struggle to find and understand information. They would likely have difficulty understanding the instructions on medication or finding and applying for jobs online.
Level 2	30.1%	5.0 million	People are not able to construct meaning from larger chunks of more complicated text, draw conclusions across multiple pieces of information, or be able to easily disregard irrelevant content. This means many Australians cannot understand data in detailed charts or graphs, or write or understand professional documents, such as legal documents, financial reports, or technical manuals.
Level 3	37.9%	6.3 million	People have a good intermediate level of literacy and can understand more detailed content – such as reading a technical manual or instruction sheet.
Level 4-5	15.7%	2.6 million	People have a higher level of reading literacy, they can understand printed and written information in a variety of contexts, they are more likely to be able to read complex documents, scientific reports etc.

Source: Australian Bureau of Statistics (2013). Examples are based on Equity Economics analysis of literacy proficiency levels from National Center for Education Statistics (2023) and PIAAC sample questions from the OECD (2023).

APPENDIX B: STUDENT PROGRESS YEAR 7-9

FIGURE B1: RELATIVE NAPLAN PROGRESS FROM YEAR 7 TO YEAR 9, GRATTAN CALCULATIONS¹⁵



Source: Grattan analysis of ACARA

APPENDIX C: RETURN ON INVESTMENT METHODOLOGY

Our methodology for estimating the economic benefits and costs is shown below.

IMPACT ON LEARNING

The provision of small group tutoring and the systematic teaching of phonics both provide an extra four months of learning¹²⁵ (equivalent to a third of a school year).

We use this research to make projections about the extra income generated for students. This equates to about \$124,140 of additional income over a lifetime in today's dollars.

IMPACT ON FUTURE EARNINGS

For each additional year of schooling a person completes, their future lifetime income rises by 10 per cent. This is based on Leigh and Ryan (2008) and Leigh (2010), which estimate future income rises by an average of 10 per cent for each extra year of schooling.¹²⁶

Lifetime earnings are calculated using ABS national average weekly earnings adjusted for the impact of low literacy levels by multiplying average earnings by the ratio of the hourly wage rate of those with low literacy to the entire population, based on Productivity Commission analysis.¹²⁷ It assumes 52 weeks of earnings per year and 43 years of total working years (from the age of 22 to 65), on average, over a working lifetime. Earnings are also assumed to grow by one per cent per annum in real terms, based on an assumption of nominal wage growth of 3.5 per cent per year and inflation (CPI) of 2.5 per cent per year over the long term. A discount rate of four per cent is applied to convert future earnings into present day 2023 dollars.

Our estimate of additional lifetime earnings is conservative for four reasons. First, we assume that only students behind in reading who require intervention (20 per cent) benefit but any additional learning to other students in the class are not included. This is a very conservative assumption that essentially assumes that no incremental benefits accrue to the remaining students in the class despite their exposure to evidence-based literacy practices.

Second, we do not include the costs that arise from delayed intervention (noting it takes four times as many resources to resolve a reading difficulty by Year 4 than it would have taken in Year 1).

Third, our estimate does not include extra taxes paid or lower welfare payments received.

Fourth, our estimate includes only the benefits obtained from small group tutoring interventions, not the implementation of all costed recommendations, for which data limitations make it difficult to provide reliable estimates.

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