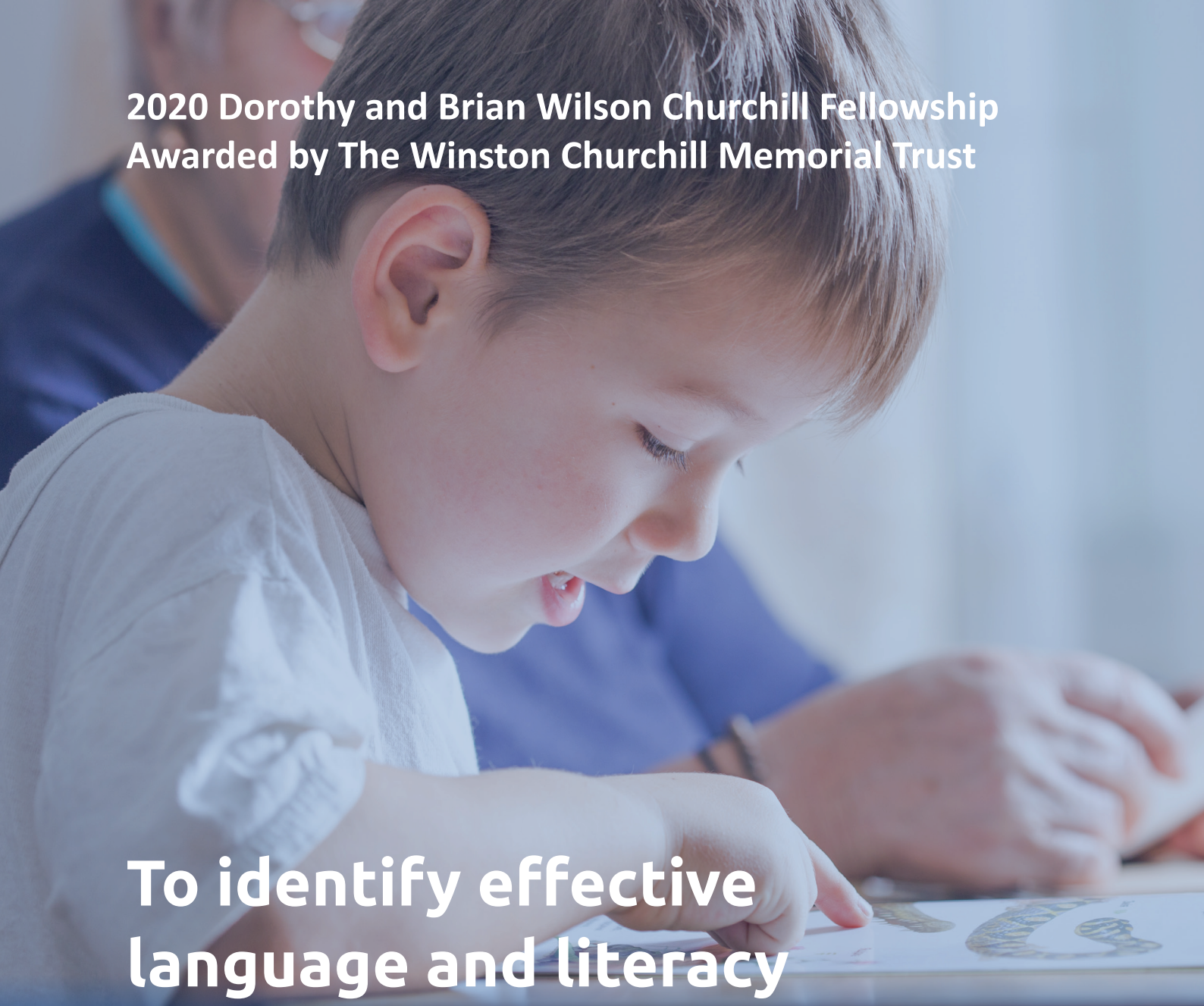

2020 Dorothy and Brian Wilson Churchill Fellowship
Awarded by The Winston Churchill Memorial Trust

To identify effective language and literacy screening and intervention practices for at-risk students

Report by Jessica Colleu Terradas

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Keywords

Evidence-based reading instruction, multi-tiered system of supports, universal screener, progress monitoring and diagnostic assessments, intervention, reading difficulties, explicit instruction.

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Dedication to older struggling readers and their families

I want to thank the Winston Churchill Memorial Trust and the members of the interview panel for seeing my potential and providing the support and exposure to make my vision come true – raising awareness about what really matters when working with older struggling students. Much gratitude goes to **Adam**, **Toby**, **Rose** and **Jessica**, who played a pivotal part in bringing the ambitious travel plan behind this report together.

Being awarded a Churchill Fellowship has been a life-changing experience, and I am forever thankful for having had the opportunity to travel internationally to broaden my knowledge and understanding, witness best practice, meet experts and exemplary leaders in their fields, and learn from organisations and schools in creating genuine change and having lasting impact on the life of young people. I would like to express my deep appreciation and indebtedness, particularly to the very busy researchers, professors, teachers, students, parents, professionals and other staff who selflessly donated hours, even days, of their time and expertise to help a stranger from across the globe. Your devotion and passion for the field has been truly inspiring and a highlight across my travels. Thank you.

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Introduction

My entire teaching career has been devoted to supporting the most challenging and vulnerable students identified as at risk for reading failures and helping them overcome their learning barriers.

As the Senior Officer, Teaching and Learning Literacy specialist and instructional coach within Canberra and Goulburn Catholic Education, I have been proudly contributing to the implementation of a system-wide teaching and learning improvement program, known as Catalyst, which aims to improve student academic achievement. Across 56 schools, this is the first initiative to take a consistent approach to what is taught, how it is taught and how it is assessed for the entire system. The aim of Catalyst is to ensure every student is a competent reader and to make high-impact teaching practice visible in every classroom. Part of my role consists of advising principals about scientifically based reading instruction and coaching teachers to deliver high quality instruction to help every child become a competent reader. I have also led opportunities for networking, collaboration and support for educators to align to the Science of Reading (SOR) in Australian schools across multiple states, using my connections with grassroots organisations like Sharing Best Practice.

What brought me to the work I do today and what drove me to apply for a Churchill Fellowship

My passion was ignited in 2007 when I worked as a volunteer in Hermannsburg, an Aboriginal community located in Central Australia. While living there, I witnessed the disadvantages faced by Aboriginal people, especially younger Indigenous children and teenagers having significant gaps in their learning, with most of them unable to read and not attending school regularly. As a result, I chose to complete a Master of Education at Edith Cowan University (Western Australia), where I first attended lectures by Dr Lorraine Hammond, Associate Professor at the School of Education and former Churchill Fellow. Her course convinced me to pursue a career in education and helped me deepen my knowledge in the field.

Upon my graduation, Dr Hammond suggested I visit Digby Mercer, the principal of a metropolitan secondary school, as he was looking for a new graduate to establish an intervention program for at-risk adolescents. In 2013, I started working as a special education teacher at Como Secondary College (Perth). My role was to deliver remedial reading interventions for at-risk adolescents, aged 12 to 15. During this time, I witnessed the many challenges faced by students who struggled to access the curriculum content provided in mainstream classes because they were unable to read. I decided to apply for a Churchill Fellowship in the hope it would help me lead the change I want to see – where no child leaves school unable to read. My aim is to disrupt the trajectory of at-risk adolescents ending in the juvenile justice system and to substantially reduce the number of students entering secondary school with low literacy.

More specifically, my Churchill project consists of an investigation of the best international practices aimed at making a difference in the lives of disadvantaged children through education. My goal is to research and identify effective language and literacy screening and classroom reading intervention practices for at-risk students so that these can be disseminated to teachers in primary and secondary schools and those in teacher training. With the completion of this report, I am delighted to be able to contribute to this matter.

Glossary of terms

TERM	DEFINITION
Science of reading	A vast, interdisciplinary body of scientifically-based research about reading and issues related to reading and writing.
Decoding	This refers to the ability to understand and apply letter and sound knowledge and read words and sentences correctly.
Structured literacy	A diagnostic approach to literacy instruction, based on the science of how children learn to read that provides explicit, systematic and cumulative instruction in phonology, letter-sound correspondence, syllables, morphology, spelling, syntax and semantics.
Whole language	An approach that emphasises the teaching of reading as a meaning-making process (also known as 'balanced literacy' or the 'three-cueing system'). The approach is based on the idea that reading is a natural process that can be learned through immersion in literature and real-world texts.
Multi-Tiered System of Support	An evidence-based framework designed to meet the needs of all students by ensuring that schools optimise data-driven decision making, progress monitoring and evidence-based supports and strategies with increasing intensity to sustain student growth.
Universal Screening	A process that involves administering measures to all students to identify students who are at risk for future difficulties and thus should be considered for prevention or early intervention services. Universal screening data also can be used to assess the overall effectiveness of the academic instruction in meeting the needs of students.
Diagnostic assessment	Assessment used to pinpoint specific academic skill weaknesses for the purposes of identifying academic skill targets for intervention and selecting appropriate, evidence-based interventions.
Progress monitoring	Assessment procedures used on a frequent basis (e.g. monthly, weekly, daily) to measure student growth in response to targeted or intensive intervention.
Evidence-based practices	Practices are informed both by the collective results of classroom practice as well as research with empirical data. When these practices are backed by research, they may be referred to as 'research-based practices', 'evidence-based practices' or 'scientifically based practices' in this report.
Direct Instruction (big DI)	Series of commercially scripted programs co-developed by Siegfried Engelmann in the 1960s based on the assumption that all students, if properly taught, can learn. DI combines explicit instruction pedagogy with a carefully sequenced curriculum set out in scripted lessons that include regular student assessment.
Direct instruction (small di)	Term that was used by Dr Barack Rosenshine in his 1976 teacher effectiveness research to describe a set of principles found to be significantly related to increasing student achievement, also referred to as 'explicit instruction'.
Explicit instruction	Teacher-directed and systematic instructional approach that includes specific components of delivery and design of instruction, such as the review of previous content, step-by-step demonstrations, clear language, adequate range of examples, frequent student responses, monitoring of student progress, feedback to students and multiple opportunities for practice, both guided and independent. This practice includes distributed and cumulative practice.
Intervention	A systematic approach to targeting specific skills identified as the potential cause of reading difficulty. Intervention consists of enhanced opportunities to learn, including additional time with the core curriculum in small groups, other supplementary instruction or individualised intensive instruction.
Intensive intervention	Intervention that requires educators to make decisions using data to improve instruction for individual students who have not responded to the instruction received in Tier 1 and Tier 2. Intervention intensification refers to applying instructional changes around dosage, the learning environment, cognitive strategies and instructional approaches.

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Executive summary

Report Title	Prevention of reading failure
Churchill Fellowship Project	To identify effective language and literacy screening and intervention practices for at-risk students
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Overview

Reading failure is preventable for most children. However, according to the Programme for International Student Assessment (2018) or PISA, 40% of 15-year-old Australians cannot read at a proficient level. This percentage represents a national literacy crisis. Australia also faces equity issues, with most students classed as 'disadvantaged' being a long way behind 'advantaged' students in reading proficiency. A large gap develops between Year 3 and Year 9, as students are expected to increasingly shift beyond 'learning to read' to 'reading to learn'.

Ensuring that older (that is, Year 4 and above, including secondary students) struggling readers develop adequate reading proficiency is essential for their overall health and success in life. Poor literacy has a direct impact on children's socio-emotional development and therefore should be considered a public health issue. Difficulties with reading can cause frustration, low self-esteem, and even anxiety or depression in some children. Many older students have gaps in their foundational reading skills, limiting their ability to access curriculum content at their grade level. Additionally, children who struggle with reading are at a higher risk of dropping out of school and/or experiencing poverty and unemployment in adulthood, which can create a cycle of intergenerational poverty and, in turn, contribute to a reduction in a nation's Gross Domestic Product.

No child should leave primary school unable to read. Despite the significant volume of research on effective reading instruction in recent decades, little to no improvement has been made in national scores of reading proficiency over the last 20 years in Australia. A substantial proportion of Australian students start secondary school with literacy and numeracy skills that are three or more years below those of their peers (ACARA, 2021). This indicates a failure to translate research into policy and practice. Ineffective and/or low-impact teaching methods in primary schools are leaving many students unable to read proficiently when they reach secondary school. This shows the urgent need for quality reading instruction in the primary school years.

The Australian education system must bring evidence-based reading instruction into every classroom. Despite increasing investment in the early years, when intervention has proven to be more effective, there are still secondary students who struggle to read because they have not been not exposed to effective reading instruction earlier. The older students get, the more difficult effective intervention becomes. 'Research indicates that it takes three times as much teaching time to achieve the same progress with the poorly motivated and struggling reader in Year 9 as it would with a Year 3 beginner.' (NRP, 2006) Research shows that young people can learn to read at any age.

‘Research indicates that it takes three times as much teaching time to achieve the same progress with the poorly motivated and struggling reader in Year 9 as it would with a Year 3 beginner.’

Immediate action needs to be taken to address the alarming and persisting trend of students falling behind in reading. This Churchill Fellowship enables me to make a tangible difference in this area. By exploring language and literacy screening procedures and identifying effective instructional practices, I can contribute to promoting effective classroom instruction, improving early identification of children with reading difficulties, and to providing advice about effective targeted intervention to help all readers reach their full potential.

The consequences of ignoring this issue are far-reaching, and we cannot afford to let students ‘fall through the cracks’. By addressing this challenge head-on, we can provide a solid foundation for future success and give every child the opportunity to thrive.

The aim of this report is to raise awareness and understanding about, and increase the use of, effective teaching practices that promote more equitable literacy outcomes for all pupils, especially for the most vulnerable and disadvantaged children, including Aboriginal and Torres Strait Islander students.

The focus of this report is on effective classroom intervention practices. It does not look at non-school factors such as family backgrounds/environment, severe learning disabilities or access to specialist services (e.g. speech pathologists), although these are also important factors. This report is intended for a wide audience – those working in teacher training and pre-service teachers – and especially for dissemination in primary and secondary schools. Boxes are placed at the end of each chapter to direct educators to the key recommendations that are more specific to schools. Beyond this, it is hoped that this report gives parents, families and the broader community the knowledge and tools to become more informed advocates for their children who struggle in schools while supporting them at home with reading.

A two-pronged approach was implemented to obtain information: 1) at the macro level – educational systems and leadership processes, including screening procedures, legislation and research application were reviewed, and 2) at the micro level – instructional strategies, models of interventions and school processes that can be implemented in an Australian context were also reviewed.

My investigation involved travelling across France, Belgium, England and the US and conducting interviews with international literacy experts in universities, education departments, and teacher-training and not-for-profit organisations. I spoke to a number of school leaders, teachers, parents and students, and arranged classroom observations in both primary and secondary schools. I also met with parent-led advocacy groups.

Finally, the release of my report is timely: the panel members of the National School Reform Agreement (NRSA) are due to deliver their report to federal, state and territory education ministers in October 2023. In the meantime, I have been in consultation with the Grattan Institute, which is currently working on a ‘Reading Guarantee’ proposal aimed at recommending government policies and practices to ensure proficient reading for all Australian students. I am hopeful my report and findings will be used to make recommendations with the potential to shape the future of schooling in Australia, leading to more equitable outcomes.

Key findings

1. Increase monitoring and accountability for poor reading outcomes

In Australia, the first National Assessment Program – Literacy and Numeracy (NAPLAN) reading test takes place in Year 3. This is typically when parents and teachers are provided with the first indicator that there may be an issue with a child's reading and is when intervention strategies usually start. However, research evidence suggests the most optimal window for early identification and effective reading interventions occurs well before this, in the first year of compulsory schooling.

This report recommends that a universal literacy screener be introduced in the early years of schooling to reduce the number of children who reach Year 3 without their reading difficulties being identified or addressed. Legislation in England, France and many states in the US has already mandated universal screening procedures for all students entering school, and has led to a high level of success in lifting students' achievements in these locations. For example, in 2012 England introduced the Year 1 Phonics Screening Check (PSC), which focuses on the assessment of a student's ability to decode real and pseudowords.[1] The PSC examines children's ability to accurately decode single words using their phonics knowledge and skills. The tool has since been mandated in South Australia and New South Wales, and other states are looking at something similar. Victoria has introduced a reduced version of the phonics check. However, data will not be able to be compared with data on students in other states.

While the PSC is a short, simple assessment that measures how students blend sounds together to read a word (which is vital in learning to read), more comprehensive universal screening tools I encountered during my travels can measure a broader range of literacy skills. Australian governments should consider making other robust assessments available to schools, such as the Dynamic Indicator of Basic Early Literacy Skills (DIBELS) 8th Edition, which is a set of procedures and measures for assessing the acquisition of literacy skills that can help teachers identify potential reading difficulties earlier and can be used for students in first year of compulsory schooling through to Year 8. DIBELS can ensure consistency and continuity in tracking students and monitoring the effectiveness of school systems through middle to secondary schools. For example, in Ohio in the US, the government provides schools with an option of three approved universal screening assessments, including DIBELS 8th Ed. Schools have the option of reporting the screening results to the Ohio Education Department. Data can then be used for crucial decisions at school and system levels, providing valuable information about students' progress in reading, and helping make decisions about adjusting teaching practices to ensure all students are receiving high quality reading instruction and targeted support. This vital information also arms educational leaders with what they need to implement to support learning and to advocate for policies that will most effectively close achievement gaps.

In France, the government has also mandated a series of national screening evaluations since 2018 as part of the EvalAide program, which is conducted up to three times from Year 1 through to Year 2, and again later in Year 6, before students transition to secondary school. In England, the Key Stage 3 Blackpool Literacy Project comprised a network of eight secondary schools that have introduced a robust assessment schedule for Years 7–9 cohorts to ensure student learning is tracked over time and that struggling students are identified as early as possible when they enter secondary school. Some challenges were reported, such as the need for specialised expertise and logistical issues (e.g. timetabling).

Whilst the evidence is in favour of universal screening and early identification of students with reading difficulties within educational settings, a shift of mindset is required from a 'wait-to-fail' approach to a preventive approach, with adherence to clear guidance and administration of monitoring tools. My findings lead me to recommend that Australian governments provide adequate staff training and ensure that students who need appropriate and timely interventions the most receive them.

[1] A pseudoword is one that could exist in a language whereby all of its sounds and combinations are permitted, but it has no meaning.

2. Catch students before they fail with the implementation of a Multi-Tiered System of Support framework

The best approach is not to wait for students to struggle. The findings of my Fellowship suggest that primary and secondary schools should implement a multi-tiered system of supports (MTSS) framework to ensure high-quality instruction and deliver interventions for older students who have fallen behind in reading.

On the basis of my Fellowship findings, it is clear MTSS is the most prevalent preventive model used for guiding the response to intervention process in order to support teachers in providing targeted support for struggling readers, and in closing the reading gap. From my observations in schools, MTSS can be implemented in a variety of ways, depending on the specific needs of the school and its students. From the international examples I encountered, the model of the Blackpool secondary school network in England shows MTSS as successfully adapted in a secondary school. In the Tigard Tualatin School District in Oregon, Metzger Elementary School provided tiers of support for bilingual students who struggle with English and/or Spanish language development. The school had a specific road map to support their own decision-making processes, including a variety of assessments that were fit for purpose and closely aligned to instruction.

The Oregon Education Department also invested funding into providing MTSS coaches to school districts across the state, with the framework showing a significant impact on student outcomes, reducing achievement gaps between disadvantaged students and their peers after five years of MTSS implementation. In Ohio, similar results were seen in the Dyslexia Pilot project, with schools that implemented a tiered system of early literacy supports increasing their percentage of proficient readers and decreasing the percentage of students requiring more intensive and expensive supports.

The challenge is not only in making this model a reality in every Australian school but in ensuring that the framework is implemented across the board. Success depends on (1) how often staff meet and collaborate to review data, (2) making strategic instructional decisions, (3) selecting and implementing evidence-based intervention programs with fidelity, (4) using frequent progress monitoring to determine whether students are making adequate progress in reading, and if they are not, (5) having the expertise to intensify interventions.

Departments and system leaders in Australia should provide clear guidance on how to deliver small group intervention within a multi-tiered system of supports, in both primary and secondary settings. Although most intervention work needs to be done in the primary years, secondary schools must invest resources and time and focus on more intensive evidence-based interventions, especially for the neediest students.

3. Invest in teaching effectiveness and promote education reforms that bring effective reading instruction into every classroom so fewer students need intervention

There is no 'silver bullet' to address reading failures, as the individual needs and abilities of the reader need to be considered, but there are better ways, grounded in research, to teach reading and to implement reading interventions. Scientific consensus is that struggling readers, indeed all readers, learn best through explicit, systematic and sequential instruction and when interventions include the key components of reading (taught alongside each other, not in isolation): oral language, phonological awareness, phonics, fluency, vocabulary and comprehension. Educators must ensure instructional practices and decisions are based on reliable data and that they use time with optimum efficiency.

The findings of my Fellowship reveal that some challenges persist in the practice of instructional strategies and methods, alignment and program selection because there are currently a wide range of commercially published school programs to use, but these have rarely been field-tested using rigorous scientific methods. In the US, the suites of commercially scripted Direct Instruction programs co-authored by Siegfried Engelmann have been shown to produce superior performance when compared to other instructional methods. This was evidenced during my visits to the Thales Academy network of private schools and the Arthur Academy charter schools. Remedial programs or school-based interventions

must be aligned with research, including the essential components of reading instruction and demonstrated evidence of success in schools with struggling readers.

Australian governments should do much more to make it easier for schools and teachers to identify high-quality programs and interventions that are aligned with reading science. The NSW Education Department has taken a step forward with the release of the new K-6 Syllabus, providing some useful curriculum materials for schools, such as the English K-6 scope and sequence. In England, the education department focused on providing schools with a list of 45 endorsed evidence-based phonics programs. In France, the French Scientific Council of National Education conducted an evaluation of teaching materials to determine which are evidence aligned, and made the findings available to schools, with only two textbooks deemed to be evidence aligned. Education departments and system leaders should provide clear guidance for making effective decisions based on the latest up-to-date research evidence when selecting reading curricula and interventions for older struggling students. Further research is required.

The aggregated findings from my Fellowship indicate that most teachers in Australia are ill-prepared to teach reading, let alone provide reading intervention for students at risk. The Education Department should strengthen teacher expertise in evidence-based reading instruction in schools. In Cincinnati, Mount Saint Joseph University offers scientifically based reading science graduate and postgraduate programs and has partnerships with public schools to ensure student teachers can generalise the skills learned in courses into classroom settings. In Texas, the education department established the Reading Academies, an 11-month professional development program, for upskilling teachers and school leaders about teaching the basics of reading and writing. In France, the Scientific Council of National Education is comprised of a team of multidisciplinary experts responsible for advising the Ministry in providing evidence-based instructional guidance and protocols to address inequities in schools. Their work has shaped education reforms and policies (i.e. EvalAide program).

Recommendations

From my investigation of world best practices on literacy teaching and intervention, the following recommendations apply at the federal, state, and school level for lifting literacy rates across Australia.

Recommendation 1

Australian federal, state and territory governments should increase monitoring and accountability for poor reading outcomes by mandating standardised evidence-based universal screening assessments in all schools to identify students at risk for reading difficulties. Following identification, there need to be immediate, early, tiered interventions using the data to target policy and resources more effectively.

1a. Policy makers should adopt a consistent approach to standardised evidence-based screening assessments across Australian states and territories to ensure early identification of students at risk for reading difficulties, and timely provision of intervention services.

1b. Education departments and system leaders should require schools to administer robust universal screeners that assess a range of literacy skills, including phonemic awareness, Rapid Automatized Naming (RAN), phonics (real and nonsense[2] [pseudo]words), fluency (rate and accuracy) and reading comprehension, for all students from first year of compulsory schooling through to Year 6, up to three times a year (beginning, middle and end) to ensure that no student 'falls through the cracks'. The assessments would, ideally, not require a lot of time to administer, score and evaluate, and the results could be shared with parents within 30 days and include a benchmark score based on the

[2] The terms 'pseudowords' and 'nonsense' words are commonly understood to mean the same thing. Both have no meaning but pseudowords are spelled in predictable ways.

student's grade level and a risk level to determine if additional intervention is needed.

1c. Education departments and system leaders should require secondary schools to universally screen Year 7 and 8 students who have previously been identified with reading difficulties (not meeting NAPLAN proficiency), using valid tools that measure oral reading fluency (rate and accuracy), phonics knowledge and decoding skills, reading comprehension and spelling.

1d. Policy makers and Australian governments should use the analysis of screening data to inform system priorities, resource allocation and needs-based funding policies.

1e. Schools should identify and track students with reading difficulties and collect data specific to these students (including students who have not received a formal diagnosis). The data should be communicated to parents at a minimum of once a term.

1f. Federal, state and territory governments should create a literacy taskforce committee to provide guidelines and protocols about universal screening assessments that are appropriate in early years of schooling and for the transition to secondary school. Funding must be allocated for research and evaluation.

Recommendation 2

Australian federal, state and territory governments should support primary and secondary schools to implement a multi-tiered system of supports (MTSS) framework and deliver interventions for students who have fallen behind in reading, with the ultimate aim of improving reading outcomes for all learners and optimising support delivery.

2a. Australian governments should provide training to educators and school leaders on the most effective ways to implement MTSS for reading in primary and secondary schools, including guidelines for decision-making processes and how to overcome structural and logistical constraints (i.e. timetabling). The guidelines should include the following:

- All students start at Tier 1 with high-quality reading instruction (see Recommendation 3).
- Provide additional support for some students at Tier 2 based on screening data (Recommendation 1) in small groups, 30–45 minutes/day, three to five times a week.
- When students have not made expected growth in reading after 6–8 weeks at Tier 2, consider moving students into Tier 3 and provide intensive intervention, one-to-one, 45–60 minutes per day, up to five times a week.
- Provide more intensive support for older struggling readers in secondary school by providing evidence-based interventions targeted to students' individual needs.

2b. Education departments and system leaders should provide training to increase teachers' capacity to (1) conduct universal screening for reading difficulties, (2) select and use diagnostic assessments, (3) analyse data with accuracy to inform instruction (4) identify and implement, with fidelity, high quality reading interventions and practices that are proven to be effective in improving outcomes for older strugglers, (5) use weekly progress monitoring, and (6) make adequate instructional decisions.

2c. Education departments and system leaders should require schools to establish multi-tiered system of supports (MTSS) teams, involving school leadership members, grade level teachers, literacy specialists and education assistants who are required to meet on a regular basis; that is, (1) three times a year after each screener administration to review data for all students, (2) every 6–8 weeks to analyse data for students at risk of receiving interventions, (3) as required when a student has failed to make adequate progress in reading. As schools carefully use data to inform decision making and refine practice, their responsibilities should include the following:

- Determine the high-priority reading skill for instruction at Tiers 1, 2, 3
- Identify students in need of additional support (those who are below benchmarks) and place them in appropriate reading interventions
- Allocate resources, including funding, staff, training, materials, scheduling of interventions
- Target interventions for students based on their individual needs
- Review progress of students in interventions and determine next steps
- Check for implementation fidelity and alignment between tiers of instruction
- Increase amount of instruction time (dosage, length and frequency) and reduce group size

when students have not made adequate progress despite receiving Tier 2 intervention (well below benchmark)

2d. For ensuring continuity of support for at-risk students if they change primary schools or when they are transitioning from primary to secondary, education departments and system leaders must provide data to teachers that tracks the reading performance.

Recommendation 3

Australian federal, state and territory governments must invest in teacher effectiveness and promote education reforms that bring effective reading instruction into every classroom, so that fewer students need intervention.

3a. Policy makers and Australian governments must create a literacy taskforce committee, comprising a national team of multi-disciplinary experts responsible for providing evidence-based instructional guidance and protocols about early reading instruction, and introducing best practice in interventions for older students with reading difficulties.

3b. Education departments and system leaders should take an active role in translating evidence on best practice reading instruction into detailed, practical guidance for schools. This role should include providing a road map to support teachers' decision making about instruction and support, ensuring students' areas of strengths and weaknesses in reading subskills are addressed (i.e. word recognition and language comprehension). These should be reviewed regularly and updated as the research grows.

3c. Australian governments should provide schools, teachers and families with curriculum materials, assessments and instruction that reflect robust scientific research on the best approach to teach reading, as well as specific guidelines about how to support older struggling readers in the classroom and at home.

3d. Policy makers and Australian governments should enhance partnerships between state and territory education departments, universities and schools to ensure training for pre- and in-service teachers is evidence aligned, high dosage and connected to classroom instruction. Teachers must be able to demonstrate they understand how children learn to read and can help students who have poor literacy skills.

3e. Australian governments and education departments should invest in the training of reading specialists/literacy coaches to instruct educators about reading instruction, including professional learning, modelling of practice and feedback provision, so practitioners can embed and sustain practice change. The coaches should be deployed in schools, with no teaching load, for up to two years, and 70% of their time should be spent in contact with teachers, assisting with planning and building leaders' capacity in literacy instruction.

Chapter 1

Background information on the Australian context and research questions

Is there a literacy crisis in Australia?

Australia's declining academic performance becomes more apparent with each release of standardised assessment results. The Program for International Student Assessment (PISA)[3] in 2018 tested 14,000 15-year-old Australian students and found around 40% of students in Australia were unable to read at a 'proficient standard'.

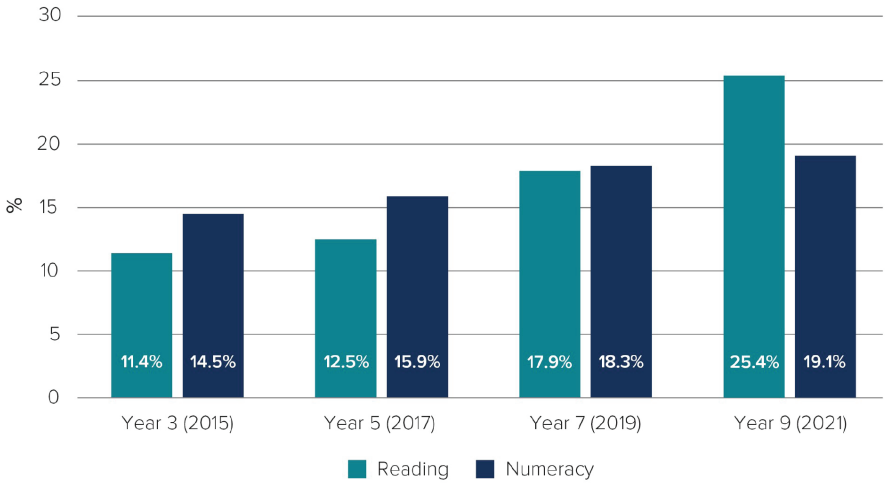
Unfortunately, PISA isn't the only body to ring the alarm bell about Australia's declining literacy standards. Australia's internal testing programs tell the same story. The National Assessment Program – Literacy and Numeracy (NAPLAN)[4] data from 2019 showed that after a decade in school, one in five Year 9 students couldn't read well enough and the most recent results showed no significant changes for secondary school students during the period 2008–2022.[5]

Australia	2008	2018	2019	2021	2022
At and below national minimum benchmark (%) Band 6	23.5	18.5	20.4	23.8	23.5

Table 1: Year 9 NAPLAN results for students at or below the national reading minimum benchmark, over time in Australia

The data is even more concerning, given that the national minimum standards (NMS) are set extremely low in Australia. According to the Grattan Institute's report[6], Year 9 students at NMS are functionally operating below Year 5 level (four years behind) in Numeracy, and this is similar in reading. It means they are four years behind their peers.[7]

The same report also reveals that learning gaps grow much larger after Year 3, suggesting that certain students are falling further behind as they progress through school. It was estimated that by the time they reach Year 9, the top 10 per cent of students are around eight years ahead of the bottom 10 per cent. And the gap actually widens



Note: This data is from Year 9 NAPLAN results in 2021 as the Year 9 students assessed in 2022 did not sit Year 7 tests due to COVID-19.

Figure 1: Proportion of students at or below national minimum standards (AERO, 2023)

3 Thomson, S, De Bortoli, L, Underwood, C & Schmid, M (2019). PISA 2018: Reporting Australia's results. Volume I student performance. Australian Council for Educational Research (ACER). https://research.acer.edu.au/ozpisa/35 Available at https://research.acer.edu.au/cgi/viewcontent.cgi?article=1036&context=ozpisa

4 The National Assessment Program – Literacy and Numeracy (NAPLAN) is an annual national assessment for all students in Years 3, 5, 7 and 9, and is the only nationwide assessment that all Australian children undertake.

5 The Australian Education Research Organisation (AERO) released a report noting methodological reasons for the discrepancy between this decline and the stable NAPLAN. Available at: https://www.edresearch.edu.au/sites/default/files/2023-03/aero-benchmarking-report-aa.pdf

6 Goss, P, & Sonnemann, J (2016). Widening gaps: What NAPLAN tells us about student progress. Grattan Institute, 23. Available at: Institutional contacts, https://grattan.edu.au/wp-content/uploads/2016/03/937-Widening-gaps.pdf

7 Del Rio, J, Noura, H, Jones K, Sukkarieh, A (2023) Raising the grade: How ACT schools can lift literacy outcomes for students and the economy. Equity Economics. https://www.equityeconomics.com.au/s/Raising-the-grade-How-schools-in-the-Australian-Capital-Territory-can-lift-literacy-outcomes-for-stu.pdf

after Year 3, showing students are not proficient enough to shift from 'learning to read' to 'reading to learn' in Year 4 and beyond.

If nothing else, all children should leave schools able to read. There is a real sense of emergency since too many of our students cannot read and write, leaving them struggling to follow the secondary school curriculum.

'Children haven't grasped the basics of sounding out words. By the time they get to high school they're so far behind their self-esteem is crippled,' says Digby Mercer, Principal at Como Secondary School in Perth, Western Australia.

Clearly, for many students, by the time they finish secondary school, it might already be too late to achieve a functional level of literacy. Having even a small delay in reading can, in a few short years, translate into a significant gap between what a child is expected to read at school and what they can learn from reading. This gap is often exacerbated because children who find reading arduous tend to avoid reading, and this avoidance puts them at a greater disadvantage. The growing discrepancies are referred to as the 'Matthew Effect' in reading – a reference to the idea that the 'rich get richer and the poor get poorer'. The same applies to reading: good readers read more, causing them to become even better readers. This mirrored the findings in the Grattan Institute's report.

'Children haven't grasped the basics of sounding out words. By the time they get to high school they're so far behind their self-esteem is crippled.'

It is crucial to acknowledge that language and literacy difficulties are a pervasive issue that adversely affects a significant number of students. To address this critical issue, I decided to pursue a Churchill Fellowship that would enable me to delve deeply into the screening procedures employed across multiple countries, and to identify language and literacy difficulties at an early stage and through middle school. My goal was to explore the most effective instructional practices that can be used to support struggling readers, particularly older students, and minimise the gap that often exists between students who are proficient in reading and those who are not.

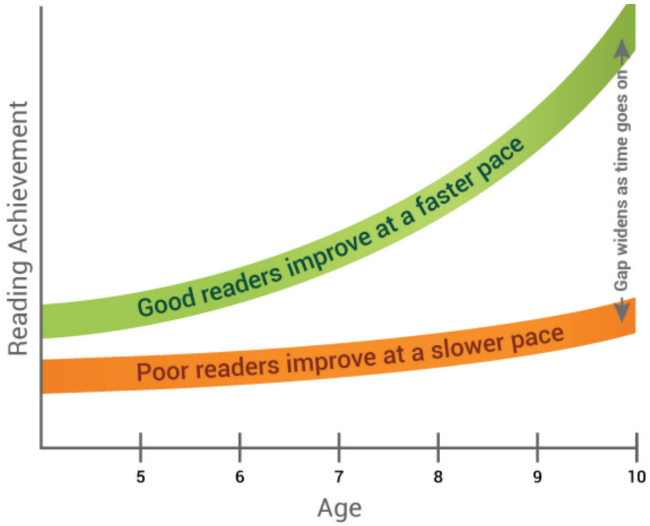


Figure 2: The gap between good readers and poor readers widens as time goes on (Stanovich, 1986)

It is unacceptable that some students are neglected due to a lack of targeted intervention and support in schools. Education systems and leaders must ensure that every child, regardless of their background or circumstances, receives the required support for their needs at the right time. I strongly believe that a diagnostic prescriptive approach is the best way forward for a healthy educational system that promotes more equitable outcomes.

The Fellowship aims to research the following questions:

- How can we improve the methods of screening and early identification for students experiencing reading difficulties in schools?
- How do we establish a school-wide literacy model that enables implementation and delivery of effective reading interventions for older struggling readers?
- What evidence-based instructional practices are proven to be most effective for older struggling readers?
- How can we intensify instruction and interventions for students who are not making desired progress in reading?
- What conditions are required to scale these practices at a systemic level to ensure we prevent and/or remedy reading failures nationwide?

To address poor literacy in young people, it is crucial to understanding what the research says about how children learn to read and how to teach it effectively and efficiently (i.e. how to implement the research findings). Provided next is a summary of the reading research available in the hope of providing some background information.

Education debate: What does the research say about how children learn to read?

Over many decades, there has been intense controversy surrounding how children learn to read and how they can be taught best. The debate in education about reading instruction, often referred to as the 'reading wars'[8], revolves around two main approaches.

1. Structured literacy, also known as a phonics approach, emphasises the teaching of letter-sound correspondences and the decoding of words. This approach is based on the scientific evidence that reading is a code-breaking process and that children need to learn the code to read successfully. This is the most effective way to teach reading, especially for struggling readers, as it provides a systematic and explicit way to teach the skills needed to decode words in a sequential manner.

2. Whole language, on the other hand, emphasises the teaching of reading as a *meaning-making process*. This approach, also known as 'balanced literacy' or the 'three-cueing system', is based on the misconception that word reading is a visual process and the belief that reading is a natural process that can be learned through immersion in literature and real-world texts.

Supporters of whole language argue that it is a more authentic and engaging way to teach reading.

In her recent podcast series 'Sold a Story', Emily Hanford, an American journalist and senior correspondent for APM Reports, examines the debate between the two approaches. Her message is clear: the science has shown that systematic, explicit phonics instruction is the necessary foundation for successful reading. Decades of research have shown that reading doesn't come naturally. The human brain is not hard-wired to read.

The evidence on how children learn to read indicates that reading is not a natural process in the same way that speaking a language is. According to Geary (2011), reading is an example of biologically secondary knowledge, which means that it requires more effort and practice for a person to become proficient, and it must be taught and learned explicitly.

According to the cognitive neuroscientist Stanislas Dehaene (2009), children learn how to read through a process of mapping the sounds of

[8] Castles, A, Rastle, K & Nation, K (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest, 19*(1), 5–51.

spoken language onto the written symbols of written language. He refers to the 'letter box' located in the left hemisphere of the brain. This is a neural network that responds to visual input by recognising the distinct features of each letter. The letter box allows the brain to recognise letters quickly and accurately in different fonts and sizes, and to distinguish between similar letters like 'b' and 'd'. However, these connections must be taught explicitly and learned through systematic instruction, practice and multiple exposures to written language.

'Reading is an unnatural cultural invention that has only been around for a few thousand years, and the brain has not evolved a genetic program to do it. Instead, the brain must recycle parts of its older functions and invent new circuits to make sense of this strange new visual stimuli that written language represents.' (Dehaene, 2009).

Over the last two decades, there have been major independent inquiries into the teaching of reading from the US (National Reading Panel 2000), UK (Rose report 2006) and here in Australia (National Inquiry into the Teaching of Literacy, Rowe 2005), and all have resulted in similar findings about what works best.

The National Inquiry into the Teaching of Literacy: 'The evidence is clear, whether from research, good practice observed in schools, advice from submissions to the Inquiry, consultations, or from committee members' own individual experiences, that direct systematic instruction in phonics during the early years of schooling is an essential foundation for teaching children to read. Findings from the research evidence indicate that all students learn best when teachers adopt an integrated approach to reading that explicitly teaches phonemic awareness, phonics, fluency, vocabulary knowledge and comprehension. This approach, coupled with effective support from the child's home, is critical to success.'[9]

The National Reading Panel: The meta-analysis revealed that 'systematic phonics instruction produces significant benefits for students in first year of compulsory schooling through 6th grade and for children having difficulty learning to read. The ability to read and spell words was enhanced in kindergartners who received systematic beginning phonics instruction. First graders who were taught phonics systematically were better able to decode and spell, and they showed significant improvement in their ability to comprehend text.'[10]

The Rose Report: 'Despite uncertainties in research findings, the practice seen by the review shows that the systematic approach, which I generally understood as "synthetic" phonics, offers the vast majority of young children the best and most direct route to becoming skilled readers and writers … It is widely agreed that reading involves far more than decoding words on the page. Nevertheless, words must be decoded if readers are to make sense of the text. Phonic work is therefore a necessary but not sufficient part of the wider knowledge, skills and understanding which children need to become skilled readers and writers, capable of comprehending and composing text.'[11]

The National Reading Panel, equally supported by the other reports, identified five key concepts at the core of every effective reading instruction program: phonemic awareness, phonics, fluency, vocabulary and comprehension, also known as the 'Big Five' of reading, which provide definitive guidelines for early reading instruction. Later, a sixth component – oral language – was added to these original five to reflect the range of research emphasising the importance of oral language development to the reading process (Konza, 2014).

When I was working within the South Australian Department for Education, the 'Big Ideas' of reading were referred to in our documentation as part of the Education Leading Learning Improvement Best Advice series. As literacy coaches within the Literacy Guarantee Unit, we encouraged teachers in public schools to incorporate these essential components to an effective reading program into their daily lessons, based on a structured literacy approach. Each concept is described as follows:

1. **Oral language**: speaking and listening
2. **Phonological awareness**: building awareness of the sounds of spoken language. Research has shown that phonological awareness is a strong predictor of reading success, and that children who struggle with phonological awareness are at risk of reading difficulties

9 Rowe, K & National Inquiry into the Teaching of Literacy (Australia). (2005). Teaching Reading: Report and Recommendations. Department of Education, Science and Training, 11. https://research.acer.edu.au/tll_misc/5
10 Available at https://www.nichd.nih.gov/publications/pubs/nrp/findings
11 Rose, J (2006). Independent Review of the Teaching of Early Reading, 4–5. DfES. https://dera.ioe.ac.uk/5551/2/report.pdf

3. **Phonics**: knowing the relationship between letters and sounds
4. **Fluency**: reading with accuracy, expression, at an appropriate pace
5. **Vocabulary**: knowing and using an expanding range of words
6. **Comprehension**: using specific strategies to understand a text

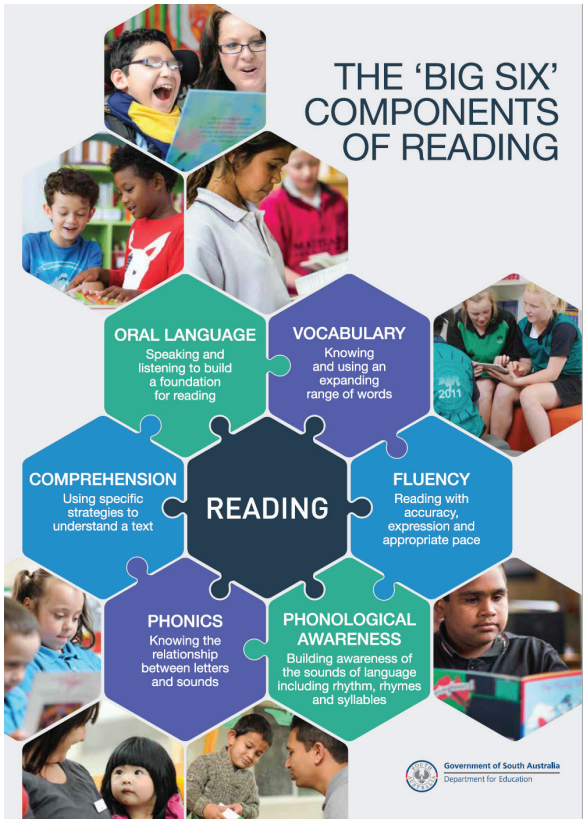


Figure 3: Materials published by the Department for Education in South Australia

Other evidence was available to help teachers and parents ensure that all areas of literacy are covered during instruction. For example, the Simple View of Reading (SVR) is a scientific theory of reading proposed by the researchers Gough and Tunmer in 1986, which outlines the core components involved in reading comprehension. SVR holds that reading comprehension is the product of word recognition and language comprehension.

If one component is poor or non-existent, reading comprehension competency will not be fully achieved. Word recognition (WR) can be defined as the ability to accurately and efficiently decode the written words on a page, whereas language comprehension (LC) involves the understanding of spoken language. This means that for students who fail to show adequate progress in reading comprehension, intervention would likely target both language comprehension and word recognition (decoding).

Despite overwhelming evidence in favour of the structured literacy approach, debates about pedagogical methods remain active in education policies and continue to create confusion in Australian schools to the detriment of our students. From my experience working with schools across multiple systems and states, there still exist many misconceptions in early reading instruction, mostly due to gaps in teacher knowledge and inconsistent teacher training. It is worth noting that, following the release of the Australian inquiry's findings (2005), not one recommendation was implemented at a national level. It has become a matter of urgency that Australian federal, state and territory governments invest in teaching effectiveness and promote education reforms that bring effective reading instruction into each and every classroom, so that fewer students need intervention.

My research leads me to believe our education system is trying to catch up with the reading research. More recently, the release of the NSW English K-2 syllabus shows changes that are more aligned to the latest evidence and research, and it clearly integrates the Big Ideas of reading in its reforms. Meanwhile, with renewed interest in the science behind how children learn to read, there

The Simple View of Reading (Gough & Tunmer, 1986)

RC Reading Comprehension **x** **WR** Word Recognition **=** **LC** Language Comprehension

are a growing number of primary schools that are now using a more explicit way of teaching literacy. Through using social media or attending education events, school leaders and teachers share their journey about how they have successfully shifted from balanced literacy to a more structured approach, one supported by scientific evidence. In this way they can testify about the positive impacts on student outcomes. But in order to lift achievement across the board, governments need to give more support to principals and teachers to put this evidence into practice in a more coherent and consistent manner.

The 'Science of Reading' (SOR) has gained popularity in recent years and has almost become a catchphrase for Facebook groups, professional learning courses and curricula. It refers to the vast and comprehensive interdisciplinary body of scientific research about reading and issues related to reading and writing. Dr Louisa Moats, an expert on science-based reading instruction and teacher education, explains that SOR is 'not an ideology, a philosophy, a political agenda, a one-size-fits-all approach, a program of instruction, not a specific component of instruction. It is the emerging consensus from many related disciplines, based on literally thousands of studies, supported by hundreds of millions research dollars, conducted across the world in many languages'.

'The Science of Reading is incomplete without the science of teaching reading.'[12]

According to the Reading League, we have 'a preponderance of evidence to inform how proficient reading and writing develops; and how we can most effectively assess and teach and, therefore, improve student outcomes through prevention of and intervention for reading difficulties'. (The Reading League [TRL], 2022)

As the Science of Reading continues to evolve with contributions from various disciplines, especially from cognitive science, using rigorous scientific methods we have gained insights into how humans learn to read, the skills required and which parts of the brain are involved in literacy development.[13,14,15,16] This has direct implication for classroom practices because we can now identify what evidence-based instructional practices are most effective for teaching foundational reading skills and remediating poor literacy.

However, our public education system is still failing older students with reading difficulties and many others by not using evidence-based approaches to teach them to read. It appears that Australia suffers more from research translation failure than we do from a lack of research on what constitutes effective reading instruction, and this is consistent with the observations I made whilst overseas. Across England, Belgium, France, US and Canada, similar issues were raised when it comes to bridging the gap between research and classroom practice. It was found that, no matter how strong the research, there are still inadequate teaching methods used in schools, leaving many students unable to read when they reach secondary school.

Defining older struggling readers

It is important to define what we mean by 'older struggling reader'. In this Fellowship report, the term 'older struggling readers' is used to refer to students in Year 4 and above who have trouble learning to read and comprehending texts despite having had ample time and opportunities to learn to read. Typically, by the end of Year 3, there is a critical transition, where students move from 'learning to read' to 'reading to learn'. Thus, many students reach upper primary and lower secondary school without the knowledge, skills and strategies they need to become strong, independent readers and learners. This impacts their capacity to both engage with the curriculum and to tackle cognitively demanding tasks.

'A study of 32 children from low-income homes found that the academic problems of low-achieving students increased as they moved through the school grade. This became especially evident by Year 4, when the more complex curriculum language led to a decline in reading achievement.'[17]

12 Kim, YS & Snow, C (2021). The Science of Reading is incomplete without the Science of Teaching Reading. Grantee Submission.

13 Willingham, DT (2021). *Why don't students like school? A cognitive scientist answers questions about how the mind works and what it means for the classroom*. John Wiley & Sons, San Francisco.

14 Wolf, M (2008). *Proust and the squid: The story and science of the reading brain*. Harper Perennial, New York, NY.

15 Seidenberg, M (2017). *Language at the speed of sight: How we read, why so many cannot, and what can be done about it*. Basic Books, New York, NY.

16 Dehaene, S (2009). *Reading in the brain*. Penguin, New York.

17 Chall, JS, Jacobs, VA & Baldwin, LE (1990). *The reading crisis. Why poor children fall behind*. Cambridge, Harvard University Press, MA.

Older struggling students might also be reluctant readers; that is, individuals who have a lack of interest or motivation to read (Singer & Murphy, 2019). This can manifest in various ways, such as avoiding reading tasks, difficulty with focus and attention, and low-self-esteem. These students often find reading difficult, fear failure and are aware they are falling behind their peers.

Common reading profiles

There is a range of factors to explain why students might still be struggling to read past Year 3, including speech and language problems, specific learning difficulties, English as a second language acquired at a later age, lack of exposure to books in their homes and limited vocabulary, poor school attendance, mental health issues, unaddressed hearing or vision problems, problems with attention and concentration, poor reading instruction when they were learning to read – or a combination of the above.

Typically, there are four main types of reading profiles that can be found in every classroom, and they can be plotted on a quadrant chart using the Simple View of Reading.[18]

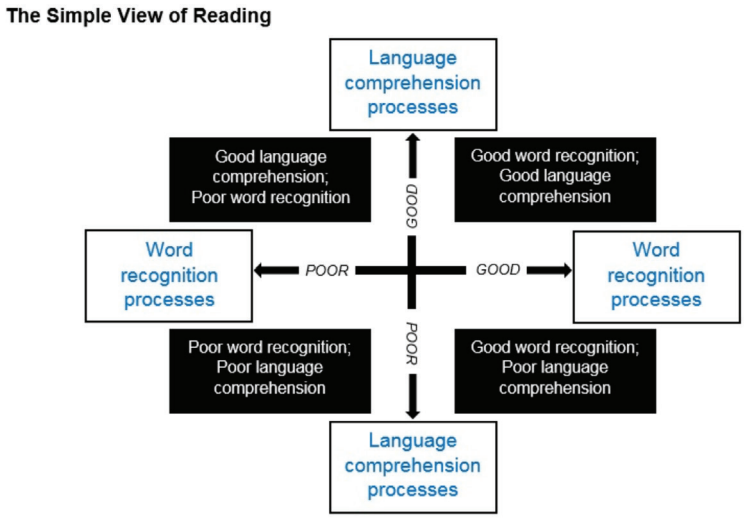


Figure 4: The four categories of readers as described by their position in the quadrants, based on the Simple View of Reading

- **Typical developing readers** (top right): Students with a good linguistic comprehension and good decoding skills, with no specific reading difficulties but who will still benefit from explicit reading instruction.
- **Poor word-level readers** (top left): Students who have poor word recognition (decoding) but good language comprehension and adequate vocabulary. These students will often learn well orally, when someone reads aloud to them or when topics are discussed but their decoding problems will impact their fluency and reading comprehension. These learners may or may not have a formal diagnosis but often have an 'unexpected' difficulty with reading, such as dyslexia.
- **Readers with mixed reading difficulties** (bottom left): Students who struggle with both language comprehension and word recognition, in the past referred to as 'garden variety poor readers'. Sometimes these students start out as poor decoders only, but, given their inability to engage with text, text-level language comprehension gaps develop over time. These students have the most significant difficulties learning to read.
- **Poor language comprehension readers** (bottom right): Students who have adequate decoding skills but who will often demonstrate language comprehension weaknesses across vocabulary, grammar and oral narrative (i.e. they sound like accurate and fluent word

18 These are not strict categories, and an individual may fit in more than one profile or change profile over time. Westerveld, MF, Armstrong, RM & Barton, GM (2020). *Reading success in the primary years: An evidence-based interdisciplinary approach to guide assessment and intervention*, p. 149. Springer Nature Pty Ltd, Singapore.

readers because they are, but if you ask them about what they have read they will struggle to answer general or specific questions about the text).

Another category includes students who have fallen behind, even though they are capable of learning, simply because they didn't get the opportunities (through effective instruction) to learn to read and might not have had access to high quality curriculum materials. For example, the whole language approach, by its nature, leads students to guess at words based on context or using clues provided by pictures (rather than sounding out words.) Such an approach to teaching reading creates instructional casualties who become poor readers. There is a mismatch between the instruction many at-risk students receive and the instruction they need in order to develop grade-level reading comprehension. For more information, a report co-authored by Five, AUSPELD and Learning Difficulties Australia in 2020, called the Primary Reading Pledge, is recommended.[19] This leads me to ask the question: can we predict future reading outcomes, allowing for earlier identification?

19 The Primary Reading Pledge was developed to address the problem of avoidable low literacy. It sets out a clear, evidence-informed framework to achieve this goal. Available at: https://fivefromfive.com.au/primary-reading-pledge/ [Accessed on 6 January 2023]

Chapter 2

Universal screening

Universal screening to identify students at risk of falling behind in reading

Reading failure is the most preventable of health issues. It affects many areas of life, such as school performance, job opportunities, and even your health, if you fail to understand a medication's instructions, for example. It can be prevented in all but a small percentage of children with serious learning disorders. Most students can be taught to read if we start early and follow the significant body of research showing which practices are most effective.

In the opening keynote at the 2022 IDA Annual conference in San Antonio[20], Dr Nadine Gaab, Associate Professor at Harvard and researcher at Boston Children's Hospital (US), reported on scientific studies demonstrating that it is possible to identify children at risk for developing into struggling readers as early as preschool using screening methods. Using MRI imaging, Dr Gaab's team's research has shown that, as a group, babies as young as three months old have an underlying infrastructure that helps predict success in reading years later. However, common literacy issues, such as dyslexia, are generally diagnosed after the most effective time for intervention has passed. Students with dyslexia have an especially hard time learning to read because their brains are wired in a way that makes understanding the relationship between sounds and letters difficult.[21]

In an interview, Dr Gaab refers to the 'Dyslexia Paradox' and explains that 'the **dyslexia paradox** describes the discrepancy between when we currently diagnose dyslexia and when research has shown the most optimal window for early reading intervention is. So currently we are diagnosing kids after repeated failure – we also call it the "wait-to-fail approach" – which is usually at the end of second grade at the earliest, maybe beginning of third grade. However, research has shown from several research labs that the most optimal window for early intervention is kindergarten and first grade — and most likely before that'.[22]

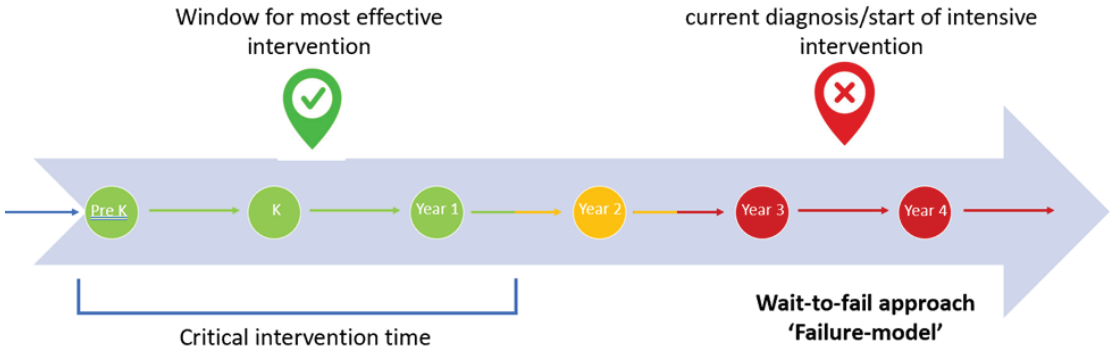


Figure 5: The timeline of typical diagnosis and when intervention strategies usually start

Figure 5 above shows that reading difficulty, such as dyslexia, is generally diagnosed after the most effective intervention window, typically from the end of Year 2 through to Year 4 (after the child has repeatedly failed or not responded adequately to a reading intervention). 'It is like looking at cholesterol after a heart disease', said Dr Gaab. Reading difficulties are not being caught early. This means that many students who are not progressing as expected in reading all fail to get timely intervention and support.

Delaying the identification of reading difficulties has direct implications for intervention and later reading development of students. As a result of the Matthew Effect, children who get off to a poor start in reading rarely catch up. As several studies have now documented, the poor first-grade reader almost invariably continues on to be a poor

20 Gaab, N & Tridas, E (November 2022). From the Pediatric Practice to the Classroom: Early Identification of Children at Risk of Literacy Problems. Presentation at the International Dyslexia Association Conference, San Antonio, TX.

21 Dyslexia is a common reading disability. It involves difficulties with accurate and/or fluent word recognition, poor spelling and decoding abilities.

22 See the interview 'Ask an Expert: Nadine Gaab - What is the dyslexia paradox?' by the National Center on Improving Literacy. Available at: https://www.youtube.com/watch?v=kPA3EsEFL0I

reader.[23] Below are additional quotes to illustrate the matter with reading trajectories.

1. **Trajectories predict reading success**
   'Good (fluent) readers in first grade have an 88% chance of being good readers in fourth grade.'[24]
2. **Trajectories predict reading failure**
   'Seventy-four percent of children who are poor readers in the third grade remain poor readers in the ninth grade.'[25]
3. **Trajectories take a significant amount of work to alter**
   'It takes four times as many resources to resolve a literacy problem by Year 4 than it does in Year 1.'[26]

   'A child with a reading disability who is not identified early may require as many as 150–300 hours of intensive instruction (at least 90 minutes a day for most school days over a 1–3 year period) if he [sic] is going to close the reading gap… between himself and his peers. And, of course the longer identification and effective reading instruction is delayed, the longer the child will require to catch up.'[27]

The Snow Report by Dr Pamela Snow, Senior Professor of Cognitive Psychology in the School of Education and Learning Sciences at LaTrobe University (Victoria) argues that early identification and intervention are crucial for children with reading difficulties, as the brain is more malleable during early childhood and is more responsive to targeted intervention. This is also supported by Gaab's research, which found that age four to seven is a critical window of opportunity for teaching children foundational word reading skills and is when intervention will be most effective. (See Appendix 2 for some suggestions of screeners for preschoolers.) Gaab recommends the adoption of a preventive model that is 'something we embrace a lot in medicine but for some reason, we have not yet done so in education'. She says, 'Instead, we are focusing on a reactive deficit-driven, wait-to-fail model.' (2019).

Thus, the best solution to the problem of reading failure is to allocate resources for early identification and prevention. However, few schools in Australia have in place a mechanism to identify and help children before failure takes place. In most cases, there is no systematic identification process until Year 3 (when the first NAPLAN results are released in Australia), by which time successful intervention remediation is more difficult and more costly. Most states and territories in Australia do not currently have universal, systematic, evidence-based early screening to identify at-risk students who need additional instruction and immediate interventions. The current approach is inconsistent and relies mostly on non evidence-based reading assessments, such as Running Records. This leads to many at-risk students not being identified and not receiving intervention even close to early enough.

Running Records are based on the now-discredited multi-cueing model of reading. It focuses on language meaning much more than language structure (speech sounds, spelling and meaningful parts in words). Running Records do not attempt to assess children's phonological awareness, whereas research informed by Rowe's report (2005) shows phonological skills are strong predictors of later reading success or difficulty, especially in Kindergarten and Year 1.

During my international travels, the preventive model was identified as the most effective approach across all five countries with several successful initiatives to improve screening procedures. The window of administration of screening procedures might vary in length and the timing change across countries, but the most effective international practices involved the systematic use of an early universal screener to identify students at risk for reading difficulty to assess their learning gaps, as early as pre-school all the way to Year 8. The following section will highlight in more detail the screening procedures in France, England and the State of Ohio in the US. Each has mandated evidence-based screening measures supported by research with strong internal and external validity and reliability that have been linked to the Science of Reading instruction and how students acquire foundational reading skills.

23 Torgesen, JK & Burgess, SR (1998). Consistency of reading-related phonological processes throughout early childhood: Evidence from longitudinal-correlational and instructional studies. *Word Recognition in Beginning Literacy, 161*, 188.
24 Juel, C (1988). Learning to read and write: A longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology, 80*, 437—447.
25 Francis, DJ, Shaywitz, SE, Stuebing, KK, Shaywitz, BA & Fletcher, JM (1996). Developmental lag versus deficit models of reading disability: A longitudinal, individual growth curves analysis. *Journal of Educational psychology, 88*(1), 3.
26 Pfeiffer, S, Davis, R, Kellog, E, Hern, C, McLaughlin, TF & Curry, G (2001).The effect of the Davis Learning Strategies on First Grade word recognition and subsequent special education referrals. *Reading Improvement, 38*(2), 1-19.
27 Shaywitz, S (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems at any level*. Knopf, New York, NY.

France

Reading statistics

The PIRLS (Progress in International Reading Literacy Study), which involved comprehensive assessments of reading literacy for students in Year 4, shows a systematic decline in reading comprehension since 2000 in France compared to other OECD countries.[28]

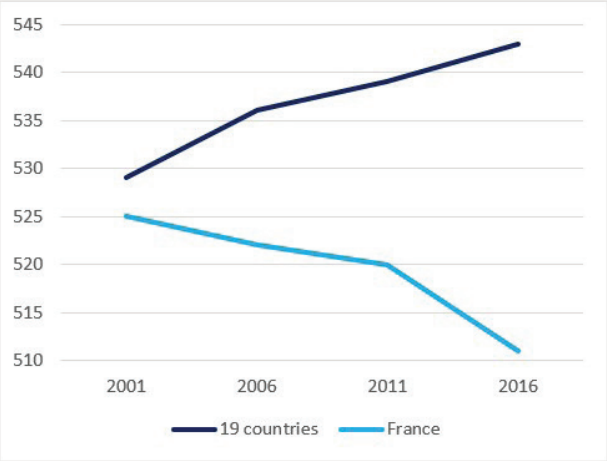


Figure 6: Year 4 students reading achievement in France from 2001 through to 2016 (Figure retrieved and adapted from Dehaene, 2019:11)

Another statistic from PISA shows that 21% of students in France did not achieve minimum reading proficiency in 2018 and the average performance in reading has not changed significantly since the first edition of PISA in 2000 (like in Australia). The OECD report revealed that the reading performance of 15-year-olds in France is strongly correlated with their socioeconomic and cultural backgrounds. Low-performing students are more frequently concentrated in the same schools, and this reinforces inequalities. The core of the discussions in France revolves around addressing policy and practical obstacles to achieve greater equity in education.

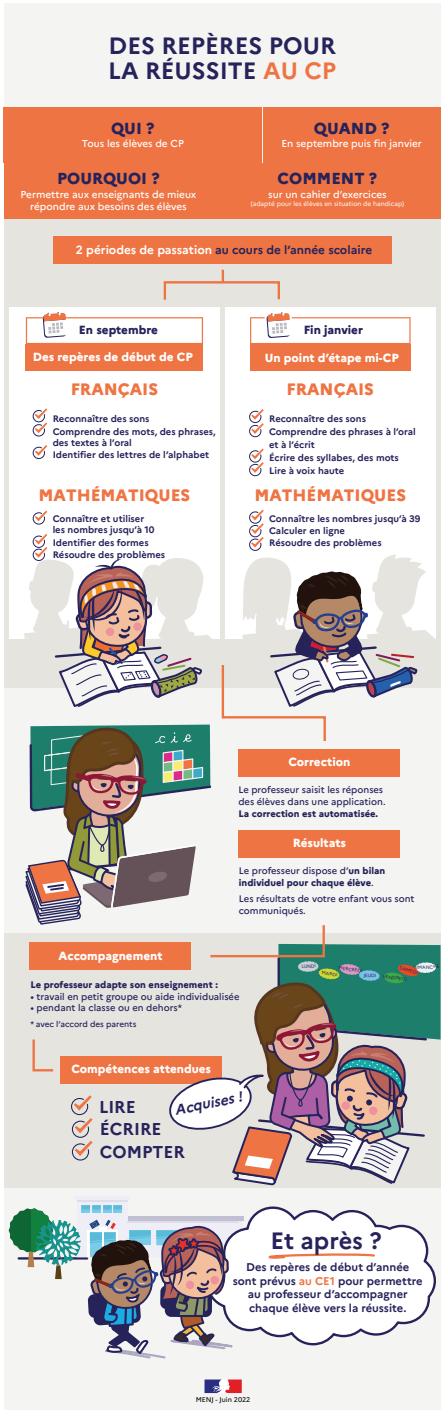
Recent policies and screening practices in France

In 2018, the former French Minister of Education Jean-Michel Blanquer created the constitution of the Scientific Council of National Education (CSEN), which is responsible for providing advice and expertise in education. CSEN is led by Professor Stanislas Dehaene, Professor of Experimental Cognitive Psychology, at the Collège de France and Director of Neurospin, a research centre for innovation in brain imaging. The Council was initially composed of 23 researchers, coming from a range of disciplines, including education science, cognitive psychology, economics and sociology. The CSEN members evaluate current instructional approaches and offer new guidelines based upon the analysis of international research. They are divided into several working groups and each group is in charge of investigating a different education-related theme. One group is dedicated to research focused on 'Evaluations and Interventions' and has been influential in introducing new assessment requirements and tools at a national level (also see in Chapter 6).

Since the 2018–19 academic school year, all French students in their first year of primary school have been universally screened to measure their performance in reading and mathematics as well as their progress through to the second year. They are then screened later in Year 6. This is part of the program EvalAide (*Evaluer pour mieux aider* meaning 'Assess to provide better support'), designed to assist teachers in identifying students who may be at risk of not meeting grade-level expectations, with the goal of preventing the development of learning difficulties or disabilities in later years.

From the interviews conducted with Professor Dehaene and Dr Cassandra Potier-Watkins, members of the CSEN and researchers in cognitive science, the screening tools can be seen to have great validity (as in, they measure what is intended to measure) and reliability (the test used to collect data produces accurate results). It was reported that the national assessment is especially useful because it can detect academic growth at a granular level, depending on a child's age, month by month, as well as support teachers with the early identification of students at risk and ensure they provide targeted interventions. This is useful, given the two international comparative studies in education development, PISA and TIMMs, are only administered with students aged 15 and 9, after the most effective window of identification and, therefore, do not ensure the optimal effectiveness of interventions.

28 The IEA's Progress in International Reading Literacy Study (PIRLS) is an international study of reading (comprehension) achievement in fourth graders. It has been conducted every five years since 2001 by the International Association for the Evaluation of Educational Achievement (IEA). The study is designed to measure children's reading literacy achievement, to provide a baseline for future studies of trends in achievement, and to gather information about children's home and school experiences in learning to read.



Universal screening in Year 1	
Who? All students enrolled in Year 1.	**When?** In September and at the end of January **The academic school year starts in September in France and ends in June the following year.*
Why? To ensure teachers can respond to the individual needs of their students, matching the level of instruction to the level of need.	**How?** Paper-based test.
Two tests in Year 1	
September (T1) At the beginning of Year 1 to gather information about students' academic performance.	**End of January (T2)** 'Check-in point', halfway through Year 1 to check student progress.
Reading Manipulate phonemes and syllables. Phoneme-grapheme correspondence. Understand words, phrases and text orally. Identify the letters in the alphabet and their sequence.	**Reading** Identify and manipulate phonemes and syllables. Phoneme-grapheme correspondence. Understand words, phrases and text orally and in written format. Write syllables and whole words. Read aloud.
Correction The teacher enters the answers using an online platform. The correction is automatised.	
Results Individual reports are provided to teachers for each student and the results are reported to the Department of Education.	
Support Teachers adjust their instruction based on the results. They might provide instruction in smaller groups with targeted activities or provide additional support outside the classroom, with parental consent.	
Outcome expectations • Reading • Writing	
Next? Another screening test (T3) is administered at the beginning of Year 2 to help teachers provide support that brings all students onto a successful pathway.	

Figure 7A: The original document sent to parents about the EvalAide program and its translation (on the right). More information is available on the Eduscol platform from the Ministry of National Education (officially called Ministère de l'Éducation Nationale, de la Jeunesse et de la Vie Associative).[29]

29 EDUSOL website: https://eduscol.education.fr/887/evaluations-de-cp-ce1-6e-tests-de-positionnement-en-seconde-et-cap

The national standardised French screener was inspired by the implementation of previous successful international initiatives, including the ALLU tests in Finland, the IUP in Sweden, the Singapore Reading and English Acquisition program (REAP) and the Phonics Check mandated in England since 2012 (see Part 2).[30] It is based on a 'Response to Intervention' (RtI) approach where struggling students are identified early on and given the support they need to thrive in school. The RTI process begins with high-quality instruction and universal screening of all children in the general education classroom. Individual students' progress is monitored, and results are used to make decisions about further instruction and intervention.

The screener is administered at the start of Year 1 to ensure teachers have time to intervene, put in place support and adjust interventions for the children identified as at risk for developing later reading (and mathematics) difficulties. It is conducted up to three times from Year 1 through to Year 2, as follows:

T1: At the beginning of the Cours Preparatoire (CP) (the equivalent of Year 1 in Australia)

T2: In the middle of the Cours Preparatoire (CP) (the equivalent of Year 1 in Australia)

T3: At the beginning of the Cours Elementaire 1 (CE1) (the equivalent of Year 2 in Australia).

Screening measures are also administered in Year 6 to check the 'health' of the system, whether students are at grade-level expectations, and to identify older students with reading difficulties who require additional support.

At the beginning of Year 6, students are administered an online universal screener, including two submeasures. The first one is oral reading fluency (how many words a child can read in one minute), as this is shown to be strongly correlated with reading comprehension. Research shows that fluent readers who can read with appropriate speed and accuracy free-up cognitive resources for higher-level comprehension tasks such as making inferences and analysing text structures. However, as students become more skilled at decoding and develop a wider range of strategies for comprehending texts, other factors such as background knowledge and vocabulary become more important for predicting reading comprehension. The second measure assesses

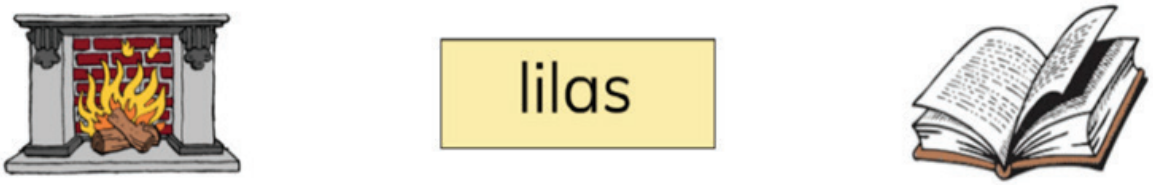


Figure 7B: An extract of the online test assessing students' ability to determine whether the suggested string of letters in the box is a real word or a pseudoword (or nonword), as part of the universal screener administered to the Year 6 cohort. The student must click on the dictionary icon (right) if they think it is a real word or click on the chimney icon (left) if they think it is a pseudoword.

students' ability to distinguish between real and nonwords ('lexical decisions') to understand students' reading difficulties. The test includes 120 items (60 words and 60 nonsense words). Students must respond as quickly as possible with accuracy, and they receive immediate feedback when an error occurs.

In 2020[31], the results of these measures revealed that 45% of Year 6 students were fluent and accurate readers, while 15% of the students were identified as at risk, scoring below Year-3 level expectations (three years behind their year level). The study revealed that older struggling readers had not fully automated their decoding skills and lacked vocabulary knowledge.

The national evaluations are reviewed during the CSEN working group sessions and feedback is collected from all stakeholders. The types of skills measured within the EvalAide program are also subject to change based on the latest research.

30 Sweden: https://www.skolverket.se/regler-och-ansvar/ansvar-i--skolfragor/individuella-utvecklingsplanen-iup; Finland: Full article: Three Studies on Learning to Learn in Finland: Anti-Flynn Effects 2001–2017 (tandfonline.com); England: https://www.gov.uk/government/collections/statistics-key-stage-1; Singapore: The Singapore Reading and English Acquisition program - ScienceDirect

31 CSEN Note no.5 'Evaluer la lecture en 6eme' (May 21, 2021) Available at: Note_CSEN_2021_02.pdf (reseau-canope.fr)

The initial measures were identified because they have strong predictive values that can determine whether a child is at risk of developing learning difficulties or not at risk. This has implications for classroom teaching practices because it provides teachers with valuable information to ensure at-risk students receive targeted intervention at the right time (as early as possible). According to a survey conducted in 2018 among a sample of teachers, 60% of participants reported that the EvalAide program successfully identified or confirmed learning difficulties for some of their students. Additionally, 37% of teachers reported that these national evaluations influenced their teaching practices. In 2020, the percentage of teachers reporting success with the EvalAide program increased to 83%, while 43% reported that the national evaluations influenced their teaching practices.

Additionally, the exercises in EvalAide change between the beginning of Year 1 (T1), the middle of Year 1 (T2) and the beginning of Year 2 (T2). The tasks are adapted based on the academic performance expected to be reached at a specific point in time. Thus, a student's result may vary from 0 to 10. This shows their ranking among the rest of the group. This way, teachers can measure students' comparative progress. The practical constraints that influenced the design of the EvalAide program are described in more detail in a text co-authored by Dr Stanislas Dehaene and Johannes Ziegler and the members of the 'Evaluations and Interventions' working group (CSEN).[32]

There are five major advantages with the implementation of the EvalAide program. These include:

- **The scope of assessment**, measuring multiple reading skills. Unlike the Phonics Check in England (next section), which focuses on decoding skills, the French evaluation tools assess both domains of the Simple View of Reading, including language comprehension and word recognition.
- **Limited time to complete the test**. The same amount of time is given to all students to facilitate comparative judgements. This reduces problems linked to attention and concentration. Also, the oral reading fluency measure is limited to one minute because studies have shown, in both theoretical and empirical research, that it serves as an accurate and powerful indicator of overall reading competence.
- **The strategic administration windows**. The first test, administered at the beginning of Year 1, gives useful baseline data for teachers to provide classroom support and ensure students' individual needs are met early. The second window of administration (mid Year 1) is like a 'check-in' point ('point d'etape') to assess student progress against what has been taught. This allows teachers to identify students who are not making desired growth in reading. Further assessment can be used to identify which components of reading underpin their difficulties. The third test is a way to determine whether interventions are still needed and whether all children have reached their reading goals and met grade-level expectations at the beginning of Year 2.
- **The evaluation has longitudinal characteristics**. It is administered three times a year to all French students, at the start of Year 1 (in September), at the start of Term 2 (in January) and again the following year, at the start of Year 2 (in September). The same students are assessed to detect any changes that might occur over this period. It closely monitors student progress and evaluates the effectiveness of instruction and/or interventions.
- **The provision of a quick data report**. The results are provided to schools within two days, including a comprehensive report for teachers and parents. Communication with parents is a key part for successfully implementing early screening. Parents must understand that the screening is universal, that their child is not being singled out, and that the purpose of the screening is to see if the child may need additional support for interventions. Some parents might be concerned that screening could lead to their child being labelled or stigmatised. Schools must explain that screening helps avoid the risk of a student developing reading difficulty and/or disability or needing more intensive special education support later on.

32 Available at https://www.reseau-canope.fr/fileadmin/user_upload/Projets/conseil_scientifique_education_nationale/15._EvalAide_CSEN.pdf

Overall, the national standardised assessments are based on five principles:

1. Rigorous and scientific assessment tools, developed by the Scientific Council for National Education (CSEN) in close collaboration with the Directorate of Evaluation, Forecasting and Performance (DEPP) and the General Directorate for School Education (DGESCO).
2. Validity and reliability.
3. Provision of results to families.
4. Support for teachers to respond effectively to students' needs.
5. Provision of tools for monitoring student progress at multiple levels, including at national, regional and school levels.

In my interviews, it became evident that the French model is strengthened by having many mechanisms in place for evaluating the education system and its actors. French students in the early years are assessed frequently, which helps teachers inform their instructional approaches and provide timely interventions for students who need it the most. Another advantage is the access to national statistics, which can provide a detailed map of common areas of difficulties in Year 1, Year 2 and Year 6, as well as highlighting geographical inequalities in educational outcomes, at multiple levels (i.e. classes, schools, cities, etc.).

In 2023 the National Education Ministry has decided to implement a set of new measures to address low levels in reading and mathematics by including two extra hours of reading and writing per day in the last two years of primary school (in Year 4 and Year 5), as well as short daily dictation exercises. The Education Minister, Pap Ndaye, reported that all students who are unable to read a text with fluidity and expression, at a speed of 90 words per minute, must benefit from specific daily practice for at least four weeks.[33] The Ministry is also planning the introduction of national standardised assessments in CM1 (the equivalent of Year 4 in Australia) and 4eme (the equivalent of Year 9), for French and maths, from the start of the 2023 school year. Similarly, an extra hour of French and maths will be added to the curriculum (replacing technology class) for students entering secondary school.[34] Additional comments and observations were gathered in the Fellowship interviews conducted with Professor Stanislas Dehaene and Cassandra Potier-Watkins, Patrick Debut (CSEN General Secretary), and Anne Valat (CSEN Project Manager), and from attending the plenary session on 20 September 2022 at the Ministry of Education. Below are additional points covered in the interviews.

- When EvalAide was first introduced and mandated for all Year 1 and Year 2 students, it received significant pushback from teachers. It has now become common practice and more teachers are using diagnostic testing to remedy students' learning gaps.
- Current practice in schools is not always reflective of what the research says works.
- There is a need for teacher training on how to use data to respond to student needs and inform practice, including the promotion of intervention strategies and progress monitoring.
- Training literacy coaches that could be deployed to schools is being considered so that teachers can receive targeted support to analyse data and embed evidence-based instructional practices in reading.

Me, Stanislas Dehaene, Cassandra Potier-Watkins and Anne Valat at the French Ministry of National Education after attending the plenary session.

33 Available at: https://www.rfi.fr/en/france/20230112-french-education-minister-presents-plan-to-tackle-drastic-school-level-slump
34 Available at: https://eurydice.eacea.ec.europa.eu/national-education-systems/france/national-reforms-school-education

England

Reading statistics

Fifteen-year-old students in the United Kingdom scored above the OECD averages in reading. However, the mean performance in reading shows scores have remained broadly similar in PISA tests since 2006. Thus, reading scores have improved in England, but not as significantly as one would expect given the focus on improving reading standards, including the promotion of phonics instruction in schools and the introduction of the Phonics Screening Check.

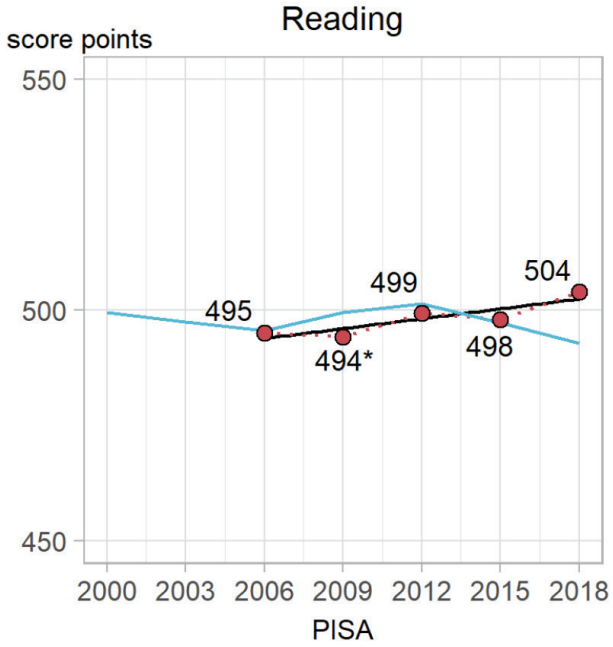


Figure 8: The trends in performance in reading for the period 2000–2018[35]

The Phonics Screening Check

In 1998, the English government made its initial effort to elevate the status of phonics through the National Literacy Strategy (NLS). This strategy was influenced by the UK Independent Review of the Teaching of Early Reading in 2006, also known as 'the Rose Report.' Following this, the School Standards Minister, Nick Gibb, established a legal obligation for all teachers to use a systematic synthetic phonics approach in teaching early reading.

The policy of teaching synthetic phonics was enforced in various ways.

- The policy provides advice on a list of 45 systematic synthetic phonics programs that have been validated based on a quality-assurance process.[36] Prior to this, the UK government also commissioned and released Letters and Sounds[37] which was offered free of charge to schools.
- From 2011–13, the UK government provided funding for primary schools to buy listed phonics programs, including training, sets of decodable books and additional resources, further supporting schools to use high quality materials aligned with a phonics approach.
- Ofsted[38], the government office responsible for educational standards, appointed inspectors who encouraged a strong focus on synthetic phonics teaching during their visits to schools.
- Universities were held accountable and expected to make the shift to structured literacy and include phonics instruction in their Initial Teacher Education courses to sustain their accreditation.
- English Hubs were established to offer support to local schools (Chapter 6).

In 2012, the Department for Education introduced new assessment requirements and mandated a quick low-stakes screening check for all children at the end of Year 1, and again at the end of Year 2 for all children who did not pass the first test (had fallen below the 'pass threshold' of 32/40). The introduction of the Year 1 Phonics Screening Check (PSC) is to ensure that schools are equipped to teach children to read. The purpose was two-fold:

- Provide a policy lever to strengthen phonics teaching in primary schools
- Identify students with reading difficulties who require extra support with decoding.

Considered a 'light touch assessment', the phonics screening check is a quick and easy individual assessment used by teachers to confirm that all children have learned phonic decoding to an age-appropriate standard. The check includes

35 Sizmur, J, Ager, R, Bradshaw, J, Classick, R, Galvis, M, Packer, J & Wheater, R (2019). Achievement of 15-year-olds in England: PISA 2018 results. Research report, December 2019.
36 UK Government Department for Education (2023) Guidance: Choosing a phonics teaching programme - GOV.UK (www.gov.uk)
37 Letters and Sounds is a synthetic phonics program developed by the Department for Education in the UK which is based on a systematic approach for teaching children to read using phonics. IT is used in many schools in England, but is not a mandatory part of the National Curriculum.
38 Office for Standards in Education, Children's Services and Skills (OFSTED).

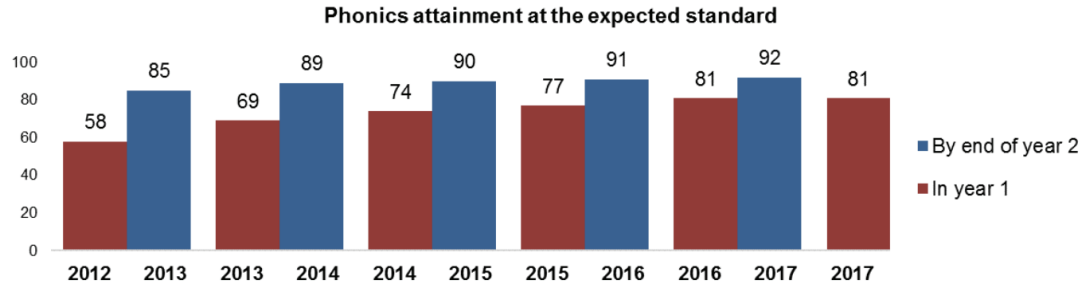
the requirement for students to decode and read aloud up to 40 words, including real and nonsense words (called 'pseudowords[39]'). It is completed in June and updated yearly. This means that students are checked with a different set of words to those used in the previous year. Teachers then analyse the results and, if necessary, plan for any additional support students might need.

The PSC is an important tool because:

- it is a valid measure of phonic decoding skills
- it can be used to identify children at risk of reading difficulties
- teachers can plan for instruction that supports progress in reading
- it can help teachers see who is guessing, and not using decoding strategies in reading

Before it was officially mandated in England, the PSC was first trialled in 300 public schools. The bar graph below shows that just 58% of six-year-olds reached the pass mark of 32 out of the 40 in that year. Later, in 2016, 81% of six-year-olds reached that standard, with 91% of children reaching that standard by the end of year 2.[40]

More than 9 in 10 pupils meet the expected standard in phonics by the end of year 2



More than 4 in 5 pupils (81%) met the expected standard in the phonics screening check at the end of year 1 in 2017, a 1 percentage point increase from 2016. By the end of year 2, more than 9 in 10 pupils (92%) met the standard, an 11 percentage point increase since the end of year 1.

Figure 9: England's Phonics results by year level since the first year of implementation in 2012 through to 2017[41]

Findings about the importance of early screening procedures can be found in the National Report for England.[42] The authors show the details of the relationship between pupil score on the PSC (in Year 1) and pupil scores in the Progress in International Reading Literacy Study (PIRLS) tests (in Year 4). This was the first PIRLS cohort to have been through the phonics check back in 2012. It appears that the reading performance of students by the middle of the first grade is highly predictive of their fourth-grade performance.

The graph in figure 10 shows that pupils who scored above the threshold score in the phonics check were also the highest scoring group in PIRLS 2016. In contrast, pupils who did not reach the 'expected standard' in the phonics check performed below England's overall average. The findings of this study present a strong case for the teaching of phonics in the early years. The report shows a clear and significant relationship between the performance on the phonics check and performance in PIRLS 2016.

Interestingly, the results show reading has improved for pupils from all backgrounds, with the low-performing pupils making greater gains faster. In the conclusion of the study, the authors highlight the two characteristics that were most strongly predictive of PIRLS performance:

- prior achievement in the Year 1 phonics check
- resources at home, both in terms of educational resources (e.g. the number of books the pupil has in their home) and socioeconomic status

39 A pseudoword word is a string of letters that is pronounceable and conforms to the English orthographic pattern, but has no meaning.
40 Past versions of UK Phonics Screening Tests are freely available online. Here are links to the 2022, 2019 and 2018 versions (in 2020 and 2021 tests didn't happen because of the COVID-19 pandemic).
41 Department for Education (6 October 2022). National Statistics. Phonics screening check and key stage 1 assessments: England. Available at: Phonics screening check and key stage 1 assessments: England 2022 - GOV.UK (www.gov.uk)
42 McGrane, J, Stiff, J, Baird, JA, Lenkeit, J & Hopfenbeck, T. (2017). Progress in international reading literacy study (PIRLS): National report for England. Department for Education.

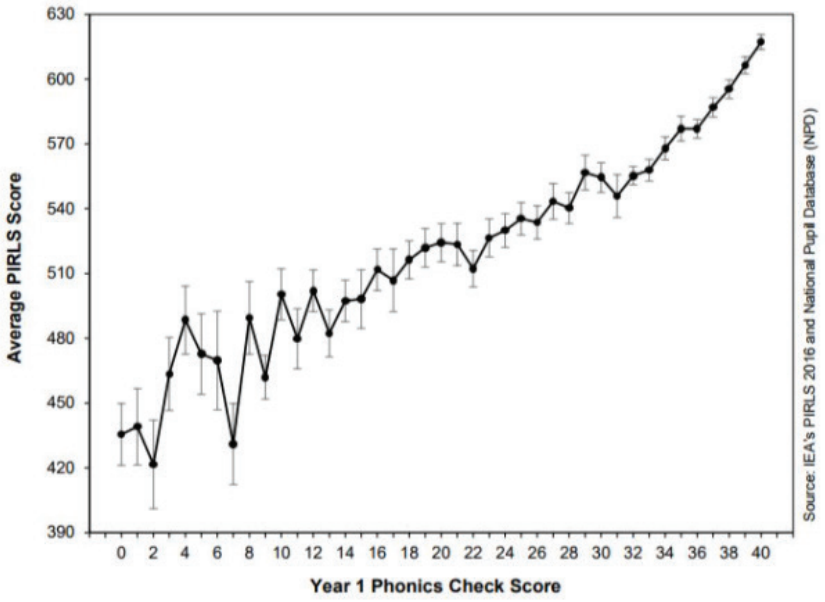


Figure 10: Performance of England's pupils in PIRLS 2016 by their score in the Year 1 phonics check (McGrane et al., 2016:64)

United States

Reading statistics

Little improvement has been reported in the National Assessment of Educational Progress (NAEP) scores in reading across the United States in the last 30 years (see figure 11). The 2019 NAEP results find 35% of fourth-grade students to be 'below basic' on the reading assessment. In 2022, fourth- and eighth-grade reading scores declined for most states/jurisdictions compared to 2019.[43]

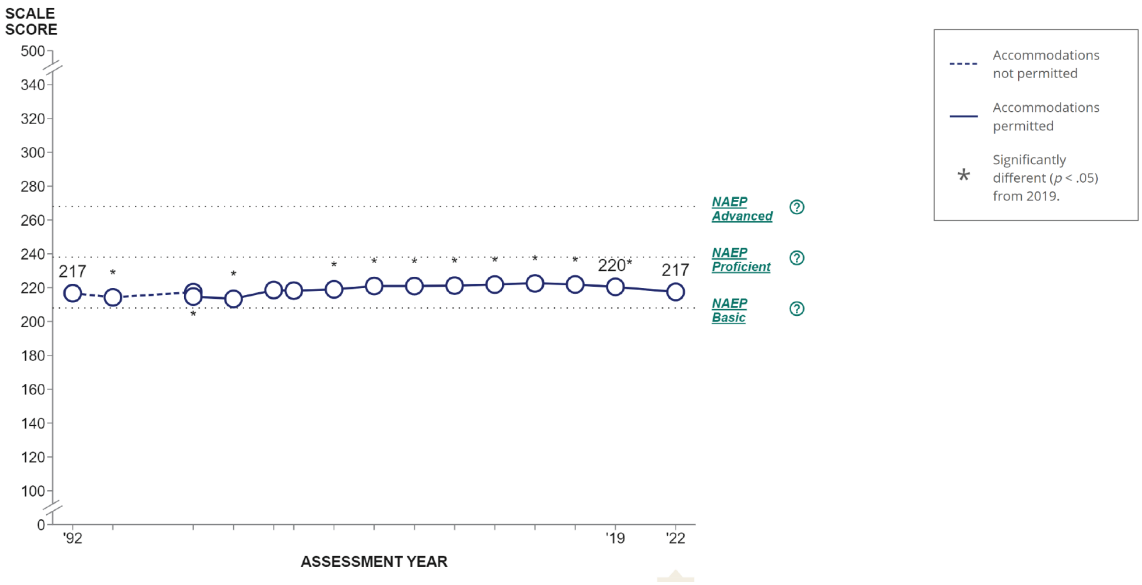


Figure 11: Trend in fourth-grade NAEP reading average scores (National Centre for Education Statistics, 2022)

43 Available at: https://www.nationsreportcard.gov/highlights/reading/2022/ [Retrieved 22 October 2022].

One state had successfully improved scores in reading – Mississippi. Considered as the poorest state in the US, Mississippi now has fourth graders reading on par with the national average. Their journey is worth noting and was reported by Emily Hanford, the senior education correspondent for APM reports in the *New York Times*.[44] Inspired by this success story, other states, like the State of Ohio, have since proposed changes in the hope that they increase performance in the teaching of reading for all students.

Mandatory dyslexia screening in the State of Ohio

There is a newly proposed law in Ohio to screen all children under age six for being at risk of dyslexia, with a tool designated for this purpose. The new law also requires that reading instruction based on science be implemented statewide to lift schools' overall performance. To date, many American states, referred to as the 'States of Dyslexia', have adopted similar dyslexia legislations and have screening requirements. The website improvingliteracy.org contains an interactive map that provides an overview of states' dyslexia requirements, policies and related initiatives in K-12 settings. The platform also provides a wide range of tools and resources addressed to parents, families, teachers and schools for improving outcomes for students with literacy-related disabilities, including dyslexia.

Figure 12: The map provides information about states' policies concerning screening for dyslexia and other specific reading disabilities. It shows that most states (in blue on the map) have passed dyslexia laws which require screening procedures in the early years of schooling.[45]

In January 2021, Governor DeWine of Ohio signed the *Right to Read Law* (HB436), a set of regulations strengthening dyslexia supports for Ohio's children. The new law requires public and charter schools to administer a universal screener and use instructional programs based on the Science of Reading. To this end, the law provides parents the legislative support needed to identify symptoms of dyslexia earlier in their children and give them access to structured literacy, which is high-quality reading that includes the essential components of effective reading instruction, as backed by scientific research. With heavy pressure from parent groups, some school districts in Central Ohio have already been providing professional development aligned with scientifically based reading research (chapter 6).

Listed below are the specific legal requirements for schools to follow.

1) **Administer a universal screening** for students enrolled in first year of compulsory schooling to Year 3

44 Hanford, E. (5 December 2019). There is a right way to teach reading, and Mississippi knows it. *The New York Times*. Available at: https://sciencelookup.org/wp-content/uploads/2021/09/Opinion-_-There-Is-a-Right-Way-to-Teach-Reading-and-Mississippi-Knows-It-The-New-York-Times.pdf [Accessed 18 November 2022].

45 National Center on Improving Literacy (2020). 'State of Dyslexia' [online] Available at https://improvingliteracy.org/state-at-dyslexia [Accessed 5 January 2023].

2) **Identify each student that is at risk of dyslexia** based on the student's results on the Tier 1 screening measure and notify the student's parent or guardian that the student has been identified as being at risk.
3) **Monitor the progress** of each at-risk student toward attaining grade-level reading and writing skills for up to six weeks. The school should check each at-risk student's progress on at least the second week, fourth week, and sixth week after the student is identified as being at risk. If no progress is observed during the monitoring period, the school should notify the parent of the student and administer a Tier 2 dyslexia screening measure.
4) **Report to a student's parent or guardian** the student's results on a Tier 2 screening measure approved by the Ohio dyslexia committee within 30 days after administering the measure. If the student is identified as having dyslexia tendencies, the student's parent or guardian should be provided with information about reading development, the risk factors for dyslexia, and descriptions for evidenced-based interventions.
5) **If the students present markers of dyslexia**, each school should do the following: (1) comply with *Ohio's Dyslexia Guidebook*; (2) select screening and intervention measures to administer to students; (3) establish a multidisciplinary team to administer screening and intervention measures and analyse the results of the measures. The team should include trained and certified personnel and a stakeholder with expertise in the identification, intervention and remediation of dyslexia; and (4) report to the Education Department the results of screening measures administered.

In an interview with Mike McGovern, parent of a son with dyslexia and President of the International Dyslexia Association (IDA) Central Ohio Branch who serves on the Ohio Dyslexia Committee, he reported that the new Ohio Dyslexia Law has resulted into four major changes:

1) Universal screening requirements
2) The creation of *Ohio's Dyslexia Guidebook*, including guidelines for instruction and interventions
3) Provision of professional learning for teachers
4) The creation of the Ohio Dyslexia Committee

Public schools must select from the Ohio Department of Education's (ODE) list of universal screening measures, which includes 1) DIBELS 8th Edition; 2) Acadience Reading; 3) AIMSweb Plus universal screener.[46] The table below outlines the skills that should be assessed at each grade level.

Skill to screen	Grade			
	K	1	2	3–6
Phonemic Awareness	X	X		
Letter Naming	X	X		
Letter-Sound Correspondence	X (starting in midyear)	X	X (through beginning of 2nd)	
Real and Non-Word Reading		X (starting in midyear	X (non-words through beginning of 2nd)	
Oral Text Reading Accuracy and Rate		X (starting in midyear	X	X
Comprehension				X

Table 2: Skills measured by universal screening (*Ohio's Dyslexia Guidebook*, 2022)

46 An updated list has been released for 2023–24. Available at: https://education.ohio.gov/Topics/List-of-Approved-Assessments#2019-2020%20List%20of%20Approved%20Assessments

The screening is administered to all first year of compulsory schooling students up to three times a year and ensures the early identification of students at risk for later reading difficulty, such as dyslexia. Preschools are also encouraged to utilise a form to document concerns and history for students transitioning into first year of compulsory schooling. These newly established identification procedures have increased school accountability and guaranteed the use of valid screeners in schools.

The Ohio Dyslexia Committee appointed 11 members, including Mike McGovern, Dr Rebecca Tolson and Dr Amy Murdoch, whom I met during my travels. The committee developed *Ohio's Dyslexia Guidebook* for schools to follow (adopted in May 2022, see figure 13)[47], in collaboration with ODE. The latter wanted to ensure school districts were guided in the process as the dyslexia law was implemented. The document is meant to offer guidance on best practices for screening students who may be at risk for dyslexia and for providing intervention and remediation to students who are identified as dyslexic or displaying dyslexic characteristics. It is worth noting that the guidelines are careful not to describe children who are flagged for intervention as having dyslexia. 'When we use the word "identified" [as dyslexic] what that means is you've had a full evaluation by a person properly certified to do that type of assessment that determines that child has dyslexia,' McGovern said. 'We very specifically and carefully say, "Your child has been flagged as possibly having shown the signs of dyslexia." It is not meant to be an evaluation or a diagnosis. It is about knowing whether your child is going to struggle in reading based on this very short assessment.'

A child flagged in the screenings will receive reading intervention. With the intervention, many children will obtain additional skills to learn to read, and will become proficient readers without ever having to undergo a dyslexia assessment and diagnosis or participate in special education.

When interviewed for this Fellowship, the committee reported facing many challenges at the time of the creation of the document. For example, the committee members initially recommended the implementation of a screener from kindergarten through to Year 3 but the state board of education dismissed it. Only students in kindergarten were initially required to be universally screened and no specific timeline was required.

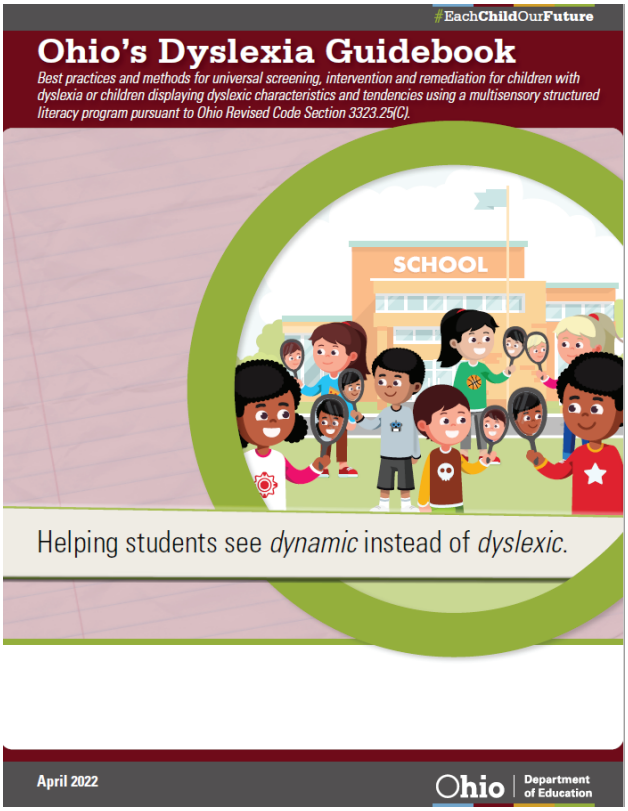


Figure 13: The front cover of *Ohio's Dyslexia Guidebook*[48]

This year, additional changes were made. During the 2023–24 school year, all K-3 students are required to be screened for dyslexia. Transfer students who have not been previously screened will be tested as well. Any first- through sixth-grade students can be evaluated for dyslexia if requested by a parent or teacher. After that, dyslexia screening is only required for kindergarten. The Ohio Legislation Committee is currently working on amendments to the law that require K-3 dyslexia screening to be ongoing and without expiration.

McGovern also reported about the strong pushback the committee received from their opponents, especially that coming from some active members of the Ohio State University who were still promoting a whole-language approach. Several amendments were added during the drafting process before the guidebook could be officially approved by the state board of education.

47 Available at: https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Literacy/Dyslexia/Dyslexia-Guidebook-update0722.pdf.aspx?lang=en-US or Ohio's Dyslexia Guidebook (osu.edu)

48 Ohio Department of Education (July 2022). *Ohio's Dyslexia Guidebook*. Available at: https://ohiofamiliesemgage.osu.edu/wp-content/uploads/2022/08/Dyslexia-Guidebookupdate0722.pdf

In line with the state policies to increase reading achievement, *Ohio's Dyslexia Guidebook* promotes evidence-based practices and instruction and intervention grounded in the Science of Reading that all Ohio public and charter schools must follow. To this end, HB436 not only mandates the dyslexia screenings and the creation of the guidebook by the Ohio Dyslexia Committee, but requires that districts also provide related professional development and establish a certification process for teachers in structured literacy reading instruction. The reading curriculum in school districts will need to align with the Science of Reading and the recommendations of the National Reading Panel.[49] This marks a considerable change in teacher mindset and shows a massive shift at a system/state level to a structured literacy approach.

More recently, in his 2023 state address, Governor DeWine explained his plan to make the Science of Reading Ohio's mandated method of teaching reading. His proposed bill would have school districts select one high-quality evidence-based phonics program from a list the Ohio Department of Education will create. He also asked the state legislature to ban the use of any 'three-cueing' materials or lessons – a popular approach known as 'whole language' which has long been discredited. DeWine is seeking $129 million from the legislature to retrain teachers and replace primary school textbooks.

'We have the knowledge and skill to screen millions of children, and yet the rate of low literacy levels will not change if we do not implement adequate early-intervention protocols and ensure high-quality reading instruction.' ***Dr Gaab (2019)***

Using assessments to identify Year 3 and above students with reading difficulties

Discussion about universal screening and diagnostic tools

Relying on teachers' judgments of students' reading skills alone may be insufficient to accurately identify students at risk with/experiencing reading difficulties. Therefore, it is crucial to have validated universal screening tools. Based on the Fellowship interviews conducted with literacy experts, the key areas for screening students in Year 3 and beyond were identified to include:

- Phonemic Awareness – Segmenting & Manipulating (i.e. adding, omitting, and substituting individual sounds)
- Rapid Automatized Naming (RAN)
- Decoding (Word) Fluency – Real and nonsense words
- Oral Reading Fluency – Rate and accuracy
- Reading Comprehension
- Spelling error analysis

Throughout my Fellowship trip to the US, I noted that Acadience Reading (previously known as DIBELS Next) and DIBELS 8th Edition were the two universal screeners most used in schools to assess the acquisition of literacy skills, both are aligned to reading research. These screeners 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 the first year of compulsory schooling through to Year 8. Each subtest (see Table 3) has been thoroughly researched and has been demonstrated to be reliable and a valid indicator of early literacy development. When implemented as recommended, these tools can be used to evaluate individual student development and help schools determine the instructional groupings for students who require additional support.

49 National Reading Panel. (2000). A report of the National Reading Panel: Teaching children to read. Washington, DC: National Institute of Child Health and Human Development. Available at: https://www.nichd.nih.gov/publications/pubs/nrp/findings

Acadience Reading[50] (previously known as DIBELS Next)	DIBELS 8th Edition[51] (Dynamic Indicators of Basic Early Literacy Skills)
Contains the following measures:	Contains the following measures
• First Sound Fluency	• Letter Naming Fluency
• Letter Naming Fluency	• Phoneme Segmentation Fluency
• Phoneme Segmentation Fluency	• Nonsense Word Fluency
• Nonsense Word Fluency	• Word Reading Fluency
• Oral Reading Fluency (including a retell fluency component) x 3 passages for every testing period	• Oral Reading Fluency x 1 passage for every testing period only
• MAZE (start at Year 3)	• MAZE (start at Year 2)
Extra	**Extra**
• Progress Monitoring resources	• Progress Monitoring resources
• Diagnostic Screener	• Dyslexia screening
• Dyslexia screening	

Table 3: A brief outline of the measures for Acadience and DIBELS 8th screeners

The measures used with each tool are designed to be employed frequently, up to three times a year, and are sensitive enough to detect student learning and growth over time. Both tools are suitable for secondary students up to Year 8 and include passage reading and comprehension measures that were developed specifically for higher grade levels. The advantage gained from extending testing into higher grade levels is that we can continue to track students and monitor the effectiveness of school systems through middle school. (See Appendix 3, the decision-making process when using DIBELS measures to identify older students experiencing difficulty. It tells when to intervene and what skill to check next.)

Interviews were conducted with the co-authors or reviewers of each universal screener, including:

- Dr Roland Good, President of Acadience Learning and co-author of Acadience Reading. He has led the program of research and development.
- Dr Gina Biancarosa, Professor in the Department of Special Education and Clinical Sciences in the College of Education at the University of Oregon. She has led the development of DIBELS 8th Edition.

In Australia, the Catholic Education Archdiocese of Canberra and Goulburn (ACT) started implementing DIBELS 8th Edition across 48 primary schools in 2021, and teachers are required to universally screen all students from first year of compulsory schooling through to Year 2. A growing number of schools have decided to screen students up to Year 6, and there is the option to use the screening tool for the most at-risk Year 7 and 8 students. Two secondary schools have already completed the testing in 2023. The screener has proved to have been of great benefit to teachers and leaders, and has provided much assistance at a system level for making significant instructional decisions.

The introduction of the DIBELS screening tool within our system meant that previous discredited assessment methods such as Running Records, were no longer required in our primary schools. It is important to note that Running Records have been used in Australian schools to assess a student's reading accuracy and fluency. Because the records are relatively easy to administer and score, it makes them a popular choice for many teachers. However, they have serious limitations, including limited focus, limited scope, reliability issues and limited support for teaching. They do not provide a comprehensive view of a student's reading ability or progress over time, nor do they provide necessary information or support for teachers to develop effective reading instruction.

50 Free materials available for download at : https://acadiencelearning.org/acadience-reading/k-grade6/ (Kindergarten to Year 6), and https://acadiencelearning.org/acadience-reading/acadience-reading-7-8/ (Years 7-8).
51 Free materials available for download at: https://dibels.uoregon.edu/materials (Kindergarten to Year 8).

For a more detailed explanation, read the blog 'Spelfabet' by Alison Clarke, OAM speech pathologist in Australia, who described Running Records as an 'uninformative waster of teacher time'.[52]

Schools should not solely rely on one source of data and must use a variety of assessments to measure different aspects of reading ability. When interviewed for this Fellowship, Dr Tolman, lead National LETRS trainer and co-author of the LETRS program[53], shared her personal suggestions about an effective and comprehensive reading assessment battery to identify deficit skills in older struggling readers. These included: 1) Gates-MacGinite Reading Tests 2) TOWRE-2 (Test of Word Reading Efficiency), 3) TOSWRF-2 (Test of Silent Word Reading Fluency) 4) LETRS spelling screeners (basic and/or advanced), 5) LETRS phonics and word-reading survey, and 6) Phonological Awareness Screening Test (PAST). She emphasised the importance of choosing the right instructional approach with the right level of intensity (usually up to 90 minutes per day, five days a week) and adjusting the group size based on the depth of skills to remediate (smaller groups for students with higher needs). She insisted on the importance of aligning the intervention with the curriculum and making sure the content is accessible to all learners. This requires strong collaboration between mainstream and special education classrooms. Having spent 12 years designing and implementing programs for academically challenging public secondary school students, she now continues to work with K-12 teachers throughout the US and Australia and delivers teacher training.

In my interview with fluency expert Dr Jan Hasbrouck, a researcher, educational consultant and author, she talked about fluency as having a crucial role in helping students progress from initial decoding to comprehending complex text. She explained how Oral Reading Fluency (ORF) assessments have consistently been found to have a high correlation with reading comprehension, and that they are a highly efficient way to identify those students who are the furthest behind in reading. ORF can be administered to all Year 7 students upon entry and unable secondary schools to quickly identify the most at-risk students in reading. It is a valid, reliable and objective measure which consists of measuring reading rate and accuracy and is expressed in words correct per minute (WCPM). It is also quick and simple to administer and score. There are ORF norms available for students from Year 1 through to Year 8, published by Hasbrouck and Tindal[54], which can help teachers determine whether students require a fluency-building intervention when they score below grade-level expectations, or whether the student has deeper difficulty with lower-order reading skills, such as phonemic awareness and decoding, letter knowledge, knowledge of alphabetic principles and concepts of print. It could also indicate difficulties with vocabulary. In brief, ORF is a more accurate measure than teacher judgement and can be used for both screening and progress monitoring and point to some practical applications for secondary school. It is best used in conjunction with reliable and valid diagnostic assessments to inform decision making about the implementation of reading interventions, see the appendix DIBELS decision-making process.

Dr Jan Hasbrouk

52 Available at: https://www.spelfabet.com.au/2019/02/running-records-are-an-uninformative-waste-of-teacher-time/

53 The LETRS (Language Essentials for Teachers of Reading and Spelling) Suite is comprehensive professional learning designed to provide early childhood and elementary educators and administrators with deep knowledge to be literacy and language experts in the Science of Reading. The course is now available in Australia as a two-year course of study, see https://dsf.net.au/our-services/workshops-and-events/letrs

54 Hasbrouck, J & Tindal, G (2017). An update to compiled ORF norms (No. 1702). Technical report. Eugene, OR, Behavioral Research and Teaching, University of Oregon.

Additionally, there are tools available to detect and prevent language difficulties which are suitable for older struggling readers. These include the following:

- **Sentence Repetition Tasks (SRTs)**: A test in which the participant is required to repeat sentences of increasing difficulty and complexity directly after the examiner reads them. The test is sensitive to underlying difficulties in grammar and comprehension.
- **Acadience Reading Diagnostic Comprehension, Fluency and Oral Language (CFOL)**: This is specially recommended for older readers with very low language comprehension skills. The tool assesses story coherence and text structure, listening and reading comprehension, vocabulary and oral language (e.g. formal definitions, morphological awareness, figurative language, syntax), and fluency with expository and narrative texts. The interviewees noted the importance of the retelling component, especially when assessing fluency in older students (from Year 4 and above). By asking questions about what the student has read, it can tell us about their comprehension and help change the way they approach reading.

To better understand how to address the language comprehension component of the simple view of reading, interviews were also conducted with Dr Kate Nation, Professor in Experimental Psychology at the University of Oxford and an expert on language and literacy development in school age children, and Professor Marilyn Nippold, based at the University of Oregon, who has expertise in adolescent language development and disorders.

In summary, when assessing reading difficulties in adolescents, the recommendation is to take a comprehensive approach – one that considers all aspects of reading, including decoding, fluency, vocabulary and comprehension. In addition to measuring word reading skills, educators must also determine whether older students have sufficient lexical development (knowing the meaning of words and the ability to learn new words) and syntactic development (rules and patterns governing the ways in which words can be combined into phrases, clauses and sentences to express meaning). Building vocabulary and background knowledge are also critical because middle and secondary school students are expected to be able to read more complex texts to learn the content of the curriculum and gain the necessary topic knowledge. Interventions to remediate reading difficulties should address all areas of reading and target each student's underlying weaknesses.

Screening procedures in secondary schools

There are no mandatory screening procedures in secondary schools in Australia. However, without identification of students' reading needs in primary schools (and targeted additional teaching), students who arrive in secondary school as poor readers are likely to continue to struggle. There are still students entering secondary school enable to read, including 40% of 15-year-old Australians, who still cannot read at a proficient level according to PISA (2018). Next is an example of assessment methods used across a network of secondary schools in England.

Case study: The Right to Succeed in Blackpool (England)

One in 4 children in England still cannot read well by the age of 11. This figure rises to 2 in 5 among children from low-income families, according to the Literacy Trust (2014). The research shows that children living in poverty will be four months behind their peers when they start school, and this gap widens over time. On average, these children are up to two years behind their peers by the time they leave secondary school, and the cycle of disadvantage can continue into future generations.

Over two days, visits were conducted in three secondary schools located in Blackpool (North of England), one of the most deprived areas in England, in which a higher-than-expected proportion of students were below national reading benchmarks. This substantial group of students faced challenges that limit access to the curriculum and they did not engage well with reading (except for social media and other less-traditional forms of reading).

A network of secondary schools took on the challenge of lifting adolescent literacy outcomes, joining the Key Stage 3 Literacy (KS3) project, a 10-year education strategy launched in 2018, and led by a not-for-profit organisation, Right to Succeed. This is a unique initiative, underpinned by a robust use of research evidence, aimed at enhancing the literacy skills of all 11–14 year-olds in Blackpool. As a former special education teacher in secondary school, I found the project's objective of closing

the literacy gap for struggling adolescents aligned with my own beliefs. According to Sarah Smith, the project director, literacy is a crucial skill that enables students to progress successfully through school and transition to adulthood and employment. Right to Succeed, established in 2015, spearheads the project, which is mainly supported by philanthropists. Its mission is to empower communities in disadvantaged areas to collaborate in providing children and youth with the best possible start in life.

The KS3 project placed great emphasis on implementing valid and reliable assessments to identify the needs of young learners. In pursuit of this goal, all eight participating secondary schools have committed to screen all their Years 7, 8 and 9 students twice a year using the GL New Group Reading Test (NGRT).[55] The initial assessments showed that of the eight schools taking part in the Blackpool Key Stage 3 Literacy Project, seven had NGRT scores below the national average, and that 16% of pupils were in the lowest NGRT performance band (Stanine 1), which is four times the national average (4%).

NGRT is an online group-administered reading assessment which is fully adaptive and standardised, providing teachers with insights about students' reading abilities to pinpoint areas of difficulty. The test is made up to two parts: sentence completion, which measures decoding with some element of comprehension; and passage comprehension, which measures a range of comprehension skills of increasing difficulty. It provides norm-referenced scores that indicate whether a particular student is reading below the average range for their age. Scores are measured on a scale between 1 and 9 (5 being the average, 1 being the lowest), and students who scored between 1–5 were provided with targeted instructional support, either in small group interventions or one-on-one tutoring.

To encourage schools to follow a step-by-step approach for identifying students' reading needs, a decision tree was developed and introduced by Dr Jessie Ricketts (Royal Holloway, University of London) as part of the project. It provides specific guidance about how to align needs with appropriate support and interventions.

'Using the full decision tree enables schools to establish whether there is a word reading need and a reading comprehension need so that they can classify students in relation to the four quadrants of the Simple View.'[57]

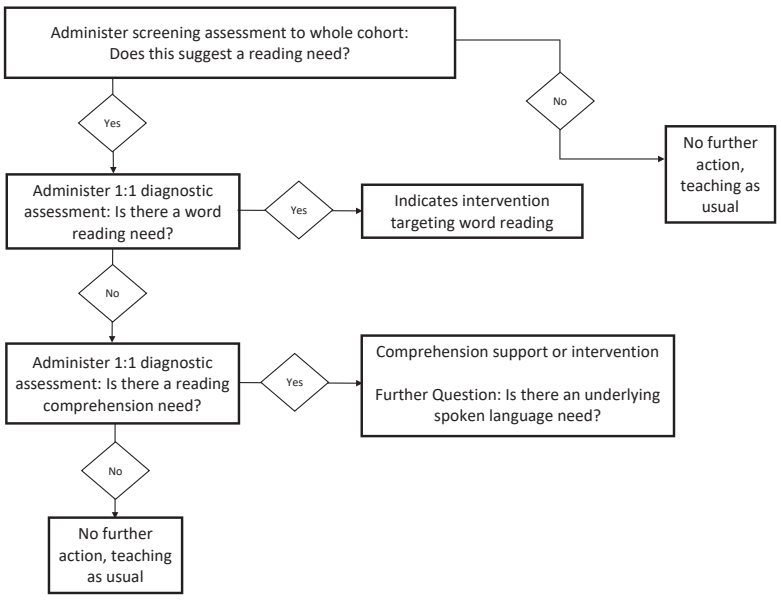


Figure 14: A decision tree to support Blackpool secondary schools in identifying reading needs and aligning these needs with appropriate support and interventions[56]

55 Available at: https://paa.com.au/product/ngrt/

56 Ricketts, J, Jones, K, O'Neill, P & Oxley, E (4 November 2022). Using an assessment decision tree to align students' reading needs to support in school. https://doi.org/10.31219/osf.io/tm5cg. Also available at: https://osf.io/kbf2d/

57 Ricketts, J, Jones, K, O'Neill, P, & Oxley, E (4 November 2022). Using an assessment decision tree to align students' reading needs to support in school. https://doi.org/10.31219/osf.io/tm5cg

After the initial NGRT screening, diagnostic testings were administered before instruction occurred to assist in identifying appropriate instruction and intervention programs. Then, student progress was closely monitored during the intervention. Schools' use of regular assessments meant that staff knew what progress pupils were making and could make timely and appropriate changes when pupils were not improving as quickly as expected.

Schools' use of regular assessments meant that staff knew what progress pupils were making and could make timely and appropriate changes when pupils were not improving as quickly as expected.

Finally, the introduction of the universal screener across all participating schools helped to evaluate the impact of school-wide practices, including intervention effectiveness. The results have been impressive: average reading scores increased from 96.7 in 2018 to 99.6 in 2021, bringing them more in line with the national average (100). This change of +2.9 points means that students have progressed more than expected for their age. Of all the Blackpool schools involved in the KS3 Literacy Project, South Shore witnessed some of the biggest improvements in reading in Years 7 and 9, with students improving by the equivalent of almost half a GCSE[58] grade in a single year (see Chapter 3).

Challenges when establishing universal screening in secondary schools

Establishing universal screening procedures to identify older struggling readers in secondary schools can be challenging for several reasons. The following information is a reflection drawn from my interviews and my work dealing with Australian secondary schools across states and sectors.

- The process of identifying at risk students can be time-consuming and resource-intensive. Secondary schools typically have larger student populations, which can make it more difficult to assess each student's reading abilities individually.
- Screening requires specialised expertise and training. Not all teachers may have the secondary skills to accurately identify reading difficulties in older students, particularly if the teachers have not received specific training in literacy assessment and instruction.
- There may be a lack of consensus among educators and administrators about which screening tools and methods are most effective in identifying struggling readers in secondary schools. This can lead to confusion and variabilities in the types of assessment used, which can make it difficult to establish a universal screening process.
- There may be logistical challenges in implementing universal screening procedures, such as scheduling conflicts, limited resources, and student absenteeism. Schools may need to allocate additional resources and support to ensure that the screening process is conducted efficiently and effectively.

Further considerations for schools when using universal screening tools:

- Where to store the data, who has access to it and who is in charge to review it.
- How to engage teachers with the data collected to inform future adjustments with instructional practices.
- How to design a school assessment schedule, a decision-making process and a targeted plan of action that take into account school logistical challenges (e.g. resources, purchase of material, funding, training for administration, data analysis, space, risk of over-identification).
- How to communicate and explain the results to parents as well as provide training for them so they can support their child at home with their reading.

58 GCSE stands for General Certificate of Secondary Education. It is an academic qualification in a particular subject, taken in England, Wales, and Northern Ireland. An equivalent in Australia is the Australian Tertiary Admission Rank (ATAR).

Key recommendations for teachers:

- **It is considered best practice to screen all first year of compulsory schooling through to Year 6 with a universal screener up to three times a year to prompt and guide instruction.**
- **Align assessments to proven theoretical frameworks like the Simple View of Reading, covering both word recognition and language comprehension.**
- **If a significant number of students are at risk upon universal screening, this is a strong indicator that structured literacy instruction is required.**
- **Universal screening measures are available to use in secondary schools and serve to identify older struggling readers.**
- **Oral Reading Fluency can be a highly efficient way for schools to identify older struggling students who are falling further behind in reading.**
- **Use frequent data collection to make real-time adjustments to instruction, rather than waiting months for the results of summative assessments.**

In summary, not only is screening the first part of a preventive support, but it is also the first step to levelling the ground in the classroom by identifying students who need further assessment and more intensive instruction. However, screening is not sufficient. After that, schools need to apply a strategic and systematic approach to the provision of intervention based on a multi-tiered system of supports with high-quality reading intervention and close progress monitoring of students.

Chapter 3

School-wide literacy approaches

Putting help in place for struggling readers using a multi-tiered system of supports

The best way to implement the Science of Reading to remedy learning gaps is to promote a multi-tiered system of supports framework (MTSS). From my visits and observations conducted in high performing schools, it was evident MTSS was the dominant approach used to guide the response to intervention process and provide targeted support to struggling students, aiming to close gaps between students who are skilled readers and those who have the potential to be.

MTSS is not new.

MTSS is not a program.

MTSS is not an intervention.

MTSS is a shift of mindset, whereby educators move from reactive to proactive thinking.

Definition: 'MTSS is an evidence-based framework designed to meet the needs of all students by ensuring that schools optimise data-driven decision making, progress monitoring, and evidence-based supports and strategies with increasing intensity to sustain student growth.'[59] MTSS is not just about tiered instruction, but rather how all the systems in a school fit together to ensure a high-quality education for all students. It helps educators become more collaborative and better problem-solvers.

Purpose: MTSS is for ALL students. It is designed to support all students to ensure no students fall through the gaps. From my experience in working with schools, especially secondary schools, intervention has often been reactive, where students are flagged for intervention due to failing grades. Instead of the 'waiting for failure' assessment model, MTSS takes a proactive and preventive approach to identify students with academic, behavioural, social and emotional needs. When implemented effectively, students do not need to wait to receive intervention based on a criteria checklist, but receive timely intervention to help them meet learning goals quickly and possibly help them catch up with their peers sooner.

Benefits: MTSS does not just support students, but also teachers, administrators and education leaders, as well as providing great benefits for system-level staff. With MTSS, teachers are able to better evaluate student needs and match instruction, resources and intervention accordingly (which reduces the number of students needing additional support). At the system level, leaders, districts and schools work together to create goals to drive improvement and measure impact on student success, creating strong MTSS teams to provide leadership and guidance on sites.

MTSS is also resource allocation: The goal is to apply the most effective and efficient use of resources for the biggest impact on students.

Evidence was reported by the Ohio Department of Education with the Ohio Dyslexia Pilot Project (2012–2015)[60] which provided funding to school districts to implement a multi-tiered system of supports (MTSS) framework for the prevention,

Cohort A students participated in the Pilot in K, 1, and 2.

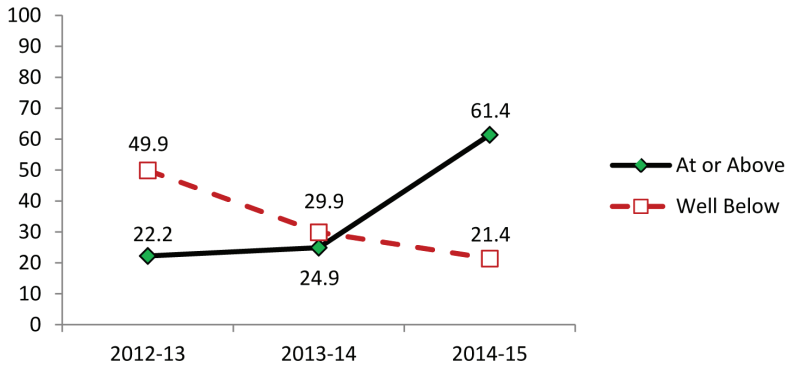


Figure 15: Percentage of students 'At or Above' benchmark and 'Well Below' benchmark at the end of each school year over the course of the Three-Year Dyslexia Pilot Project

59 Definition from the Massachusetts Department of Elementary and Secondary Education. Available at: https://www.doe.mass.edu/sfss/mtss/blueprint.pdf

60 Full report available at: DPP-Year-3-Evaluation-and-Final-Report.pdf (decodingdyslexiaoh.org)

early identification of and early intervention in reading difficulties. The results confirmed the impact of MTSS on learning and on the cost of service delivery. Districts that implemented a tiered system of early literacy supports increased the percentage of proficient readers and decreased the percentage of students requiring more intensive and expensive supports (Figure 15).

Districts that implemented a tiered system of early literacy supports increased the percentage of proficient readers and decreased the percentage of students requiring more intensive and expensive supports

The key components of MTSS:

1. Evidence-based practices
2. Universal screening of all students early in the school year
3. Multi-tiered instruction that can be intensified in response to the levels of need
4. Frequent progress monitoring
5. Data-based decision making

1. **Evidence-based practices** aligned with the six pillars of reading (oral language, phonemic awareness, phonics, fluency, vocabulary and reading comprehension) and cognitive science.
2. **Universal screening** consists of high-quality assessments that provide useful student data and are generally conducted three times a year (e.g. DIBELS 8th Ed.) to identify students who might be at risk for reading difficulty and need additional support. Screening is also used to identify patterns and trends of learning and achievement at the school and grade levels.
3. **Multi-tiered instruction**. All students should reach grade level reading goals, but what it takes to get them there varies in intensity. An MTSS framework is composed of three tiers:

   Tier 1 – universal instruction for all students. At Tier 1, all students receive scientific, research-based core instruction. Instruction at Tier 1 should be explicit, differentiated, and should include flexible grouping and active student engagement. High-quality instruction is essential to ensure that the needs of at least 80–85% of students are met at Tier 1.

   If Tier 1 instruction is not successful in meeting the needs of at least 80% of the school's population, the school team should evaluate the quality of the curriculum and its delivery, and also consider possible solutions to create a better match between students' needs and the core curriculum and instruction (e.g. improving explicit instruction, using flexible groupings, maximising time on-task and increasing student engagement).

   Tier 2 – targeted instruction for some students. At Tier 2, students identified as being at risk through universal screeners are provided scientific, research-based interventions in addition to the core. Approximately 10–15% of students will need supplemental instruction at a Tier 2 level of support to become proficient readers. Tier 2 interventions are implemented with groups of students demonstrating common skill deficits.

   Targeted group interventions typically involve an additional 20 to 45 minutes of instruction provided 3–5 times a week (e.g. two to three 15-minute intervention periods, for example). Targeted group interventions must be more explicit: they must be more intensive than core instruction; more supportive, with corrective feedback, and positive reinforcement; carefully scaffolded; and ideally occur in smaller flexible, skill-based groups of approximately 3 to 5 students, for primary schools, and 6 to 8 students for middle and secondary schools. More frequent progress monitoring should occur.

   Tier 3- intensive instruction for a few students. Students who have not demonstrated progress with targeted group interventions at a Tier 2 level of support require more time in more intensive interventions. Tier 3 interventions are distinguished from Tier 2 interventions because they are individualised based on data collected, and occur with smaller student-teacher ratios (e.g. ideally one-on-one, however, groups of 3–5 students or a larger group broken into a few groups of 3–5 students is acceptable for middle and secondary schools), and possibly occur for a longer duration of time (e.g. more daily minutes or more weeks spent in intervention), including 45–60 minutes 5 times a week in addition to core instruction. About 3–5% of students will require this level of intensive support. Ever more frequent progress monitoring should occur.

   A student is only moved to Tier 2 when they demonstrate a need that differentiated core instruction cannot meet Tier 1, and a student is only moved to Tier 3 if sufficient progress is

not met in Tier 2 and they are demonstrating a need for intensive support.

4. **Progress monitoring**: Progress monitoring uses valid and reliable tools and processes to assess performance, quantify the improvement of responsiveness to intervention and instruction, and evaluate the effectiveness of instruction, interventions, and/or support.

   For students in Tier 2 intervention, progress monitoring should occur every 2–4 weeks, with a clear exit plan in place. The goal is to catch these students up to return to Tier 1 instruction. For students in Tier 3 intervention, progress monitoring should occur weekly, proportionally to the level of frequency and intensity of the intervention.

5. **Data-based decision making** includes data analysis and problem-solving through team meetings to make decisions about instruction, intervention and implementation. Not only does the data align the curriculum and instruction to assessments but it is also used to allocate resources and drive professional development decisions in schools.

The implementation of an MTSS model requires four types of assessment. Each comes with a purpose and must be linked to the instruction (see Table 4).

Screening	Diagnostic
Assessment questions: 1. Which students and systems are at risk? 2. Is the core reading instruction at Tier 1 effective? 3. Is targeted intervention at Tier 2 effective? 4. Is intensive intervention at Tier 3 effective? 5. Which essential skills should be enhanced in Tier 1? In Tier 2?	**Assessment questions:** 1. Why is the student at risk? 2. What should we teach next? 3. How should small groups be refined?
Given to all students Brief, standardised, predictive Indicators of essential early literacy skills Provide student-level and system-level information Administered up to three times a year	Given to some students who are at risk or who are not making progress More in-depth than screening Closely linked to instruction
Examples: Acadience Reading, Dibels 8th Benchmarking testing	**Examples**: the Macquarie Online Test Interface provides evidence-based tests for free (i.e. Motif)
Progress monitoring	**Outcome evaluation**
Assessment questions: 1. Is it working? Are students making progress? 2. Should we make a change to instruction? 3. Should we intensify support?	**Assessment questions**: 1. Did it work? 2. Are students at benchmark? 3. Did students meet Year level expectations?
Brief, standardised Alternate forms of the same task Sensitive to changes over small units of time Monthly, fortnightly, weekly	Group administered, standardised Tests grade-level expectations
Examples: Acadience Reading, Dibels 8th progress monitoring tools	**Examples**: NAPLAN, PAT-Reading, school reports and assignments

*Table adapted from 2022 Stephanie Stollar Consulting LLC – the Centre of Literacy and Learning[61]

Table 4: The four types of assessments in the MTSS framework

61 The Centre for Literacy and Learning website: https://www.readingscienceacademy.com/ and free download available at: https://www.readingscienceacademy.com/rsa-opt-in

Here are some references and resources that can provide more information:

- 'Intensive Intervention & MTSS' by the National Centre on Intensive Intervention.
- Center on Multi-Tiered System of Supports by the American Institutes for Research.
- Schaffer, G. E. (2022). Multi-Tiered Systems of Support: A practical guide to preventative practice. SAGE Publications. This book offers step-by-step guidance on how to implement MTSS in schools, including how to assess student needs, design interventions and monitor progress.
- Durrance, S (2022). Implementing MTSS in Secondary Schools: Challenges and Strategies.
- The Australian Education Research Organisation (AERO) has recently published their 'Implementing effective tiered interventions in secondary schools project'[62] which aims to use research to help school systems support students struggling with literacy and numeracy. AERO is also currently conducting research into available screening and monitoring assessment and will provide further recommendations about specific measures in 2023.

In summary, MTSS is an important piece of the educational support system, and everyone involved should understand it. The next section contains international case studies about how an MTSS framework could look like in practice across different school contexts, both in primary and secondary, as well as in a bilingual setting. Recommendations about what makes an MTSS school-wide literacy model effective will be outlined, drawing upon my Fellowship interviews and observations in primary and secondary schools.

Case study: Loudon Elementary School (California, US)

This case study reports information collected from my interview with Dr Stephanie Stollar, a part-time assistant professor in the online Reading Science Programs at Mount St. Joseph University and a founding member of a national alliance for supporting Reading Science in Higher Education. She is also the founder of Stephanie Stollar Consulting LLC and the creator of The Reading Science Academy. Her research interest is about the multi-tiered system of supports (MTSS) and she sees it as the framework for implementing the Science of Reading.

Further information was also collected from attending her presentation 'Using MTSS to Bring the Science of Reading to Light' at the 6th Annual Conference of the Reading League in Syracuse (New York), co-presented with Sharon Dunn, Principal of Loudon Elementary School from 2009 to 2019 (now an MTSS leadership consultant) and Diane Bryson, former first-grade lead teacher at Loudon Elementary. The session talked about the school's success story and how MTSS was used to build instructional capacity within staff to improve reading outcomes.[63]

According to the Principal, Loudon Elementary School used to be the lowest performing in the Panama-Buena Vista Union School District (in Bakersfield, California) and had a long history of poor academic outcomes. The sixth graders struggled with reading, including some students who were three years below grade-level expectations.

The first step Sharon took after being appointed as principal was to implement the introduction of a universal screener, Acadience Reading, so she could see which students were above, at, or below benchmark in reading. The screener was administered three times a year, at the beginning, middle and end of the year to all students from first year of compulsory schooling through to Year 6. The results were to determine what Tier 1 instruction might look like. The first data reports showed that 65% of first year of compulsory schooling students were identified as being at risk of reading failures (see yellow and red in figure 16, overleaf) when they entered school. By the end of the year, 72% of the students were moving into first grade highly at risk. 'The ship is sinking and sinking fast because first year of compulsory schooling lays the foundations. Everything trickles up from there, first year of compulsory schooling, first grade, second grade, are pivotal in early reading skills,' she said.

62 de Bruin K, Kestel E, Francis M, Forgasz H & Fries R (2023), Supporting students significantly behind in literacy and numeracy: a review of evidence-based approaches, edresearch.edu.au https://www.edresearch.edu.au/resources/supporting-students-significantly-behind-literacy-and-numeracy

63 Stollar, S, Dunn, S, Bryson, D & Stewart, L (October 2022). Using MTSS to bring the Science of Reading to light: how to improve reading outcomes against all odds. Presentation at the Reading League Conference, Syracuse, NY.

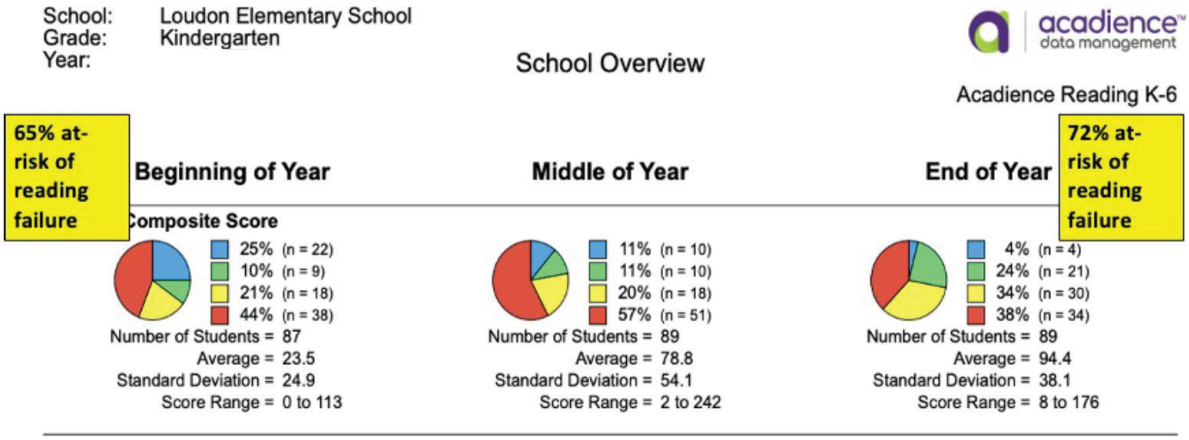


Figure 16: Loudon Elementary School data from the Acadience Reading report for first year of compulsory schooling students in 2010–11, including beginning, middle and end benchmarking goals. ©Sharon Dunn MTSS Leadership Consultant LLC

Urged on by the situation, Sharon decided to take a team to Los Angeles to attend the Acadience Super Institute, where she met the screening's authors, Dr Roland Good and Dr Ruth Kaminski. Sharon and her team focused on learning all they could about the Acadience K-6 assessment measures as well as the implications for core instruction and intervention. Equipping herself with a thorough understanding of Acadience data analysis, she purposely invested in building a team within her school which included specialists, teachers and middle leaders, and planned regular meetings to review data, using a collaborative problem-solving approach. Drawing in the expertise of specialists, like Cara Bergen (who helped guide differentiation of the core instruction) and Dr Stephanie Stollar (who helped support with Acadience professional development and MTSS guidance), the leadership team and the teachers established more targeted small-group instruction according to needs within Tier 1. They used specific measures from the Acadience Reading screening tool to group students during a portion of the English language arts block (the equivalent of the literacy block in Australia) with a focus on word reading ability, phonetic decoding ability and word reading fluency in the early years. The fluency measures are more important after second or third grade, when children have acquired sufficient word reading skills that they can apply with reasonable accuracy. Soon the students were making gains but still not enough to close the gap between students at year level and the ones below, with the students in the early years still remaining below reading benchmarks.

In response, Sharon introduced teachers to diagnostic testing through 95 Percent Group[64] – 'the type of assessment that could tell our teachers whether it's a vowel team or an 'r' controlled vowel that is the problem. Not only that … 95 Percent Reading Group had the materials and processes to clean up the greatest reading skill deficits', she said. Diagnostic assessments tell at a glance the specific greatest skill deficit a student needs addressed during intervention (Tier 2) – or what should be taught next. Sharon brought in 95 Percent Group diagnostic assessments, materials and processes, including decodable readers, and put in place protocols for the teachers to remedy the skill deficits. She also provided professional learning and coaching aligned with the Science of Reading to the whole school, three times a year with a consultant from 95 Percent. Sharon sat side-by-side with the teachers to learn with them. Funding was set aside for this process to help lead the school improvement journey. 'Fortunately, we had a healthy budget because of our poverty situation. I was able to cut back on extraneous things that weren't results oriented and focus all that funding on the professional development of staff and giving the teachers release time during the school day to then hone what they've learned,

64 Founded in 2005, 95 Percent Group supplies evidence-based instruction tools, resources, knowledge and support to teachers and school leaders, aligned with the Science of Reading, and promotes explicit and systematic literacy instruction. Available at: https://www.95percentgroup.com/

apply it, and collaborate in the most efficient way. This created collective teacher efficacy, which has an effect size of 1.57, according to John Hattie's work, which is also strongly correlated with student achievement.'

Three areas had become a high priority at Loudon:

1) **Tier 1 core instruction**. The most common mistake is to start with Tier 3, instead of starting with Tier 1. If more than 30% of students in Tier 1 are below national minimum benchmark, there is a problem with the core curriculum instruction;
2) **A school-wide literacy strategy** using an MTSS framework; and
3) **Assessments**. Valid and reliable universal screeners, diagnostic assessments and progress monitoring, and supported by high-quality professional learning for teachers and school administrators.

Consultants came into the school and worked with staff to analyse the data from the universal screener and diagnostic assessments to inform instruction. The 95 Percent Group materials were aligned with the Science of Reading and helped the school match students' needs to instruction more effectively and efficiently. They designed a schedule that guaranteed that students would receive additional opportunities for learning in a systematic way using the MTSS framework.

Based on the Acadience screening data, core instructional groupings were established to target skills within each cohort (rather than just a class). For example, the Year 1 cohort included 106 students and nine staff members, and all the students were placed in groups according to their skill needs, utilising a flexible service delivery model (Figure 17).

Tier 2 provided increasingly intensive, evidence-aligned instruction, utilising 95 Percent Group diagnostics, materials and processes to target lowest reading skill deficits to promote accurate decoding. During this time, students who were accurate worked on fluency of reading connected to text and writing. More intensive support, extra instruction and teaching staff were provided for the most at-risk students during Tier 2.

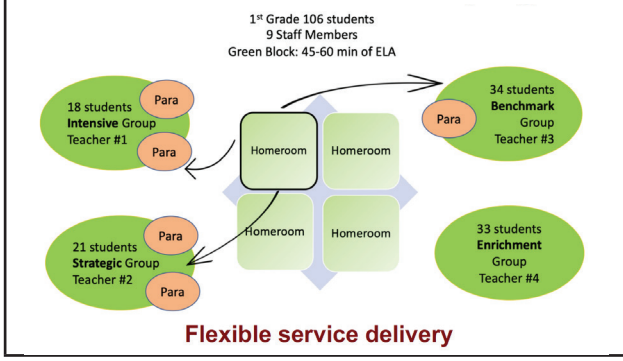
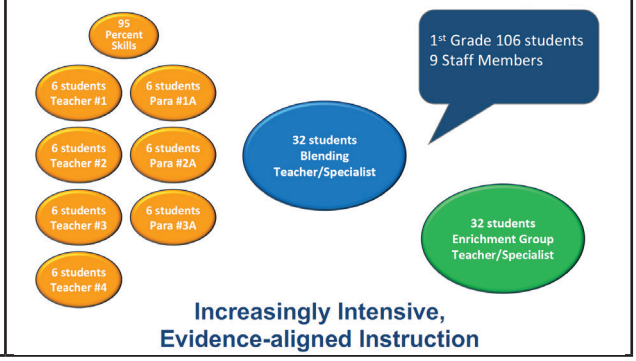
Slide 1: Tier 1 core instruction	Slide 2: Tier 2 intervention
The figure below shows how the flexible skill-based grouping occurred. For example, 18 Year 1 students were placed in the intensive group with one teacher and two education assistants (re 'para') while 33 students scoring well above benchmark (see in the "enrichment" group) were placed in a group with only one teacher (45 minutes daily).	Within the intervention grouping, students received increasingly intensive evidence-based instruction (with 95 Percent Group intervention materials), as shown in orange, in smaller groups with six students maximum and one staff member, as well as more frequent progress monitoring. The groups were usually smaller, flexible and skill based, with a narrowing range of skills (30 minutes daily).
	

Figure 17: Two slides from the presentation 'Using MTSS to bring the Science of Reading to light', TRL Annual Conference in Syracuse (NY) ©Sharon Dunn MTSS Leadership Consultant LLC

In this way, all human resources, time and materials available within the school were optimised and individual students' learning needs met, ensuring a 'flexible service delivery' for core instruction and increasingly intensive evidence-based instruction for Tier 2 interventions.

According to the principal, it takes three to five years to make substantial changes. In the 2018–19 school academic year, Loudon scored fourth in the Panama-Buena Vista Union school district compared to 2015, when the school was the lowest among 24 schools altogether. Figure 18

shows the percentage of students meeting and/or exceeding the benchmark in reading from 2015 to 2019, from Year 3 through to Year 6, in the California Assessment of Student Performance and Progress (CAASPP).[65] Nearly 60% of Loudon students met the standard in reading according to the end of the year state assessment. Based on Acadience screening results, the reading outcomes moved from 28% proficient readers in first year of compulsory schooling to 93% of sixth graders reading proficiently and accurately at grade level mid-year 2020. It reminded us that: 'There is nothing to fix reading overnight, but you can create a system that makes it better every year and stay the course'.

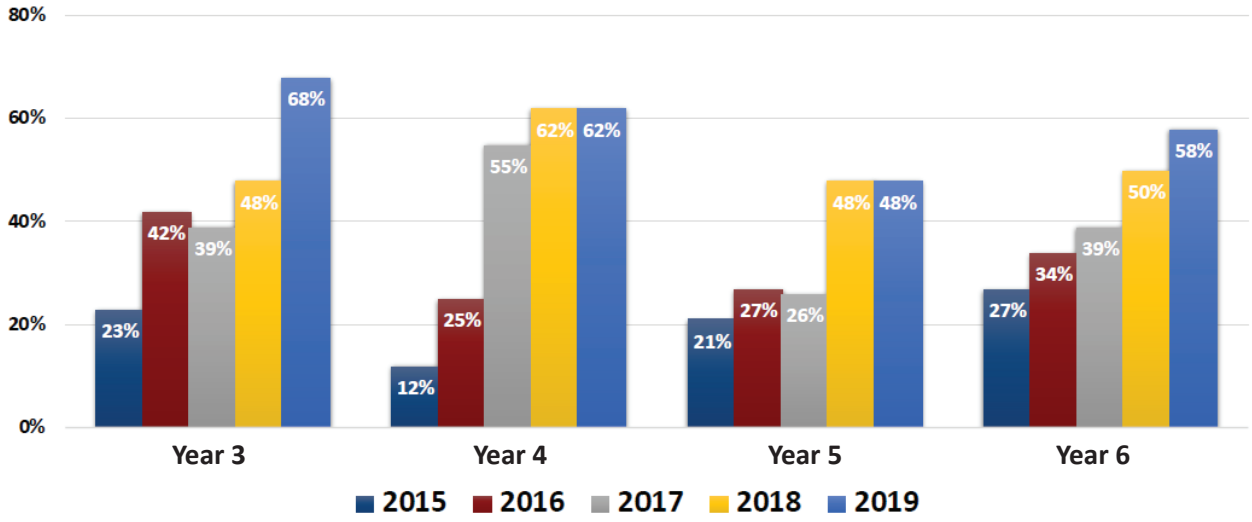


Figure 18: The percentage of students meeting/exceeding standards in reading from 2015 to 2019 at Loudon Elementary School from Year 3 through to Year 6, in the official state assessment (CAASPP). ©Sharon Dunn MTSS Leadership Consultant LLC

In summary, five steps were highlighted to lead the school through positive change while overcoming MTSS implementation challenges:

Step 1. **Learn** about the Science of Reading

Step 2. **Collect** universal screening data – build consensus and urgency using a schoolwide assessment system. Assessment compliance is key.

Step 3. **Implement** a data-based collaborative problem-solving process – collect diagnostic screening data and promote shared leadership and teaming where all stakeholders discuss and analyse the data. Make teachers and leaders understand the scores and what they mean.

Step 4. **Use universal screening data** to analyse Tier 1 (core instruction) and include schedule, curriculum and instruction (scope and sequence, routines, materials, instructional grouping), and adopt a flexible service delivery.

Step 5. **Align Tier 2** – use diagnostic screening data to analyse Tier 2 and provide increasingly intensive evidence-aligned instruction

Throughout my interviews with several school leaders and literacy experts, they have often recommended creating a position onsite, such as a reading specialist; that is, a person with a flexible teaching load who could arrange the grouping and oversee the small groups, collect and analyse the data and plan a schedule for teachers (determine which students are withdrawn in intervention groups for Tier 2 or Tier 3). Sharon's final advice is 'just to remember that we can prevent reading failures. We have the Science of Reading. We have research behind us. We know what works, what creates a skilled reader'.

'Quality classroom instruction in first year of compulsory schooling and the primary grades is the single best weapon against reading failure.'[66]

65 The standardised CAASPP test is administered to all California students in Year 3 through to Year 8 and Year 11. It provides an opportunity to measure the skills of all students against the academic standards (in English, Maths and Science) and shows whether students are in track to pursue further studies and career by the time they graduate from high school. More information is available at: https://www.caaspp.org/

66 Snow, C E, Burns, MS & Griffin, P (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.

Case study: Oregon Response to Instruction and Intervention (Oregon, US)

The second case study describes how the Oregon Department of Education (ODE) has driven a positive school improvement change using an MTSS approach to lift literacy outcomes. The project is called the Oregon Response to Instruction and Intervention (ORTIi). The information below was collected from my Fellowship interviews with Beth Ferguson, Dr John Potter and Dr Lisa Bates, literacy coaches working within the ORTIi project in Hillsboro (State of Oregon).

ORTIi is an organisation funded by ODE and currently comprises up to five coaches who have been working to support Oregon's school districts and students. Their mission is to cultivate the capacity of each school district community to build and sustain a comprehensive multi-level system of supports that identify and serve the literacy instructional needs of every child. Each coach is assigned a portfolio with several schools they visit on a regular schedule, providing technical assistance to those implementing an MTSS model. They ensure schools provide targeted, effective instruction to meet the needs of all students and use screening procedures to identify at-risk students. They work closely with schools and help them overcome the challenges when leading school improvement and practice change. Their focus is on literacy, early intervention and the use of evidenced-based teaching practices in reading.

ORTIi's mission is to cultivate the capacity of each school district community to build and sustain a comprehensive multi-level system of supports that identify and serve the literacy instructional needs of every child.

The ORTIi initiative began in 2005 when ODE contracted the Tigard-Tualatin School District to work with other school districts to develop MTSS systems for use in supporting the learning needs of all and identify students with Specific Learning Disabilities (SLDs). Districts, not schools, can apply to participate in the ORTIi project. The implementation process lasts up to four years and schools receive minimal funding to help offset costs for training, e.g. travel, relief teachers, etc. Taking part into the ORTIi project requires schools to undertake three major steps:

Step 1 Administer a universal screener three times a year for all students in primary school and implement a multi-tiered system of support model

Step 2 Select a core reading curriculum aligned with scientific research

Step 3 Identify students with learning difficulties

To help schools select an appropriate screener, ODE has released a list of approved universal screening tools (based on the IDA recommendations), including (but not limited to) the following:

- DIBELS 8th Edition
- Acadience Reading K-6,
- Aimsweb Plus Reading
- easyCBM in Reading

One of the preliminary requirements for schools participating in the ORTIi project is to share their screening data with their coach, including the distribution report for K-3 for each entry point (beginning, middle and end of the year). The coach and the school leaders then examine the data in more detail to identify trends and patterns within each year level. The following questions are considered to help guide schools through their reflection:

- Are you looking at this data at the district/ school level?
- Do you see any large achievement gaps?
- Do certain groups have significantly less/more students above benchmark?
- What is your plan to address these gaps?

The ORTIi project goals include the following:

- **Leadership** – Build leadership skills in school and district leaders for developing the infrastructure, implementation, accountability and sustainability of an MTSS framework.
- **Professional Development** – Help districts develop the capacity to identify staff needs and provide the training, coaching and support necessary to maintain a high level of system implementation and effectiveness.
- **Instruction** – Support districts and leaders in providing high-quality, effective instruction and interventions matched to student needs that raise the achievement of all students.
- **Data-Based Decision Making** – Support districts in establishing data-based decision-

making systems and teaming structures that drive an ongoing cycle of instructional improvement.

- **Assessment Systems** – Support districts to develop, use and maintain assessment systems that improve the quality and effectiveness of instruction, screen students to determine their instructional needs, monitor the progress of students in interventions, and evaluate the implementation integrity of the system overall.
- **Specific Learning Disability Identification** – Develop capacity and confidence to make eligibility decisions for referrals to special education services.
- **Outreach** – Increase statewide awareness and accurate understanding of MTSS systems and the benefits to students and educators, and help districts develop their readiness and commitment to implement MTSS framework.

Based on my previous work experience with the Literacy Guarantee Unit in the South Australian Department for Education, it seems like the ORTIi project has a mission similar to the Australian initiative implemented in South Australia with the creation of the Literacy Guarantee Unit (LGU) – at the same time as the introduction of the Year 1 Phonics Screening Check. The purpose of the LGU is to lift literacy outcomes for all students by promoting reading instruction in the early years. To date, the LGU has appointed up to 28 literacy coaches with expertise in phonics and teaching students with dyslexia and other learning difficulties. The coaches are deployed across the state to promote scientifically-based reading research in public primary schools to ensure all students can read proficiently and achieve proficiency standards for NAPLAN testing. On a needs basis, the coaches provide teachers with follow-up coaching, observation and feedback in their own classroom as they implement systematic, explicit and sequential phonics instruction. Their work involves building teachers' and leaders' capacity to sustain a change of practice aligned with the Science of Reading.

In contrast, the coach-school ratio is smaller within the ORTIi, with one coach for about five school districts, and there is a stronger focus on building school leaders' capacity rather than in-class coaching for teachers, as per the LGU's first-hand approach. The ORTIi coaches primarily work with leadership teams to create goals to drive improvement, measure student success and provide guidance with whole-school literacy systems (MTSS). Other similarities were found between LGU and ORTIi, including the provision of professional learning opportunities for educators, such as on-site training and consultation, regional and statewide training. For example, the LGU organise statewide, cross-sector, conferences three times a year, including in regional centres. These events are available to educators of all year levels but are essentially targeted towards the teaching of foundational literacy skills. Meanwhile, ORTIi also organises frequent virtual events to build teacher knowledge and capacity.

Additionally, ORTIi coaches provide a strategic sequence of on-site trainings for school leaders who choose to opt in to the four-year project. In the first year of participation, the training focuses on Tier 1 core instruction and what it looks like in practice (e.g. length of literacy block and quality core instruction aligned to the Big Ideas of reading). In the second year, schools are trained about literacy interventions and how to implement a school-wide literacy system. The third year of implementation focuses on intensifying and individualising reading support for students who are not making adequate progress with evidence aligned reading intervention programs. Individual problem-solving involves a team-based approach to ensuring students learn to read. The final year is focused on using a response-to-intervention approach to support students with specific learning disabilities, as well as ensuring the sustainability and responsiveness of the MTSS that the district has built.

Effective leadership is critical for successful implementation of MTSS.

The ORTIi project has made available on their website a series of useful modules that provide an overview of a multi-tiered system of supports in reading (MTSS-R). Each consists of a short (15–20 mins) video describing the general features of MTSS, along with additional resources and reflection questions for schools.

According to the literacy coaches, effective leadership is critical for successful implementation of an MTSS framework. To establish an effective school-wide literacy system, leaders and leadership teams must create and maintain several critical practices. Among these are a repertoire of agreed teaching and learning practices grounded in research that is consistent

across the school, including a specific time length for the literacy block, materials, data-based decision-making across all tiers of instruction, effectively allocating resources, installing effective communication loops, and creating leadership team structures. 'Leadership' is not provided by a single person but different people engaging in different kinds of leadership behaviour as needed to establish effective programs and sustain them as circumstances change over time. Therefore, it is imperative for all leaders, from coaches to principals and teacher leaders, to align their beliefs, actions and collaboration to increase student achievement. For example, it is recommended that participating ORTIi schools create multi-layered teams to analyse data and that they must follow the suggested timelines (Table 5 below).

Teams		Frequency of meetings	Purpose
1	The grade level teams (teachers within one year level), along with administrators and support staff	Three times a year after universal screening	• Analyse data for ALL students at grade level to determine the health of the whole classroom instruction • Determine the essential priority skills for the grade level and agree on strategies for addressing these skill needs in the literacy block • Identify which students may need interventions (if students are more than 1.5–2 years behind, they may need Tier 3 intervention)
2	Intervention placement meetings (teachers and intervention teachers within one year level), along with administrators and support staff	Occurs after the grade level team meeting and every 6–8 weeks	• Review data (e.g. screening, program and diagnostic assessments) to guide the selection of at-risk students • Place students in appropriate interventions • Plan and adjust interventions • Review progress of students in interventions and determine next steps
3	The individual problem-solving teams (any person involved with students requiring intensive intervention at Tier 3)	Meet as needed when a student has failed to make adequate progress after two or three consecutive content mastery tests or two groups of interventions	• After a student has not made adequate progress in interventions, analyse data and select an individually designed intervention for that student • Intensive one-to-one intervention • Consider needs for Special Education referrals after 22 weeks of interventions

Upon request, supporting documents used by the ORTIi coaches can be provided (e.g. the exemplar handbook, including sample materials for the teaming/data-based decision-making).

Table 5: The suggested timelines for creating multi-layered literacy teams to analyse school data

Primary schools are required to make changes in intervention, which are decided upon by the team. The following are the options available for academic and behavioural intervention changes, according to the ORTIi exemplar handbook (p. 33).

- Add 15 or more minutes per intervention session (e.g. extra time could be used to pre-teach vocabulary or core reading content). Reduce group size by 2–3 students.
- Add a behaviour plan and/or attendance intervention to increase instructional time, motivation and/or attention.
- Change remedial reading program if the current intervention is not addressing the student's needs. This change should be based on additional assessment (phonics screener, core reading program assessment, intervention placement test, etc.).
- Add reading content according to protocol based on additional assessment (phonics screener, core program assessment, intervention placement test, etc.) to provide additional practice on targeted skills.

- The team may decide that the student needs more time in the current intervention along with refinement in the instructional delivery based on the needs of the student by increasing the intensity of the intervention. In these instances, schools consult the team's coach. For further information about the intensification of reading interventions, see Chapter 5.

Impact on student outcomes

Finally, since 2005, ORTIi has provided training and technical assistance to over 100 school districts in Oregon and has a history of proven effectiveness. Across the numerous school districts that have participated in the project over the past 10 years, most have seen an increase in the percentage of students identified as proficient readers and a reduction in the percentage of students needing the most intensive level of reading supports.

- 79% of actively participating Oregon RTIi school districts increased the percentage of students identified as proficient readers (Grades 1–3) during the 2015–16 school year.
- 1,517 at-risk readers in grades 1–3 saw their reading trajectories altered successfully in ORTIi schools, between the 2013–14 and 2015–16 academic school years. This means these students who began a year at risk for reading failure ended the year on track to be successful in school and beyond.

The districts implementing MTSS have also seen strong growth in student reading skills, and improvement in the number of students meeting important reading benchmarks. A school leader reported: 'The most beneficial aspect of participating in the Oregon RTI project is that we have set district goals, teach to fidelity our core program, and are working daily to strengthen our teaching so that our students' reading skills grow and improve through best practices in instruction.' According to the ORTIi coaches, students in ORTIi school districts are more likely to meet or exceed proficiency criteria on the statewide reading assessment than those students in non-ORTIi school districts.

Some schools have also been able to significantly reduce their achievement gaps between economically disadvantaged students and their peers after having had five years to build and sustain an MTSS model. For example, the graph shows sample data from an ORTIi elementary school with 31% of the student population indicating a Latino/Hispanic background. Over the course of three years, this school reduced the achievement gap between White and Latino students in reading proficiency from 28% to 18%.

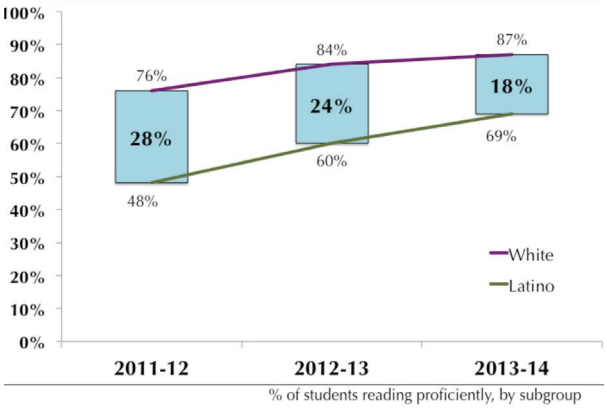


Figure 19: Sample data from an ORTIi primary school with 31% Latino/Hispanic student population

Despite substantial evidence to suggest the success of the ORTIi project, from my conversations with the ORTIi coaches some challenges have been identified:

- MTSS is not a mandate by the ODE. Districts may choose to participate in the ORTIi project.
- Participating schools are expected to be trained within four years, a relatively short period of time considering the changes required in school improvement processes, putting at risk positive long-term and systemic changes.
- Limited funding and resources allocated (e.g. not enough coaches available and some positions are not backfilled which means some districts might be on the waiting list).
- The impact of the pandemic with increasing learning gaps post Covid-19.
- MTSS is a dynamic process that never ends, and requires educators to move beyond a checkbox mentality.

Case Study: Metzger Elementary Public School in Portland (Oregon, US)

The Fellowship visit to ORTIi, in Portland, also included a morning spent at Metzger Elementary Public School, in the Tigard Tualatin School District, where many of the school-wide literacy processes outlined earlier were observed in practice.

A meeting was arranged with Jessica Swindle, the principal, Joyce Haner, literacy coordinator, and four ORTIi coaches, and walkthroughs were conducted in the morning across first year of compulsory schooling to Year 4 classes, including small group interventions. At Metzger Elementary, 550 students are enrolled from Pre-first year of compulsory schooling through to Year 5, with 48% of students indicating a Latino/Hispanic background with a vast majority of them being socioeconomically disadvantaged compared to their peers. Despite the demographic challenges, the school has a strong reputation within the district for having successfully created a continuum of supports using evidence-based instruction and intervention through an MTSS framework. The main strengths identified were a strong shared leadership, effective teaming structures and assessments, as well as an innovative two-way immersion program (English/Spanish) using an MTSS model. Indeed, the school provides a unique instructional environment that fosters the dual language and literacy development of Spanish and English. All students are universally screened in both languages to identify those at risk for later reading difficulty. For students who required additional support, they were able to receive targeted interventions to support the early literacy development in English and Spanish, based on their needs.

At Metzger, the instruction targets the key components of literacy – phonological awareness, phonics, vocabulary, oral reading fluency, comprehension, and writing – using a variety of instructional techniques that are appropriate for students' different language proficiency levels and stages of literacy development.

During the visit, Jessica Swindle, who is in her fourth year of principalship and also used to work as a teacher at the same school, discussed the changes of practice undertaken over the last 13 years to lift literacy outcomes. She started by implementing a universal screener and created a consistent assessment schedule, requiring all teachers to comply with it. Some of their assessments to identify students' instructional needs include a quick phonic check, EasyCBM, and an I-Ready placement test.

Secondly, the school focused on improving teaching practices in core instruction (Tier 1), selecting evidence-based practices, or what they called the 'non-negotiables' and standards of practice for reading instruction, and they worked on refining what a literacy block would look like at Metzger. See below an example of the approximate guidelines, provided by ORTIi, that schools might spend on reading during the 110-minute block. This is not necessarily the sequence in which teachers would teach the items. It also does not imply purely teacher talk time during the time allotted. These times may be broken up over the course of the reading block.

1st year of compulsory schooling – 2nd Grade	3rd Grade – 6th Grade
15 minutes – Build Background/Oral Language 15 minutes – Phonemic Awareness 15 minutes – Phonics 20 minutes– Vocabulary/High Frequency Words 45 minutes– Comprehension/Shared Reading/Small group instruction 110 Minutes	20 minutes – Build Background/Oral Language 20 minutes – Phonics 25 minutes – Vocabulary/High Frequency Words 45 minutes– Comprehension/Shared Reading/Small group instruction 110 Minutes

Table 6: Suggested times to spend on reading during the 110-minute block from first year of compulsory schooling to Year 6

In addition, Metzger's leadership team provided multiple professional learning opportunities for their staff that aligned with the Science of Reading and that were relevant to the school bilingual context. According to Joyce Haner, 'Professional development helped teachers examine bias and learn ways to use culturally sustaining instruction and assessment.' Initially, the training was funded and provided to the whole school as part of a four-year model demonstration model called Project

Lee[67] at Portland State University and sponsored by the Office of Special Education Programs in the U.S. Department of Education (2016–2021). The project staff collaborated with Metzger Elementary school to improve their MTSS for English learners (ELs), specifically those at risk for or with a disability. A technical advisory group consisting of district and school leaders met regularly with project staff members to review formative data and optimise the model for English learners across the three tiers of support. In addition, teachers engaged in ongoing professional development on various aspects of effective reading and language instruction, with consideration for the contextual, cultural and linguistic backgrounds of students and families.

In practice, at Metzger Elementary, many high-impact evidenced-based strategies were observed during the classroom visits, including explicit teaching with high levels of scaffolding, multiple opportunities for students to respond using Paddle Pop sticks, partner talk and/or non-volunteers, choral responses and a 'no hands-up' policy. The learning intention and success criteria of the lessons were displayed in every classroom so students had a strong understanding of what they needed to be striving towards. Lessons were delivered at a brisk pace, with well-established instructional routines, strategic and effective seating arrangements, evidence of point-based reward systems, use of graphic organisers, etc.

To ensure teachers embed evidence-based practices, the school built a successful internal coaching model where teachers record one to two 10–20-minute video clips of their instruction each term, analyse their own instruction, using a self-assessment checklist for self-observation through video, and making self-directed adjustments. Random walkthroughs and more formal observations are also conducted by the leadership team, including peer observation. A checklist was designed in collaboration with staff – 'Effective reading block look-fors at Metzger' – and used to provide feedback and ensure teachers are held accountable against specific instructional practices. 'This promotes consistency across the school and reduces variance in teaching,' said the principal. Some strategies include the following:

- evidence of best practice for 100% engagement (in all components of a reading block)
- curriculum implementation (based on a selection of programs, instructional focus, and materials)
- error correction: rapid cue, correct, praise
- language embedded co-teaching during comprehension instruction
- explicit vocabulary instruction
- differentiation for rate and level (whole group and small group instruction).

The Metzger leadership team also created an 'instruction and data-matching matrix' to support teachers with the understanding and analysis of the data collected from their range of assessments (e.g. screener, placement test and diagnostic testing). The matrix covers the most common types of weaknesses a student might have in specific areas and, accordingly, which remedy or remedies might apply. For example, if a student shows weakness in phoneme segmentation fluency, they may struggle to hear the individual phonemes in words and break them apart. The instructional focus would be phonemic awareness. As a remedy, the document suggests the delivery of additional Heggerty Phonological Awareness for 5 to 10 minutes in small groups. Alternatively, the student might benefit from practising a phoneme-blending routine using Elkonin boxes and/or accessing I-Ready Tools for Instruction or personalised lessons addressing the skill deficit. The document includes a selection of curriculum or programs used by the school that matches each instructional focus, in order of least intensive to most intensive. Another useful matrix has been designed to address needs for students in interventions and can be provided upon request.

A checklist was ... used to provide feedback and ensure teachers are held accountable against specific instructional practice.

Below are some intervention practices further discussed with staff and gathered during the visit.

- Interventions matched students' identified needs.
- Frequent adjustments to interventions were often needed.

67 From 2016 to 2020, Project Lee worked with English learner K-5 students in three elementary schools in the Portland region, including Metzger Elementary school, to optimise their literacy learning using a culturally and linguistically responsive MTSS framework. More information available here: http://www.projectlee.org/overview/

- Tier 2 interventions provided more targeted instruction than the typical classroom instruction and grouping was determined by the skills needed to be learned.
- Students in Tier 2 interventions were in small groups (up to 5 pupils) and received an extra 20–30 minutes of instruction 3–5 times per week in addition to the 90-minute core instruction (Tier 1) from highly trained intervention teachers.
- Tier 2 interventions provided additional preview and review of skills, additional opportunities for practice, and immediate corrective feedback. The instructional materials were the researched-based programs already in use.
- Highly skilled interventionists delivered Tier 3 intensive interventions, in smaller groups of two to three students. This level of instruction targeted specific, persistent difficulties and was adjusted based on data from continuous progress monitoring.
- Students who scored in the bottom 5% of universal screening or benchmark assessments, performing two or more years below grade level, were identified as severely at risk and eligible for Tier 3 interventions.
- Students in Tier 3 interventions received an extra 45–60 minutes daily, 4–5 times per week, either in individual or small groups (1–3 students), based on flexible grouping targeting similar language and/or reading level and needs, including frequent progress monitoring (weekly or twice a week).
- Interventionists closely monitor progress and record the data every Friday. The data is then imported into a whole-school data log by Joyce Haner.
- The interventions were reviewed every nine weeks based on progress monitoring data analysis.

To ensure strong fidelity to the MTSS implementation, the leadership team members agreed on the following advice:

1) Start with an action plan and involve all stakeholders, using data to drive decision making
2) Build a culture of vulnerability where 'asking for help' is normalised and teachers want to be better
3) Select evidence-based practices aligned with the Science of Reading
4) Align Tier 1 instruction and curriculum content with Tier 2 and Tier 3 interventions
5) Provide professional learning opportunities and support for teachers
6) Recognise and remove barriers to teaching and learning for both staff and students

Whereas MTSS is mostly used as a preventive measure in primary schools, in the secondary context similar features to the ones outlined above can also be adapted to support older struggling readers. However, MTSS might need to be adjusted for remediation to account for the complexity of organisational structures within secondary schools (discussed in the next section).

Case Study: Adaptations of the MTSS model in secondary schools (Blackpool, England)

This case study discusses the implementation of multi-tiered evidence-based reading interventions for struggling adolescent readers in Blackpool secondary schools, including the benefits and challenges of flexible groupings in this particular setting. A network of eight schools joined the Blackpool Key Stage 3 Literacy project focusing on improving the literacy capability of all 11–14 year-olds across the town through a research-based approach developed by the not-for profit organisation Right to Succeed (mentioned earlier in chapter 2).

Interviews and classroom observations were undertaken in three secondary schools participating in the KS3 project where the MTSS model has been implemented, including Montgomery Academy, South Shore Academy and Blackpool Aspire Academy. Not only were reasonable adjustments within classrooms made, but the schools also provided varying levels of evidence-based reading intervention, drawing on the expertise of Dr Jessie Ricketts, Senior Lecturer in Developmental Psychology at Royal Holloway College (London University), and Alex Quigley, educational blogger and author, and with the support of the Right to Succeed foundation. Thus, students were not withdrawn for any reason, and they were equipped with the literacy they needed. Overall, teachers shared that all students had made progress and reengaged with schoolwork.

Below are the main takeaways from the visit in Blackpool.

Across eight secondary schools, all students from Year 7 through to Year 9 were universally screened, up to twice a year, using the online group-administered standardised test: the GL New Group Reading Test. Using the screening data, students were ranked based on the greatest needs, with those who were at or below benchmark eligible for additional amounts of instruction. The most at-risk students were then administered a battery of diagnostic assessments, following a step-by-step decision tree (Chapter 2, figure 14), which supports staff in identifying reading needs and aligning these needs with appropriate support and interventions. One advantage of early screening and diagnostic measures was that students could access evidence-based interventions that were targeted to their individual needs from the very start of secondary school.

Scheduling was reported by school leaders as being the most challenging organisational constraint. They had to determine the feasibility of using an MTSS model to address reading difficulties within their context while considering exiting organisational systems. If an MTSS approach is to work, schools need to consider how students can receive consistent instructional supports at Tier 2 (and possibly Tier 3). In the secondary schools I visited, students identified as at risk were pulled out of mainstream classes up to four times per week. Careful consideration was made to scheduling timetables, so students were not withdrawn from the same subject more than once in a half term.

The current model observed in the three Blackpool secondary schools enabled intervention to occur in smaller groups (less than six students) for each grade level and the reading interventions were short in duration, about six to 10 weeks. Shorter interventions tend to be more intensive and focused on specific reading skills or strategies which may yield larger effect sizes. By targeting specific areas of difficulty, these interventions can provide concentrated and explicit instruction, leading to more significant improvements. However, longer interventions may be necessary for some students, especially adolescents with complex reading difficulties or/and those who are already several grades behind.

Another concern raised during the visits was that secondary teachers are trained on the basis that the students coming into secondary school have attained a Year 6 level of reading competency. Teachers are not equipped to teach reading or the basics of writing. The principal at South Shore Academy warned me not to assume that teachers (not just English) have the prerequisite knowledge to provide reading interventions. This is why the school invested time and money to provide considerable professional development for their staff. Their reading interventions are currently delivered by well trained reading specialists who frequently monitored student progress.

For both assessment and interventions, there was a deliberate focus on the components of reading that are strongly associated with student growth in reading comprehension, such as phonemic awareness and phonics knowledge, fluency and vocabulary. In one observation, a group of four Year 8 students were being taught domain-specific words (connected to general classroom learning) by looking at the structure and origin of words. The teacher reported that a morphological approach complements a phonemic approach to decoding and is of tremendous help for older students who have difficulty with phonics. The students in the small group were able to identify the different affixes in the words and use these clues to determine the meaning of words and provide definitions. These struggling adolescent readers were not likely to have acquired such morphological knowledge through previous reading experience as much as their peers and, therefore, needed intensified instruction in small groups. Word-analysis strategies to build students' knowledge of etymology have been proven effective in vocabulary interventions for their students.

A similar approach to morphology and etymology was also observed at Montgomery Academy where Estelle Bellamy, Director of English at

Estelle Bellamy with students using the Wiki Way bookmarks

the Fylde Coast Academy Trust group of schools (FCAT), introduced the Wiki Way, a series of printed bookmarks to increase children's understanding of vocabulary. The bookmarks included the most common affixes for each subject area. Morphology has thus become a whole-school approach at Montgomery to assist all students in building vocabulary. All subject teachers are expected to provide student-friendly definitions and engage students in interactive, robust vocabulary follow-up activities. The tool is used to promote opportunities for students to explore relationships between words and activities that highlight different facets of word meaning. Teachers have since reported that it has helped students' comprehension of texts and subjects. In 2020, Estelle received a grant of £3,000 to expand her work in Blackpool primary schools, and the Wiki Bookmarks were being used in the other secondary schools during my Fellowship visit.

Leaders promoted the explicit and deliberate teaching of literacy in all curricula as well as making time for reading aloud in classrooms.

Other classroom observations were conducted, including a range of structured literacy interventions, either in small groups or one-to-one (Tier 2 and Tier 3 interventions). An advantage to working with adolescents one-on-one is the flexibility in instructional methods and content based on student response. This method also has the potential to increase the intrinsic motivation of students, as they can discuss their goals for learning with their tutor or teacher while building meaningful relationships with an adult. For students still unable to read words on the page, the schools opted for evidence-based phonics programs, that also included systematic instruction in reading fluency and automaticity. Such programs are particularly helpful for poor comprehenders with low working-memory capacity.

Another consistent approach for these secondary schools was the primary focus on strengthening classroom reading practices at Tier 1. This is a particular challenge in secondary schools, as teachers typically focus on content-area instruction without paying sufficient attention to teaching reading skills required for tasks. Despite the difficulties, leaders promoted the explicit and deliberate teaching of literacy in all curricula as well as making time for reading aloud in classrooms. For instance, at Blackpool Aspire Academy, the visit to which was hosted by Simon Blackwell (Assistant Headteacher and Teaching and Learning Leader), Natalie Morgan (Disciplinary Literacy Leader) and John Woods (Headteacher/ Principal), literary canon lessons were introduced. Teachers had collaboratively selected a list of important works of literature, for each year level, that they thought were deemed valuable and worthy of study.

Literary canons in secondary schools can vary, depending on the school, region and education system. In many English-speaking countries, there are common literary canons that are often taught in secondary schools. These canons frequently include classic works of literature such as Shakespeare's plays, novels by authors like Charles Dickens, and the work of poets such as Emily Dickinson. Schools might include more diverse and contemporary texts to reflect the experience of students from different backgrounds.

At Blackpool Aspire Academy the teaching of literary canons has become common practice from Year 7 through to Year 10 in the school, and teachers have reported positive outcomes. All teachers are expected to read aloud the selected novel to students for 20–30 minutes (5 times a week) as well as using reciprocal reading strategies to improve students' understanding of the text. The four main reciprocal strategies were 1) predicting, 2) clarifying, 3) summarising, and 4) questioning. As I walked through a Year 8 class, a physical education teacher was reading aloud a text from The Hunger Games by Suzanne Collins and modelling fluent and expressive reading. All students were sitting in rows and following along (sometimes with a ruler), and each had a hard copy of the book. During reading, the teacher stopped at appropriate points to explore new vocabulary and use reciprocal strategies, where one student was taking on the role of discussion leader and leading the group through the strategies. Meanwhile, the teacher was also circulating the room to monitor student engagement with reading. The students were actively participating in conversations about the text, enabling them to develop a critical stance, as they could test their ideas with peers and hear multiple perspectives. This approach was reported to help improve reading comprehension and contribute to the development of academic language. What convinced me was that struggling students with decoding weaknesses were able

to focus on their comprehension by listening to the teacher read the text aloud and access content. It was an effective way for the teacher to demonstrate reading strategies and behaviours on a continuous text, while making the content accessible to all students, especially for struggling readers.

The same effective shared reading approaches in Tier 1 were observed at South Shore Academy where the Read and Register Literary Canons were offered during form time, at the start of each day (30 minutes a day, five times a week). From my meeting with Rebecca Warhurst (Head of School/ Principal), Beverley Priestner (Reading and Literacy leader), and Emma Greenwood (Assistant Head of School), I learned that teachers selected up to six books for each grade level to read during the academic school year. Five criteria were used for selecting the books covered during the literary canons, with teachers drawing on the expertise of Alex Quigley, including 1) important pivotal works of literature, 2) complex narrators, 3) historical context of a text, 4) non-linear narratives, where possible, 5) non-fiction. See the table below. What stood out was teachers' capacity to be flexible and constantly readjust the book selection based on student feedback. If a book was not well received by students, teachers choose a new one, ensuring students were still exposed to rich, authentic texts.

It is important to note that the selection of texts in the literacy canon can be contentious and subject to debate. Critics may argue that certain works are overemphasised or that works are excluded because they are not considered part of the literary canon. Nonetheless, they serve as a basis for the study of literature and can help students develop critical thinking and analytical skills. Plus, structured read-alouds in secondary schools help bridging students' reading difficulties with texts and have great potential impact on students' overall reading achievements.

	Year 7	Year 8	Year 9	Year 10	Year 11
Book 1	Your Are a Champion By Marcus Rashford	A Monster Calls By Patrick Ness	Noughts and Crosses By Maloris Blackman	The Book Thief By Marcus Zusak	To Kill a Mockingbird By Harper Lee
Book 2	Stone Cold By Robert Swindells	The Curious Incident of the Dog in the Night By Mark Haddon	Noughts and Crosses By Maloris Blackman (continued)	The Book Thief by Marcus Zusak (continued)	Lord of the Flies By William Golding
Book 3	The Graveyard Book By Neil Gaiman	Hunger Games By Suzanne Collins	Night By Ellie Wiesel	Lord of the Flies By William Golding	Things Fall Apart Chinua Achebe
Book 4	Chinese Cinderella By Adeline Yan Mah	Hunger Games By Suzanne Collins (continued)	Animal Farm By George Orwell	I am Malala By Malala Yousafzai (continued)	10th Century fiction and non-fiction booklet
Book 5	The Island at the End of Everything By K.M Hargrave	My Sister Lives on the Mantelpiece By Annabel Pitcher	Blood Brothers By Willy Russel	Marta's Malala article	
Book 6	Peter Pan By J.M Barrie	Chinese Cinderella Part II By Adeline Yan Mah	Moonrise By Sarah Crossman	Notes from a Small Island By Bill Bryson	

Figure 20: Examples of text selection for the literary canon classes at South Shore Academy

From my observations and interviews, it was obvious that literacy and reading had become a high priority in the schools I visited in Blackpool. Attention to prior knowledge, vocabulary and oral language are crucial aspects of their whole-school initiatives as well as a part of their interventions in addition to phonics instruction.[68] Every teacher and administrator has a role to play in the process.

- **Senior leaders** lead and give a high profile to literacy by providing regular professional learning opportunities for staff on the explicit teaching of vocabulary, reading comprehension strategies across content areas using metacognition, questioning for comprehension, scaffolding, modelling and retrieval practice to strengthen memory.
- **Middle leaders** identify barriers to literacy in their subjects and ensure the curriculum is delivered with reasonable adjustments when necessary.

68 To learn more about the schools from Blackpool's Key Stage 3 Literacy project talking about improving literacy, watch the webinar: https://www.youtube.com/watch?v=EU07yoFTZ24

- **Heads of Learning Areas** spend half a term shadowing each faculty to support the teaching of literacy and to highlight and share good practice as well as making supportive suggestions for further improvement.
- **All staff** contribute to students' development of reading and vocabulary and promote the explicit teaching of reading in their subject areas.

Listed below are quotes I collected.

'Who is responsible for teaching reading? We have to do something collectively and I think all staff must become a teacher of reading. Building solid foundations for successful reading is the rationale for change so we can break the poverty cycle occurring in Blackpool.' Rebecca Warhurst, Principal at South Shore Academy.

'Based on a staff survey conducted in our school, we moved from 67% to 100% of teachers reporting that they felt supported with the teaching of literacy.' Simon Blackwell, Assistant Headteacher and Teaching and Learning Leader at Aspire Blackpool Academy.

'The ability to read is a fundamental life skill. However, secondary school leaders and teaching staff should be aware that a significant number of their pupils are lacking the basics. All children, with very few exceptions, should leave school proficient readers.' Ofsted's Chief Inspector Amanda Spielman.[69]

Across the board, each school committed to actioning a three-strand approach and made relevant adjustments to fit their context:

- The explicit teaching of literacy in all curriculums via high-quality professional development training provided to all staff
- Universal 'Register and Read Literary Canon' classes
- Targeted interventions with smaller student groups identified at risk based on a universal literacy screener

Additionally, the people interviewed pinpointed particular obstacles they encountered while carrying out MTSS in secondary education. When combined with other challenges mentioned by researchers, the main barriers to implementing MTSS in secondary schools can be divided into two categories: **logistical** and **instructional**. Issues related to logistics are around scheduling, staffing, making the time for intervention during the school day and finding space for intervention groups to meet. For instance, leaders might need to rethink the structure of their timetables and move students from optional elective classes to make time necessary for reading interventions. On the other hand, instructional issues are about providing high quality professional learning opportunities, improving the quality of Tier 1 instruction across all subjects, identifying effective interventions and building staff capacity.

In order to implement MTSS effectively, it is recommended that schools choose an approach that is the best fit for their specific context and meets the needs of all students. Appendix 6 shows the reflection tool for supporting secondary schools to review and implement solid identification and intervention processes. The MTSS Centre at the American Institutes for Research[70] has developed two documents to assist educators in thinking about their schools' unique context and the steps they can take to begin implementing MTSS. These 'Consideration for MTSS implementation' documents are tailored for either middle school or secondary school settings and include a series of guiding questions to consider. The questions cover a range of topics, such as how to utilise existing resources to implement MTSS, and what type of support teachers need to provide instruction for all tiers of intervention (Center on Multi-Tiered System of Supports, 2021).

Finally, this promising Blackpool case study shows that MTSS has a place in secondary schools, as it is an evidence-based, data-driven model and has the potential to help older struggling readers to develop competencies in reading.

69 Spielman, A (31 October 2022). Reading should be explicitly taught even in secondary schools. Press release https://www.gov.uk/government/news/reading-should-be-explicitly-taught-even-insecondary-schools

70 Available from: Center on Multi-Tiered System of Supports (MTSS Center) | American Institutes for Research (air.org)

Key recommendations for teachers and schools

From the research and the Fellowship interviews, certain essential conditions were consistently reported as constituting foundations for building an effective MTSS school-wide literacy model to prevent and support struggling readers.

1) **Data-based decision making is the cornerstone of an MTSS model. To support MTSS in being a fluid process, reliable and valid sources of universal screening, diagnostic, progress monitoring, and outcome data are utilised to inform instruction and intervention relative to the academic, socio-emotional and behavioural needs of students.**

   Suggested assessment process:

   - **administer a universal screener to all students three times a year (beginning, middle and end)**
   - **administer a diagnostic assessment to some students identified as at risk based on screening data**
   - **use weekly progress monitoring following the start of a small-group intervention**

2) **High-quality training and fidelity. Attend professional learning opportunities that are grounded in reading research and meet the needs of students in Tier 1 core instruction, including high-impact teaching strategies that account for how the brain learns. Seek coaching, peer observation and feedback to change practice and ensure that evidence-based reading instruction is embedded over time. Full Implementation is reached when 50% or more of the intended practitioners, staff and/or team members are implementing the identified strategies with fidelity and seeing strong outcomes for all students.**

3) **Strong leadership team. Establish an active leadership team that meets on a regular basis and takes on the responsibility of ensuring that systems meet the needs of all learners. The team has the authority to make resource, scheduling, programming, and staffing decisions and has representation from a range of stakeholders (e.g. curriculum, pedagogy, student support, special education, and middle leader, etc).**

4) **Reading intervention in the early grades is the strongest preventive action schools can take.**

5) **The key to MTSS is the strengthening of Tier 1 classroom instruction.**

Now that we have looked at know-how for implementing the MTSS model through the lens of several schools and developed a greater understanding of the MTSS components, the next important related topic is about the choice of pedagogies. What are the most effective teaching practices for all learners, especially for students with reading difficulties?

Chapter 4

The choice of instruction matters

Pedagogical choices and instruction play a crucial role in supporting struggling readers and should not be left to chance. There is an extensive body of research about learning to read that confirms the premise that children need explicit instruction in the six components of reading, in every classroom, every day. Teachers must use methods that are explicit, systematic and sequential. According to Vaughn et al[71]: 'The Science of Reading has established that explicit instruction is associated with beneficial outcomes for students and may be the secret source of instructional success.' Additionally, a series of resources compiled by the Australian Education Research Organisation (AERO) shows that explicit instruction is an effective teaching practice across a variety of contexts and for different subgroups of students. Their practice guide[72] highlights the pedagogical choices that can best improve student outcomes and provide useful insights to guide policy makers and school systems.

What works? Explicit, systematic, and sequential instruction

In a recent study, Professor Kathleen Rastle, and her colleagues[73] from the Royal Holloway College of the University of London, in England, simulated the impact of explicit instruction on learning to read using a new writing system. The research team trained two groups of 24 adults to read novel words printed in two artificial alphabets comprising different underlying spelling–sound and spelling–meaning regularities. For example, novel words were always composed of four symbols and the final symbol was silent.

Both groups received 10 days of training on learning to read 48 novel words. However, on day two of the training, one group was assigned to the discovery-learning condition and the other group was assigned to the explicit instruction condition, for only 30 minutes (or about 3% of their total training time) The aim of the study was to evaluate how the short input of explicit instruction could have influenced participants' learning of underlying regularities, as well as their retention of the individual trained items.

The results reveal significant differences in learning outcomes between participants who received explicit instruction and those that did not. All participants learned the trained words with accuracy. However, the groups differed dramatically when their generalisation was tested (i.e. their ability to use the code to read unfamiliar words). The point is that the discovery group by and large did not discover the underlying code, despite up to 18 hours of training on the novel words.

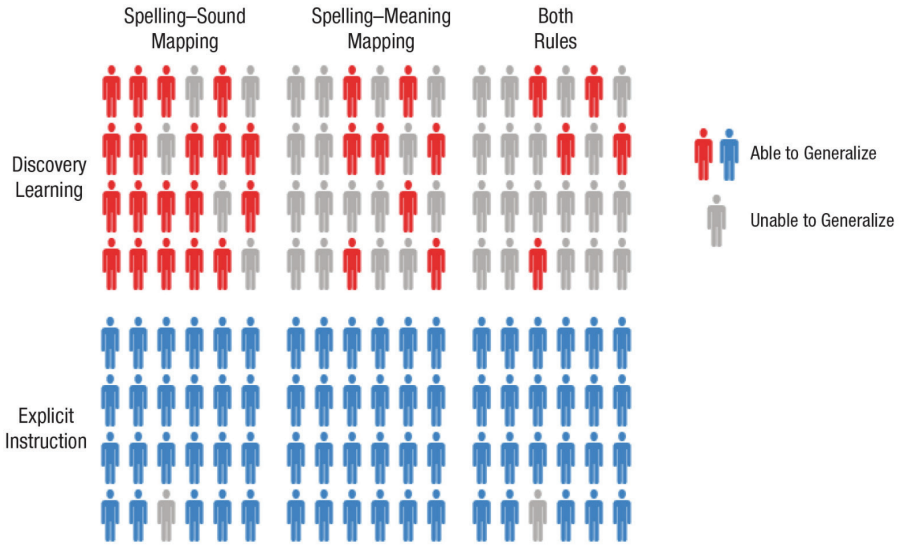


Figure 21: Overall performance by participants after 18 hours of training, including the discovery learning led group (in red) and the explicit instruction group (in blue)

71 Vaughn, S & Fletcher, JM (2021). Explicit Instruction as the essential tool for executing the Science of Reading. *The Reading League Journal, May/June, 2*(2), 4–11. Available at: https://europepmc.org/article/pmc/pmc9004595 [Accessed 18 December 2022]
72 Available at: https://www.edresearch.edu.au/practice-hub/explicit-instruction
73 Rastle, K, Lally, C, Davis, MH & Taylor, JSH (2021). The Dramatic Impact of Explicit Instruction on Learning to Read in a New Writing System. *Psychological Science, 32*(4), 471–484.

These findings illustrate the benefits of using explicit instruction during reading acquisition. It raises critical consideration about the way individuals are taught and the way teachers choose to design and deliver instruction that can have a significant impact on student learning and their retention of knowledge.

From the Fellowship interviews conducted with many professors from different countries, including Anita Archer, Sharon Vaughn, Stanislas Dehaene, Marie Bocquillon and Steve Bissonnette, to name just a few, there was a strong consensus about explicit instruction being the most effective teaching practice for both mainstream and special education settings, and that it is applicable to any discipline where the objective is to teach mastery skills (like reading).

'Explicit instruction is systematic, direct, engaging, and success oriented—and has been shown to promote achievement for all students.' ***(Archer et. al. 2011)***

Explicit instruction is a way to teach in a direct, structured way. When teachers use explicit instruction, they make lessons crystal clear. Students are not left to guess or discover for themselves. The teacher states what is expected and uses lesson routines to support and ensure learning.[74] Most importantly, what the students have actually learned is continually assessed during the teaching process.

The model progresses from **'I do' (Model) to 'we do' (Lead) to 'you do' (Practice)**, a system which involves chunking content into small components, modelling new skills, giving students ample practice with feedback, and providing structured opportunities for review and practice, until students can practise independently and apply what they have learned (Rosenshine, 1986). From my observations in schools across multiple states in Australia and overseas, explicit instruction is far from boring and didactic but instead is lively and playful, and also effective and efficient.

Where I work, within the Catholic Education Archdiocese of Canberra and Goulburn, a significant investment has been made in supporting teachers to implement high-impact explicit teaching methods in their classrooms, with the provision of qualified instructional coaches. This was part of the official launch of the Catalyst program in October 2020, at which time practitioners and school leaders began engaging in evidence-based research and discussing its implication for schools and classroom practice. My regular classroom observations across the 56 schools in NSW and the ACT (covering a wide range of socioeconomic conditions) indicated that teachers' demonstration of explicit instruction lesson design and delivery components has changed positively over the last couple of years. Teachers and principals reported that students who experience explicit teaching practices have made greater learning gains and our schools have seen significant improvements in Year 3 NAPLAN results since introducing Catalyst (see the video capturing insights from St Thomas the Apostle Primary School[75]). The Canberra and Goulburn Catholic Education approach has also influenced other systems like that used by Catholic Education Tasmania, where 38 schools have recently pivoted away from a constructivist-led approach to an instruction model grounded in the Science of Reading and aligned with cognitive science.[76]

'In the quest to maximise students' academic growth one of the best tools available to educators is **explicit instruction**, structured, systematic, and effective methodology for teaching academic skills.'[77]

Not only should the explicit instruction method be part of the toolkit for teachers, but it is also helpful to all students learning new skills and content, and it is essential for struggling or disadvantaged learners, those who struggle to learn to read and write. Identified as a **high-leverage practice**, explicit instruction has historically been embedded in approaches to implementing intervention within multi-tiered system of supports (MTSS).[78] It supports struggling readers by having the instruction become more explicit as students' learning challenges become greater.

Another reason explicit instruction benefits all learners, but particularly those who find learning

74 Archer, A & Hughes, C (2011). *Explicit Instruction*: *Effective and Efficient Teaching*. New York: Guilford Publications.
75 Available at https://www.youtube.com/watch?v=gO50g0sEAzg
76 Watch the recording of the presentation 'Catalyst and Insight: a collective journey' delivered by Patrick Ellis, Education Lead from Catholic Education Canberra and Goulburn (CECG), and Jennifer White, Project Lead for Insight at Catholic Education Tasmania (CET), about the journey that CET and CECG have been on, guided by the science of learning, explicit teaching and direct instruction. From the Teaching Matters Summit held in Hobart, 2–4 April 2023. Available at: https://www.youtube.com/watch?v=8l94TeIzJ_4
77 Archer, A & Hughes, C (2011). *Explicit Instruction: Effective and Efficient Teaching*. New York: Guilford Publications.
78 Hughes, CA, Morris, JR, Thierren, WJ & Benson, SK (2017). Explicit instruction: historical and contemporary contexts. *Learning Disabilities Research & Practice, 32*(3), 140–148.

to read more difficult, is that it **mitigates the limitations of working memory** by providing students with new concepts in small chunks in a controlled manner. Students are taught each of the individual tasks one by one before integrating them so they can more readily acquire the complex tasks. This process requires a careful analysis of the task in order to isolate the subskills and has the effect of making instruction more explicit.

The terms '**systematic**' and '**sequential**' are often associated with explicit reading instruction. It involves a scope and sequence, which refers to the range of skills being taught (e.g. phoneme-grapheme correspondences to decode polysyllabic words) and the order in which to teach these skills, moving from easy to more complex. Many reading programs are usually structured around a scope and sequence and it is crucial that the lesson plan is explicit and organised, ensuring a gradation of skills based on students' learning needs, as well as an adequate level of scaffolding. Teachers are responsible for organising their instruction in a logical and sequential manner (building one skill on others that have been learned), and ensuring that learning is evaluated continually.

The level of **scaffold and practice** is key to explicit instruction, and varies, based on the students' mastery of the task. Teachers can either add and/or reduce supports based on students' responses and must continue practice until the students have automatised the learning. Even when using a highly scripted approach to teach reading, teachers are still required to apply their professional judgement. In my conversation with Dr Sharon Vaughn, she explained that explicit approaches do not need to be scripted if the lesson plans are organised and delivered using the principles outlined above. However, to reduce the variance in teaching and optimise the learning time, teachers might opt in for a semi-scripted instructional routine or a fully scripted program like Direct Instruction SRA programs (see the next section).

During the Churchill trip, many classroom observations were conducted in both private and public schools, with explicit instruction methods noted as clearly the dominant approach to teaching foundational reading skills as well as remediating reading difficulties successfully. According to Dr Sharon Vaughn, 'Explicit instruction makes learning more accessible to all students, increases their confidence in tackling challenging tasks and produces more impactful outcomes. Simply put, students learn to read more efficiently.'[79]

Researchers have found that when effective teachers teach concepts and skills explicitly, students learn better.

In summary, if one wants to teach effectively, there is substantial evidence to suggest that explicit instruction is the best model to adopt and is far more effective than inquiry-based learning.[80,81,82,83] Researchers have found that when effective teachers teach concepts and skills explicitly, students learn better, especially those who struggle with learning to read.

The value of Direct Instruction for at-risk students

The history and key features of DI

Direct Instruction is an evidence-based instructional approach that emphasises explicit teaching, systematic instruction, and scripted lessons. It was developed in the 1960s by Siegfried Engelmann and Wesley C. Becker at the University of Illinois, in collaboration with other researchers.

During my Fellowship travels, I visited the Engelmann-Becker Centre (Oregon), and met with Owen Engelmann, President and senior author, and Evan Haney, co-author at Engelmann-Becker Corporation and President of the Engelmann Foundation. Both reported on the long-term benefits of Direct Instruction and pointed to the vast body of research supporting DI effectiveness in a wide range of educational settings. From my experience, there seems to be a common misconception that DI programs are only suitable for interventions targeting at-risk students.

79 *The Reading League Journal*, vol. 2, Issue 2, May–June 2021, co-authored with Jack Fletcher.
80 Guilmois, C, Popa-Roch, M, Clément, C, Bissonnette, S & Troadec, B (2019). Effective numeracy educational interventions for students from disadvantaged social background: a comparison of two teaching methods. *Educational Research and Evaluation, 25*(7–8), 336–356.
81 Kirschner, PA, Sweller, J & Clark, RE (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist, 41*(2), 75–86.
82 Rosenshine, B (2012). Principles of instruction: Research-based strategies that all teachers should know. American Educator, 36(1), 12.
83 Sweller, J (2021). Why inquiry-based approaches harm students' learning. The Centre for Independent Studies Analysis Paper, 24, 1–10. https://www.cis.org.au/wp-content/uploads/2021/08/ap24.pdf

However, DI has been widely used and has proven to be effective for mainstream students and those with learning difficulties, and suited for a wide range of grades (primary and secondary). It has also been used in both public and private schools across the United States and in other countries.

The origins of DI can be traced back to Engelmann's work on Project Follow Through, a large-scale educational experiment conducted in the United States from the late 1960s to late 1970s, funded by the US Federal Government. The project aimed to compare different instructional methods for improving the academic performance of disadvantaged students. It involved more than 100,000 children, from first year of compulsory schooling through to third grade, in 178 school communities that were taught by one of nine different educational models (DI being one of them). The findings revealed that children who participated in the DI model made significant gains in academic achievement (Heward & Twyman, 2021). Figure 22 shows that students receiving DI did better than those in all other programs when tested in reading, maths, spelling, language and cognitive skills. Other approaches were found to be not as effective as DI.[84]

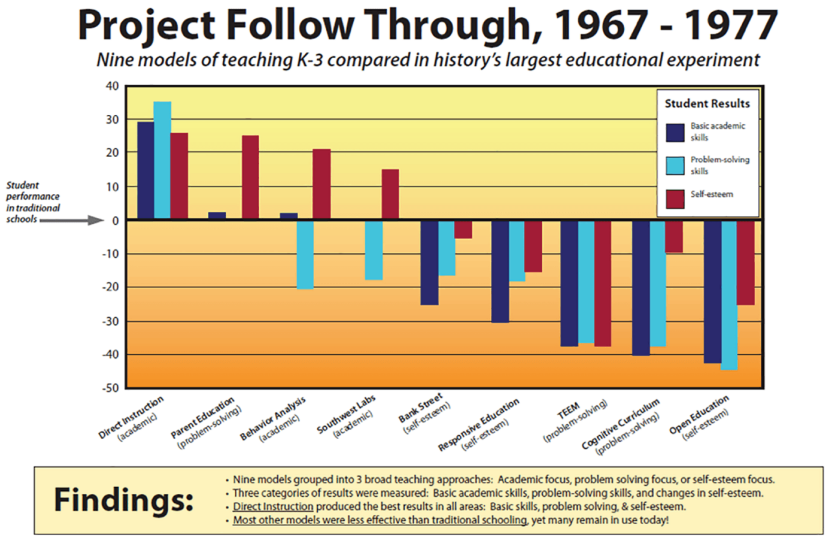


Figure 22: Comparison of achievement outcomes across nine Follow Through projects

Dr Siegfried Engelmann initially intended DI to be used with highly at-risk students to allow them to learn more in less time. He believed that low performers and disadvantaged learners must be taught at a faster rate than typically occurs if they are to catch up to their higher-performing peers. Only by teaching at a faster rate can the achievement gap be reduced.

Key features of DI

a. Students are placed in instruction according to their skill level (in homogenous groups).

b. The program's structure is designed to ensure mastery of the content.

c. Faultless communication[85] is provided to students, where task sequences to teach concepts and operations are designed to permit one-and-only-one possible interpretation wherever possible. This is based on the theory that clear instruction eliminating misinterpretations can greatly improve and accelerate learning.

d. The teacher is responsible for the student learning. If the student fails, the model suggests diagnosing the teaching history.

e. Programs are field tested and revised before publication based on student performance data before publication. Just as in medicine, where before a drug is deemed suitable for patients, it has to go through rigorous testing and cost-effectiveness analyses.

The authors of DI assume that all students can learn when their instruction is well designed. As Engelmann wrote: 'The determinants of student

84 For more information on the effectiveness of DI, see Adams & Engelmann (1966), Stockard et al. (2020; 2018) which includes a comprehensive review of research related to DI and to learn about the Project Follow Through, see Engelmann (1992).

85 Engelmann's Theory of instruction introduces the concept of 'faultless communication': a sequence of instruction, frequently involving examples and non-examples in a well-crafted order, which logically leads to an accurate communication of the concept and eliminates the possibility of confusion.

achievement are the details of the teaching (2020:191)'.[86] Thus, a great deal of attention has gone into determining the order in which examples are represented to ensure that each element builds on previous learning, minimising cognitive load. They are organised so that skills are introduced gradually, giving students a chance to learn those skills and apply them before being required to learn another set of skills. During my Fellowship conversations and correspondence with Evan Haney, he explained how the engineering of a DI program works, referring to the metaphor of a staircase: 'The most basic requirement of a stairway is that each step has strong support. That means students will always possess the required pre-skills to take the next step. Each step, then, is the small amount of new material they will learn during each instructional period.' (Engelmann, 1999)[87] Only 10% of each lesson is new material. The remaining 90% of each lesson's content is review and application of skills students have already learned but need practice with in order to master.

DI in Australian schools

Several Australian initiatives have emerged in recent years, choosing to implement DI programs to lift students' literacy outcomes, especially for children from disadvantaged backgrounds. In 2018, the Western Australian Government released funding to implement an initiative providing intensive professional learning on evidence-based literacy strategies and instructional coaching centred around explicit direct instruction methods across 24 schools in the Kimberley region of Western Australia. The Kimberley School Project is evidence of a scalable model that privileges high-impact instruction where DI scripted programs and unscripted teacher-directed approaches were proven effective in schools in remote Aboriginal communities. The project's key consultant, Dr Lorraine Hammond, AM Associate Professor at the School of Education at Edith Cowan University in Western Australian, reported that direct and explicit instruction is key to securing student learning (2021).[88] She is also currently involved with the Catalyst project in the Canberra and Goulburn Archdiocese.

Additionally, Australian politicians, policymakers and educational researchers have publicly commented in the media on the benefits of DI.[89],[90] Aboriginal lawyer and activist Noel Pearson, from Good to Great School, has been a key figure in getting DI into schools, resulting in better educational outcomes for Indigenous students in Cape York (Queensland). In the meantime, there seems to be a growing interest for taking up DI in Australian schools (both primary and secondary) over the last 10 years and the results have shown positive impacts, as noted with these two examples.

Noel Pearson delivering his keynote presentation at the Catalyst System Day in Canberra (ACT), January 2023

Como Secondary College (Perth, Western Australia) offers literacy and numeracy interventions to the most at-risk students in Year 7 through to Year 9, using a combination of DI programs and explicit instruction methods. About one-third of Year 7 students enter Como's intervention classes, and after two years more than 75% are fully engaged in the mainstream curriculum at the age-appropriate level. Over the past 10 years, the school has been able to track students through school and into the workforce and can say that, for a large number of students who received the intervention, it has successfully changed the trajectory of their lives.[91]

Mastery Schools Australia (Queensland) opened its first campus in Varsity Lakes in 2021 to provide a quality educational alternative for Year 4 to Year 9 students disengaged or at risk

86 Engelmann, S (2020). *War against the schools' academic child abuse*. NIFDI Press.
87 Engelmann, S (1999, July). Student-program alignment and teaching to mastery. In 25th National Direct Instruction Conference. Eugene, OR: Association for Direct Instruction. http://www. studentnet.edu.au/aispd/newsletters/newsletters/archive/term2-01/speced.pdf.
88 Hammond, L (2021). Confronting Indigenous educational disadvantage: A Kimberley perspective. The Centre for Independent Studies. AP 20, March 24. Available at: https://www.cis.org.au/wp-content/uploads/2021/03/ap20.pdf
89 Available at: https://www.youtube.com/watch?v=Gd_9rszR27s
90 Pearson N (2021). Yes, DI did it: The impact of Direct Instruction on literacy outcomes for Very Remote Indigenous schools. *The Australian Journal of Indigenous Education, 50*, 402–411. https://doi.org/10.1017/jie.2020.20
91 I was awarded a Schools Plus/Commonwealth Teaching Award based on the progress the students made in my times at Como Secondary College.

of disengaging from mainstream schooling. Their teachers also use DI programs side-by-side with teacher-led explicit instruction lessons that aim to develop the academic foundations and resilience that will allow students to re-enter mainstream education. Their students have made significant improvement in standardised reading and maths scores. This is in addition to a significant increase in student self-confidence, self-esteem, and engagement.

DI in the US

During the Fellowship trip, classroom observations were conducted in five primary schools that were using Direct Instruction scripted programs to teach reading as part of their core instruction, as well as for intensive interventions. The following section reports the main takeaways collected from the Thales Academy schools in North Carolina and the Arthur Academy network of public charter schools in Oregon. Well-taught DI lessons were observed and anyone walking into the classroom would have been struck by the high energy level, the rapid pacing, the teachers' use of verbal and visual signals, and the children's responding in unison. It stood out from typical teaching methods. There was a rigour of delivery and active participation in learning from all students in every classroom.

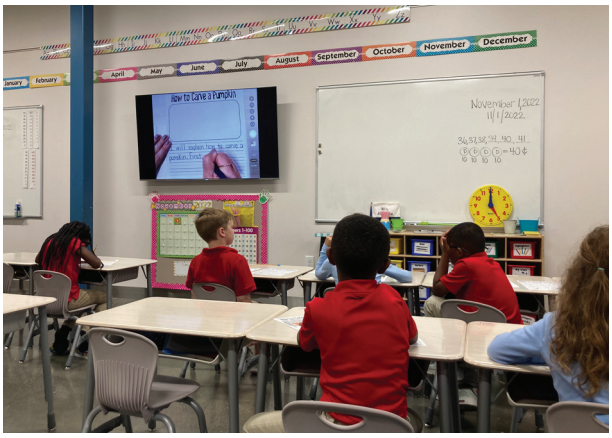
Case study: The Thales Academy private school network (North Carolina, US)

The one thing the Thales Academy schools do slightly different from other public schools in their state is offer a curriculum from the first year of compulsory schooling through to Year 5 based entirely on Direct Instruction methods. Fifteen class observations were conducted in three different campuses over two days and the consistency observed was outstanding. The visits included:

1) The Thales Academy Raleigh, hosted by Janice Holton, Principal, and Lindsey Marion, Assistant Principal. The school has 512 students from first year of compulsory schooling through to Year 8
2) The Thales Academy Knightdale, hosted by Wanda Evans, Principal. The school caters for pre-first year of compulsory schooling through to Year 8
3) The Thales Academy Wake Forest, hosted by Jill Ellison, Principal and Laurie Matthews, Assistant Principal. The school has 650 students from pre-first year of compulsory schooling through to Year 5
4) Online zoom meeting with Heather Brame, K-5 Senior Administrator and Instructional Coach.

It all started with one man: Robert (Bob) Luddy, a successful business and educational entrepreneur. In 1981, Bob Luddy purchased a sheetmetal shop and transformed it into CaptiveAire Systems, a leading manufacturer of commercial kitchen ventilation systems in North America. However, Bob Luddy is more than just a businessman; he is considered a champion for children's education and a school choice advocate. In 1998, he first established Franklin Academy, a public charter school in Wake Forest, which now serves over 1,200 K-12 students. After a while, Bob became tired of trying to convince North Carolina education to improve the state's public schools, so he ended up building his own network of low-cost private schools that the government couldn't meddle with. In 2007, Bob opened Thales Academy, a network of private schools, offering a high-quality Pre-K-12 education at an affordable tuition price. The Thales Academy was first established, starting with 20 students, in a temporary facility in the back of his corporate office. It has now grown to 3,000+ students through the Raleigh area, and they expect over 5,000 students in the next couple of years.

On average, each school includes 500 students with 36 staff, and class sizes vary across year levels, from 18 students in pre-first year of compulsory schooling, to 24 students from the first year of compulsory schooling through to Year 2, 26 students from Years 3 to 5, and up to 32 students in Years 6 to 8.



Year 1 & 2 students during their reading and writing classes at the Wake Forest Thales Academy Campus, North Carolina

In every single class, the following was observed:

- Well-established and predictable instructional routines
- Error correction procedures with direct feedback to individuals and/or groups
- A well-balanced mix of group, partner and individual turns – every student had multiple opportunities to respond within the lesson
- Effective use of the space of the classroom
- Rapid pacing, use of signals and thinking time provided
- All students reading in sitting position and some tracking along with their fingers
- Eyes directed to the learning at all times
- Positive reinforcement with specific praise
- Teaching to mastery with repeated practice and consolidation of skills
- Strategic classroom seating arrangement and most desks in rows. The only objects on desks were what students needed for instruction and there was no other distraction. Desks were clear of water bottles and pencil cases.

Listed below are the programs used at the Thales Academy schools for K-5. Some of these programs are not part of the Direct Instruction suite. Teachers used explicit instruction principles (as mentioned earlier) to deliver the non-scripted lessons in other subjects.

- Reading Mastery Transformations, and Spelling Mastery K-5
- Math Saxon (up to Yr 5) – not DI
- Shurley English Grammar
- Core Knowledge Curriculum – History and Geography and Science

Upon enrolment, the principal conducts a student interview and administers a placement test in reading, maths and spelling so students can be placed together in a classroom according to skill level grouping and are taught at a pace and level appropriate for their abilities. The school only accepts students reading at year level or above, except for pre-first year of compulsory schooling and first year of compulsory schooling students, where the selection criteria are more flexible. However, post Covid-19, there have been some exceptions, given some younger students might enter school at a lower level. Janice Holton, the Principal at Raleigh Campus, reported that students have made significant progress with DI methods and the school is able to provide multiple entry levels. Depending on student performance, most cohorts have two or three strands, either at year level and/or above year level in Reading Mastery K-5. As students move up the grades, they can access above-level grade courses (moving beyond DI methods) in literature and algebra to continue to be challenged.

School administrators meet monthly (twice a term over nine weeks) as a team, with teachers and classroom support staff to review students' progress monitoring data, ensuring every child is making constant progress (based on mastery learning) and in cases where they are not, an intervention is provided (with an additional dosage of instruction). Based on the data collated, the team discusses whether additional actions should be taken to help students succeed, including moving students to a different skill-level grouping as needed. If a child fails three consecutive mastery tests (there is a test after every five lessons in the reading programs), they are provided with an extra 30 minutes of instruction twice a week, which is a repeat of the Reading Mastery lesson, at a slower pace and in smaller groups (3–5 students). There is no further targeted support for these students, besides differential seating arrangements in classrooms. If the difficulties persist, the school usually refers the parents to external agencies. For example, a speech pathologist might come into school to work one-to-one with some students.

School administrators meet monthly as a team, with teachers and classroom support staff to review students' progress...

Finally, Thales Academy has grown exponentially in just a few years, expanding from 30 students in 2007 to over 5,600 students across 14 locations in three states, including North Carolina, Tennessee and Virginia. When asked about what makes Thales Academy unique, the principal at the Raleigh campus mentioned the outstanding results in reading and the high level of accountability within the district. In terms of challenges, she reported about 1) the emphasis on growth and how to build teacher knowledge, 2) finding the right people for the job, and 3) getting the buy-in from teachers by explaining why DI works.

Case study: The Arthur Academy charter public school network (Portland, Oregon)

During the Fellowship visit to Oregon, one day was spent visiting two schools that are part of the Arthur Academy (AA) Charter Schools network, including David Douglas AA hosted by Richelle Owen (Principal) and Gresham AA hosted by Kandice Burton (Principal). Interviews were also conducted with Stephani Walker, the Executive Director since 2013 and Dr Bonnie Grossen, chair member of the Arthur Academies. In these schools, DI is used from the first year of compulsory schooling through to Year 5 as the main instructional approach to teach reading and numeracy. The network includes six primary schools in total, and has a proven record of success since their first charter school opened in 2002.

'It is unrealistic and unfair to expect teachers to be able to write their own lessons. Asking teachers to design instruction is like asking the pilot of a 747 to design the plane...'

When walking through classrooms, I could observe teachers providing engaging work. The teachers were able to accelerate their instruction 'on the fly', depending on how well students were responding to the instruction, moving from readily accessible skills to more complex learning. Because the lessons were delivered at a brisk pace, the teachers were able to present more material and move students further. The fast pace left no room for distraction either. No child was fidgeting during the main instruction, and everyone was actively engaged and focused on the learning task. All students experienced multiple opportunities to respond, either in group or individually, as well as receiving immediate feedback. There was no room for excessive teacher talk.

Scripted lessons were part of teachers' daily practice at the Arthur Academy and staff mentioned a significant reduction of workload and not having to 'reinvent the wheel', given they had access to planning documents and lessons. According to Dr Bonnie Grossen, chair member, the advantage of scripted programs is that this allows teachers to focus on their delivery and classroom management strategies while the scope and sequence and the lesson plan are taken care of. Scripted lessons also ensure low variance in teaching across schools within the network. In Australian schools, scripted lessons or curricula are starting to emerge. The way the American journalist Shepard Barbash described the decision to use scripts is particularly relevant to today's debate in education:

'It is unrealistic and unfair to expect teachers to be able to write their own lessons. Asking teachers to design instruction is like asking the pilot of a 747 to design the plane, or the conductor of a symphony to compose the score, or the lead in Hamlet to write the play ... The typical Engelmann (DI) program takes anywhere from three to 10 years to develop. Asking teachers to match this effort is unrealistic – they already have a challenging full-time job in a classroom.' (2012:43, in Stockard et al. 2021).

From these school visits, it has become evident that DI programs can be used for mainstream classes as well as in remedial settings to accelerate learning for all students. The key to remedying learning gaps is to teach more in less time. Another important takeaway was the implementation of an internal coaching model to support teacher delivery of DI programs across every school, in both networks (See Chapter 6).

The challenges of program selection, alignment and implementation

Program selection: Many reading intervention programs claim to be supported by evidence but only few have robust evidence of their effectiveness to back these claims, making it challenging to assess their effectiveness or to make comparisons between different programs.

Because there are many intervention programs available to use (some of which are commercially produced and others that are freely available on the Internet), a great deal of attention must be paid to determine which program is best suited for a student's individual needs. The Dyslexia SPELD

Foundation website offers a list of criteria[92] that make reading programs more likely to achieve successful outcomes, including 1) evidence-based programs, 2) explicit and direct instructional methods, 3) dual coding, 4) cumulative reviews, 5) regular assessments, to name but a few (see the full list in Wheldall et al).[93] Professor Stanislas Dehaene commented on the use of published programs: 'The proof of the matter is whether the kids have actually learned to read the fastest possible way.' (AUSPELD, 2021). And Louisa Moats gently reminds us that, 'while programs are very helpful tools, programs don't teach; teachers do'.

Program and curriculum alignment: Some schools use one program or one classroom teaching method for their core instruction (Tier 1) and a different program (or programs) for reading intervention instruction (Tiers 2 & 3). These choices can have very real consequences for struggling students. Inconsistent or conflicting routines, scope and sequences, keywords, and corrective feedback are confusing to students who are already struggling to learn. When an intervention program is used for small group intervention, the sequence of skills should replicate or be aligned with the core program as closely as possible. In secondary schools, the intervention should be aligned with the curriculum and the instructional methods should be consistent across Tier 1 and Tier 2. Aligning classroom core reading instruction with the supplementary reading instruction received during the intervention have been found to be one condition of effective reading instruction for struggling students.

Dr Sharon Vaughn, Executive Director of the Meadows Center for Preventing Academic Risk (MCPER), who predominantly conducts research with middle and secondary school struggling readers, commented on the fact that students often receive instruction from different teachers using different programs and instructional methods from the one used in the main classroom. This often results in a lack of coherence or alignment of the content, methods, and design of supplementary and core reading instruction programs. A failure to align Tier 1 and Tier 2 reading instruction programs can result in struggling students experiencing what amounts to two different reading curricula and interventions. In this circumstance, struggling students can develop confused notions about reading instruction since they would be required to learn different reading instruction terminology, content, and skills at a different pace and in a different sequence. Careful attention must be paid to the planning and delivery of core and supplemental reading instruction provided to low-achieving readers.

'While programs are very helpful tools, programs don't teach; teachers do.'

Louisa Moats

Common implementation challenges: School leaders and teachers I interviewed during my travels identified four main reasons why it can be difficult for schools to provide timely and targeted reading intervention for older struggling students:

1) older at-risk students often have more complex reading difficulties, which can require more time, resources and expertise to address effectively
2) reading intervention programs designed for younger students might not be suitable or effective for older students, which requires schools to develop customised intervention programs that are tailored to the unique needs of each student. This is time consuming and resource intensive
3) older struggling students may be more resistant to participating in reading intervention programmes, especially if they feel embarrassed or stigmatised by their reading difficulties.
4) budget constraints and staffing shortages can limit schools' ability to provide adequate reading intervention services to all students in need.

92 Available at: https://dsf.net.au/professionals/teachers-and-tutors/selecting-an-intervention-program
93 Wheldall, K, Wheldall, R & Buckingham, J (2023). *Effective instruction in reading and spelling*. MRU Press: NSW

Recommendations for effective reading interventions and programs

Effective intervention programs: Interviews were conducted with several authors of remedial programs targeted to older struggling readers. These authors included Dr Marylin Sprick, Dr Linda Carnine and Dr Anita Archer. Each unanimously agreed about the effectiveness of explicit instruction and reported using these principles to design the architecture of teaching materials for struggling readers.

Based on my professional career and from this Fellowship experience, I suggest this selection of scripted or heavily scaffolded intervention programs (suitable for students in Year 4 and above):

- Corrective Reading (Decoding) and Corrective Reading (Comprehension)
- MacqLit (phonemic awareness, phonics, fluency, vocabulary and comprehension)
- Reading Tutor Program (decoding and word recognition, reading fluency practice)

  Sounds-Write (phonics, word reading accuracy, fluency, initial morphology)
- REWARDS intermediate (Grades 4-6) and REWARDS Secondary (6-12) (decoding multisyllabic words reading, fluency practice, and comprehending content-area text). See also REWARDS Plus Science & Social Studies (reading comprehension, fluency, content-specific vocabulary and expository writing skills)
- The Third Quest (content knowledge, vocabulary, word study, comprehension and fluency)
- Heggerty Bridge the Gap (phonemic awareness intervention lessons)

Most of these programs come with their own tests (e.g. placement tests, mastery tests, cumulative reviews) which allow teachers to begin students at the appropriate level and monitor progress over time. It is worth noting there are several effective programs in existence; the list above is not meant to be exhaustive. The reasons these programs are mentioned are:

- I have used them myself with primary or secondary students after completing the training and/or have worked together with educators to implement them
- I have seen them used with positive effect based on pre- and post-test scores
- They have been developed based on the reading science and follow an explicit and systematic teaching approach. In some cases, I have met with the authors and discussed the program characteristics in more depth.

The common features to an effective reading intervention, regardless of whether teachers choose a commercial program or developed a school-based program, include:

- **Use explicit, systematic and sequential instruction, with cumulative review**, as the best approach to serving the needs of all students, and
- **Align instruction across the Tiers** to maximise student response. Ideally, both instructional content and instructional practices should be aligned across the Tiers so students can generalise what they learn in Tier 2 to Tier 1 classes. Instruction and interventions must not be implemented in a vacuum, nor be seen as two separate things. Mixing instructional approaches in the same subject matter can confuse struggling students and put them more at risk. In Tier 3, teachers may isolate a particular area where they note a student is not developing at an appropriate rate of progress (see Chapter 5).
- **Implement interventions that integrate the word recognition and language comprehension components**, and focus on building fluency practice, explicitly teaching sophisticated vocabulary and developing background knowledge. 'Teaching knowledge is teaching reading,' says Dr Sharon Vaughn (2022)
- **Align the level of instruction to the needs of the students**. Through diagnostic assessments, a teacher can determine whether a student's reading difficulties are caused by (1) word reading problems (e.g. decoding), (2) word meaning problems linked to insufficient vocabulary, (3) insufficient background knowledge, (4) lack of fluency in reading words/phrases/texts, and/or (5) inadequate use of reading comprehension strategies. Instruction should be based on student needs

identified through diagnostic assessments (see Chapter 2)

- **Teach spelling, writing and vocabulary alongside each other**, not in isolation, and it must be closely linked to the curriculum (included in content areas)
- **Consider strategies to engage and motivate** the students and provide a safe and supportive learning environment.

I invite teachers, reading specialists, education assistants and/or parents supporting older struggling readers to consider accessing the following useful resources:

- Providing reading interventions for students in Grades 4-9 This guide provides four evidence-based recommendations to meet the needs of older students.
- The 10 Key Policies and Practices for Reading Intervention This document shares the most important practices that all teachers can put in place right now in their instruction.
- De Bruin, K. (2019). Tier Two Literacy Interventions in Australian Schools: A Review of the Evidence Version 2.0. (Monash University).

Key recommendations for teachers

- **Use direct, explicit instruction to deliver Tier 2 and Tier 3 interventions for students struggling with reading and align these instructional practices with the main classroom instruction (Tier 1).**
- **Implement an intervention which is based on the individual needs and strengths of the reader and designed to address specific reading difficulties.**
- **Use scripted commercial programs and/or school-based interventions that have been shown to be effective in raising academic achievement levels of older struggling students, and include diagnostic and progress monitoring data.**
- **Strategically integrate the essential components of reading (i.e. phonemic awareness, phonics, fluency, vocabulary and comprehension) with spelling and writing instruction and focus on building background knowledge. Ideally the intervention should be closely aligned to the curriculum.**
- **Prioritise school resources and focus on the students who need the most intensive intervention support**

One question remains: what do we do when students are not making sufficient reading growth? Regardless of the quality of any program or teacher knowledge, there will always be students who need supplementary instruction designed to meet their needs. Even though there is substantial evidence to demonstrate the effectiveness of Direct Instruction and explicit instruction, many struggling readers still require more intensive efforts than those students who are performing at/or near grade level. The next section offers guidelines on adapting and modifying instructional practices to deliver appropriate, responsive and more intensive interventions for students with persisting reading difficulties.

Chapter 5

Intensification of reading instruction and interventions

Knowing how and when to intensify reading intervention for students who are not making desired progress

For a few students, Tier 1 and Tier 2 reading instruction may not be enough, and their reading skills development may not progress at the same pace as that of their peers. How can we close the gap when students are already 3–5 years behind (in exposure and experience, not age) and additional instruction has not been enough to meet their needs?

With close monitoring of student progress, it may be observed that some students are not responding adequately to Tier 2 intervention and not achieving expected growth in reading. Usually, schools tend to move these students from Tier 2 into Tier 3 intervention, providing additional intensive one-to-one support. Is it sufficient and effective enough to adjust intervention until students are on track for reading success?

Intensifying interventions for students with reading difficulties is challenging. The information collected from the interviews with international literacy experts suggests there is no single solution to this issue which can guarantee all struggling readers will make sufficient progress and catch up with their peers.

What is known is there is a range of effective evidence-based strategies that can be implemented to intensify instruction and interventions. This typically involves increasing the dosage, duration or frequency of the intervention in response to students' lack of progress. However, schools that extend learning time for intervention still need guidance on maximising the use of instruction time. What I often see happen, is that teachers use assessment data to monitor student progress but are unable to make meaningful changes to instruction. More training to support data analysis and instructional decision making is needed. On the other hand, schools might have limited staff to provide additional learning opportunities for struggling students in smaller groups. What my Fellowship revealed is that other factors (separate from dosage) can also be considered to help students narrow or eliminate the reading gap so they can reach grade-level expectations.

Intensification involves frequent adjustments to instruction based on student data.

That being said, during my Fellowship travels no one expert agreed on which strategies work best for each student. As a result, intensification involves frequent adjustments to instruction based on student data. It requires time and is highly dependent on teacher knowledge, and therefore can be very challenging to get right. The next section describes in more detail how teachers can optimise the impact of an intervention in cases where it is not producing expected reading growth amongst struggling students.

'Remediation requires much more intensity.'[94]

Educators might consider accessing the following resources to learn more about how to strengthen literacy interventions when students are not making adequate progress toward their reading goals.

- Intensive Interventions for students struggling in reading and mathematics. A practical guide[95]
- Intensifying Literacy Instruction: Essential Practices[96]
- The taxonomy for intensification (Fuchs et al, 2017)[97]
- The intensification framework (NCIL, 2022)[98]
- The National Centre for Intensive Intervention (NCII) Academic Tools chart[99]

94 Fletcher, JM (2022, November). Understanding dyslexia: What we know from science. Presentation at the International Dyslexia Association Conference, San Antonio, TX.

95 Vaughn, S, Wanzek, J, Murray CS & Roberts, G (2012). Intensive interventions for students struggling in reading and mathematics: a practical guide. Porthsmouth, NH: RMC Research Corporation, Center on Instruction. Retrieved January 8, 2023, from https://files.eric.ed.gov/fulltext/ED531907.pdf

96 Intensifying Literacy Instruction: Essential Practices. Accessed on 7 January 2023: https://intensiveintervention.org/resource/intensifying-literacy-instruction-essential-practices St. Martin, K, Vaughn, S, Troia, G, Fien, H & Coyne, M (2020). *Intensifying literacy instruction: Essential practices*. Lansing, MI:MTSS Technical Assistance Center, Michigan Department of Education.

97 Fuchs, L. S., Fuchs, D., Malone, A. (2017). The taxonomy of intervention intensity. Teaching Exceptional Children, 50(1), 35-43. Available at: https: //files .eric.ed.gov/fulltext/EJ1160167.pdf

98 National Center on Improving Literacy (2022). Intensifying reading instruction and intervention for students who are not making desired progress. In *The Reading League Journal, September/October 2022, 3*(3):50-57.

99 Academic Intervention Tools Chart. Accessed on January 8, 2023, from https:// charts.intensiveintervention.org/chart/instructional-intervention-tools, National Center on Intensive Intervention. (2013). Data-based individualization: A framework for intensive intervention. Washington, DC: American Institutes for Research. Available at https://files.eric.ed.gov/fulltext/ED575656.pdf

Adjusting what to teach

The reading components

There is substantial evidence to show that the use of systematic and explicit instruction to teach the skills encompassed in the Big Six of reading is beneficial for all students, especially students with, or at risk for, reading difficulties (Vaughn et al. 2000). The Simple View of Reading can serve as a robust theoretical framework for developing an evidence-based reading intervention in remediating struggling readers (Chapter 1). Although some skills are more relevant at different developmental periods (e.g. more emphasis is placed on word reading initially and less emphasis over time on this as students move away from decoding), the content taught during intervention lessons must effectively and strategically integrate all components of reading. At no point should instruction focus exclusively on only one of the reading components. Rather, instruction should be in context whilst matching students' learning needs.

Another important point when adjusting content so it aligns with the essential components of reading is to consider the logical progression of skills, with building from easy to more complex skills as students move from novices to become skilled readers.[100,101] In their report, Martin et al.[102] include the figures below, outlining the sequential progression of reading skills from first year of compulsory schooling through to Year 12, based upon the two components of the simple view of reading.

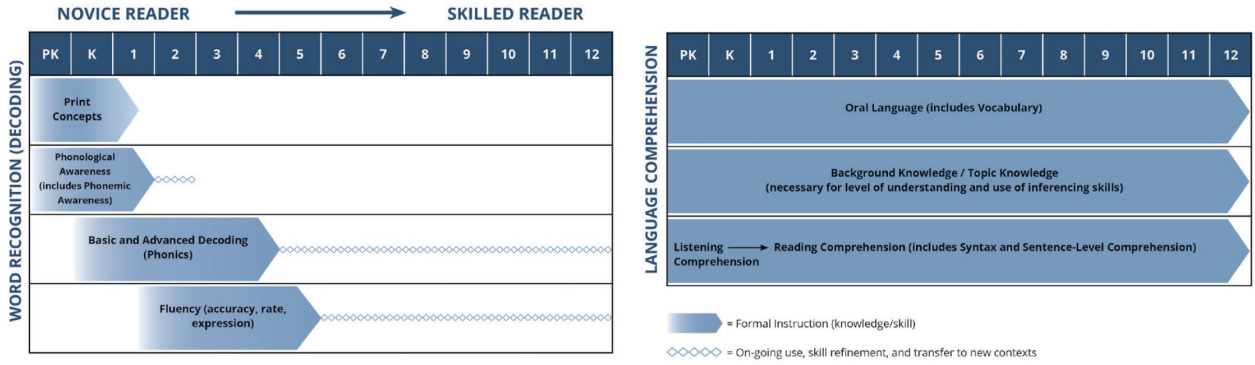


Figure 23: The progression of skills, which includes a hierarchy of easy to complex skills to teach word recognition (decoding) and language comprehension (Martin et al. 2020).

The third important related point is the provision of targeted intensive instruction that would benefit struggling readers, either in small groups or one-to-one, based on where students are in their progression. This means teachers must know the skill acquisition level of each student for each component and align instruction accordingly. Martin et al. (2020:8) recommend schools 'provide instruction in skills that are below the students' current Year Level performance'. For example, sixth graders who are operating at a Year Three reading level could require instruction in component skills below Year 6 (e.g. basic and advanced phonics and additional fluency practice).

Having said this, even if students do not have the decoding skills to independently read texts, vocabulary and comprehension instruction must still be provided to students with reading difficulties during core instruction (Tier 1). Other approaches can be used to build vocabulary and foster reading comprehension. For example, teachers can read aloud texts well above students' independent reading levels and ask questions about vocabulary, predictions, inferencing and prior knowledge. Teachers modelling through reading aloud should be a common practice in primary classrooms and is viewed as an important vehicle for vocabulary development, which in turn supports comprehension.

Motivational and cognitive learning strategies

Students who continue to struggle with reading might have cognitive processing issues arising

100 Kilpatrick, DA (2015). *Essentials of assessing, preventing and overcoming reading difficulties*. Wiley, Hoboken, New Jersey.
101 Ehri, L (2005). Phases of development in learning to read words by sight. *Journal of Research in Reading, 18*, 116–125.
102 Martin K, Vaughn, S, Troia, G, Fien, H & Coyne, M (2020). *Intensifying literacy instruction: Essential practices*. Lansing, MI: Mi MTSS Technical Assistance Center, Michigan Department of Education. Available at: https://intensiveintervention.org/resource/intensifyingliteracy-instruction-essential-practices [Accessed 7 January 2023]

from difficulty paying attention, an inability to sit still for any length of time, taking longer time to complete tasks, poor memory when recalling multi-step instructions, and poor self-regulated learning skills. The goal is to teach students strategies they can use on their own when they approach a difficult task. Some examples include:

- **A gradual release of responsibility**. Provide specific scaffold during instruction to help students accomplish tasks with a high level of mastery in a way that influences self-efficacy and working memory capacity.
- **Goal-setting**. Students use a bar graph to chart how they are progressing with oral reading fluency. Making progress more visible helps set, monitor and achieve reading goals.
- **Teaching students multi-step routines** for important skills (e.g. how to decode multisyllabic word following an instructional sequence) and use **metacognitive strategies** to help students monitor comprehension.

As a result of being taught motivational and cognitive learning strategies within the context of reading instruction, and not as a separate intervention, students are better able to adapt these strategies more widely while reading independently at home and learning in other subject areas.

University of Texas, Austin

In my discussion with Dr Jessica Toste, Associate Professor in the Department of Special Education at the University of Texas in Austin, she emphasised the positive effects on integrating motivational belief trainings to reading interventions, especially in Years 6 through to 8 (a critical time for adolescents where motivation drops). Within her study[103], three groups received the following interventions:

'A major factor that aids or limits the amount of improvement that a child may make in reading is highly related to their motivation to persist in learning to read despite difficulties.' *(Lyon, 1998)*

- Group 1 received scripted reading lessons only
- Group 2 received scripted reading lessons with motivational belief training
- Group 3 was the control group

The group that received motivational belief training showed greater gains, with students in the group more on task and more engaged. Interventions are more likely to have positive long-lasting effects when paired with positive psychology and motivational supports. The findings are also supported by the work of Professor Jessie Ricketts, researcher at Royal Holloway, University of London, and Dr Sharon Vaughn, researcher at the University of Texas, whom I both met during my travels. They also highlighted the importance of motivation in older struggling readers, and the need to address motivational factors as part of reading interventions.

According to Lyon: 'A major factor that aids or limits the amount of improvement that a child may make in reading is highly related to their motivation to persist in learning to read despite difficulties.' (1998:14).

In teacher education, Dr Toste often uses an analogy from the film Shrek. In the movie, Shrek says 'Onions have layers. Ogres have layers. Onions have layers. You get it. We both have layers.'

103 Toste, JR, Capin, P, Williams, KJ, Cho, E & Vaughn, S (2019). Replication of an experimental study investigating the efficacy of a multisyllabic word reading intervention with and without motivational beliefs training for struggling readers. *Journal of Learning Disabilities, 52*(1), 45-58.

The same could be said about older struggling readers because they have many layers that are hidden beneath the surface, some which have accumulated from repeated failures to master reading skills in school year after year. Teenagers experiencing reading difficulties can struggle with emotions of frustration or anger – and may have a hard time trusting that a new teacher will be able to help them make observable gains after so many years of experiencing challenges. This, in turn, can lead to students feeling less inclined to engage in reading over time. These issues are the many layers needed to be peeled back to set the right conditions for improving reading outcomes in older struggling readers. Teachers must address cognitive and motivational factors or the intervention might not work, no matter how targeted, systematic and explicit it might be.

Adjusting how to teach

Instructional design and delivery

As described in chapter 4, instructional design and delivery principles based on explicit instruction (see Table 7) have a significant impact on students' reading outcomes and can be adjusted to better support students at their levels of need, whether they have working memory issues, poor attention and/or executive functioning difficulties.

I met with Dr Anita Archer, a well-known educator and author, who has written extensively on instructional strategies and interventions to improve student outcomes. One of her suggestions for intensifying interventions is to increase the frequency and duration of instruction, particularly for struggling students. She spoke too about providing additional modelling of strategies to ensure students can arrive at a correct answer. In addition, she suggested that teachers might also increase the number of opportunities a student is required to demonstrate their learning during the lesson (written, verbal, physical responses). This could mean increasing the number of opportunities a student has to read and answer a question, and reducing teacher talk. Ensuring immediate feedback is provided to remedy misunderstandings is also critical: 'If you expect it, correct it,' she said. Additionally, increasing the pace of a lesson can help students with learning difficulties stay focused and engaged, and allow teachers to teach more in less time, to paraphrase Dr Engelmann. Dr Archer also emphasised the importance of setting high expectations for all students and using positive reinforcement to motivate and encourage their efforts. According to her, instructional design is heavily reliant on how well the instruction is delivered and how well students are responding to the instruction/intervention during the lesson.

Design	Delivery
Organised and targeted lessons	Active engagement
Systematic, sequential and explicit instruction	Frequent opportunities for students to respond
Clarity and unambiguous communication	Frequent progress monitoring
Routines, routines, routines	Immediate affirmative and corrective feedback
Modelling of strategies using worked examples	Brisk pace
Gradual fading	Deliberate practice opportunities with sufficient independent practice
Distributed and cumulative review	Adjust lessons
Appropriate complexity of the learning task at hand	

Table 7: Essential components for instructional design and delivery based on explicit instruction

Additional considerations

Other arrangements could be made to support students with persisting reading difficulties.

The organisation and physical layout of the classroom environment can increase students' motivation and engagement. Teachers should adjust classroom seating so that students are in close proximity and receive more immediate feedback.

Dosage, duration and frequency. Teachers can increase the amount of time students receive intervention, by either: (1) increasing the frequency of intervention lessons provided per week or per day (from three times per week to two times per day), (2) increasing the length of the daily instructional sessions (from 30 to 120 minutes), (3) extending the duration of the intervention (for additional weeks or months).

The report published by the Center on Instruction[104] recommends making decisions about learning time based on each student's circumstances, including:

- how far the student's achievement level is below grade-level expectations
- the length and frequency of the previous interventions, and
- the complexity of the learning tasks at hand.

Although increasing instructional time is one of the most common and important ways to intensify interventions, there is insufficient evidence to suggest how much intervention is enough. A study conducted in 2000[105] found that interventions up to 20 weeks might be sufficient to allow many younger students to make substantial gains in reading. However, while this is an important finding given the limited resources in schools, it does not apply to students in Year 4 and higher. More research is required to answer questions about remedial interventions for older students with reading difficulties.[106]

Teacher-student ratio. Decreasing group size helps teachers divide their attention amongst fewer students and increases the potential for individualised instruction. As the students are grouped according to similar needs, teachers can work more intensively by tailoring their instruction to their students' specific needs. In smaller groups, teachers can more easily maintain appropriate pacing and increase opportunities for interaction between them and their students. This means students have greater opportunities for responding and practicing and can receive more frequent feedback and timely error correction. It is also easier for teachers to monitor on-task behaviour and engagement. However, smaller group size can be expensive because more teachers are needed. Further research is required to determine the optimal teacher-student ratio.

Decreasing group size helps teachers divide their attention amongst fewer students and increases the potential for individualised instruction.

In practice, these adjustments are heavily dependent on students' instructional needs, how intense those needs are, and the resources available at the school. Dr Toste recommended educators focus on what variables are within their control, including school context and human resources (for example, whether enough school personnel are trained and available to deliver smaller intervention groups). It is important to note that intervention time should be increased to accelerate learning and allow for more instruction, rather than a repeat of Tier 1 core instruction over a longer period of time.

Fidelity of implementation

The fidelity of implementation refers to the degree to which a program is delivered as intended. Lack of implementation fidelity might result in a practice or program being less effective and less efficient, which, in turn, might result in having students not developing reading skills at a fast enough pace. This is a recurrent problem I observed in schools. Several factors need to be considered when measuring the fidelity of implementation, including dosage, quality of program delivery, student responsiveness, quality of teacher training, teacher attitudes, program characteristics and differentiation. From the interviews with academics and school leaders, it was observed that implementing an intervention with a high degree of fidelity and integrity remains a challenge in practice. Some educators referred to the term 'toxic mutation' to describe teachers who choose to adapt and not maintain the integrity of school-based programs and/or commercial programs.

There are ways to address concerns about the variability of program implementation. Dr Beth Harn, Associate Professor in the department of

104 Vaughn, S, Wanzek, J, Murray CS, Roberts, G (2012). *Intensive interventions for students struggling in reading and mathematics: a practical guide*. Porthsmouth, Nh: RMC Research Corporation, Center on Instruction.

105 Elbaum, B, Vaughn, S, Hughes, MT & Moody, SW (2000). How effective are one-to-one tutoring programs in reading for elementary students at risk for reading failure? *Journal of Educational Psychology, 92*, 605-619.

106 Vaughn S, Fletcher JM (2012) Response to intervention with secondary school students with reading difficulties. *Journal of Learning Disabilities. 45*(3):244-56.

special education at Oregon University, suggested that educators use fidelity checklists, along with increased supervision, to gain information about how students respond to intervention. For example, Dr Harn and her colleagues developed the Quality of Intervention Delivery and Receipt (QIDR) checklist[107] which is a tool designed to be used by trained observers who can objectively rate the delivery and receipt of an intervention. The checklist can help identify areas where the delivery or receipt of an intervention may be improved, and can be used to guide intervention implementation and evaluation efforts. In our interview, she reported that, 'typically, evidence-based practices implemented with high fidelity will result in improved outcomes, whereas low fidelity will lead to poorer outcomes'.

'...typically, evidence-based practices implemented with high fidelity will result in improved outcomes, whereas low fidelity will lead to poorer outcomes.'
Dr Beth Harn

I encountered many examples in schools I visited where leaders conducted classroom observations using checklists to hold teachers accountable and provide targeted feedback (see chapter 3 the 'Reading Block Look-fors' tool at Metzger elementary school, or in chapter 4 coaching staff implementing Direct Instruction programs). Teachers were provided with specified routines to increase the degree to which they implement evidence-based strategies with fidelity and integrity. These practices contributed to more accurate implementation and reduced variance in teaching for better reading outcomes in students.

Finally, more research is still needed to better understand (1) the role of intensification, including the length of intervention, hours of instruction, optimal ratios of teachers to students and reading time, (2) program adherence/fidelity, (3) careful training of staff; (4) teacher experience. To varying extents, these factors will influence the outcomes of an intervention. The last factor to consider during the intensification process is the requirement for sufficient assessment and frequent progress monitoring to remedy learning gaps in reading.

Using assessments to support decision making

Before intensifying instruction, analysing data from screening and progress monitoring tools is recommended to determine whether students are making desired reading progress. Intensification of intervention should only occur for students who are not responding to effective Tier 1 instruction and supplemental instruction in Tier 2 or who are well below grade level expectations. Using this data tells teachers if the students are on track to reach their reading goals and if the current interventions in place are working. If not, more intensity of instruction is needed.

During the intensification process, weekly or fortnightly progress monitoring data should be used to assess the skills that align with the focus of the intervention, and whether these skills are improving quickly enough to help students meet their end-of-year results.

Further data might be considered for making strategic instructional decisions when students continue to make insufficient reading growth. This includes the following:

1. **Content mastery data** (e.g. Is the student mastering the skills being taught during instruction?), which is administered approximatively once per week (e.g. every five lessons). Sometimes this is already built in to a commercial program (e.g. the Spelling Mastery Direct Instruction program has a mastery test every five lessons)
2. **In-depth diagnostic assessments** to better define a student's strengths and needs. This will ensure we can identify students' skill gaps in a particular area, such as phonics (e.g. Does the student know the 44 sounds in the English language?)
3. **Parent and teacher interviews and observations in class** (e.g. Is the student's behaviour impacting his/her ability to learn and access instruction?). Teachers are encouraged to make careful observations of the student's verbal and non-verbal behaviours during instruction, including correct/incorrect responses, level of participation, motivation, attention and persistence.

107 Fritz, R, Harn, B, Biancarosa, G, Lucero, A & Flannery, B. (2018). How Much Is Enough? Evaluating Intervention Implementation Efficiently. *Assessment for Effective Intervention. 44*. 153450841877290. 10.1177/1534508418772909.

Careful consideration must also be taken not to overtest students, as this can decrease the available instructional time to the detriment of student learning. Teachers must be wise and efficient about what they collect and must only collect data that will help them make instructional decisions. Below are some guiding questions.

- Has the initially applied adaptation proven to be effective?
- Is the student mastering the content being taught in the intervention?
- Has the progress been gradually maintained or slowed over time?
- If progress slows down, another adaptation is needed, and further diagnostic assessment needs to be conducted to better understand students' difficulties.

To fully understand the intensification process, a case study is presented in Appendix 4, using a fictional Year 1 student, Ethan, who has been previously identified as at risk with reading difficulties. This case study describes how educators can make frequent adaptations to interventions based on student data to accelerate learning.

Limitations of intensive interventions for older struggling readers

Findings from my Fellowship suggest that students who continue to struggle with reading into secondary school are likely to have a slower rate of progress and may need significantly more time in intervention (i.e. several months or a full school year, perhaps more) than younger students with reading difficulties. This resonated with the conversation I had with Professor Jessie Ricketts, from the Department of Psychology at Royal Holloway (University of London), who spoke about having realistic expectations when dealing with older struggling readers. She reported that there may be little noticeable progress resulting from intervention and that even small shifts in reading proficiency can be meaningful (i.e. it might allow them to do more or gain confidence). These small changes may have cumulative effects in the life of young people.

Struggling adolescents will benefit from more intensive and sustained intervention, which may include daily small group instruction or one-on-one format delivery. This is likely to require schools to adapt or change their current structures (i.e. timetables, access to curriculum content, delivery format, physical resources), as well as mindset and existing practices for these students. In our discussion, Dr Sharon Vaughn recommended that schools examine what instructional approaches they are currently using to provide intervention for students with reading difficulties, when problems tend to persist. She used the term '**intervention platform**' which refers to 'the basis by which adaptations, accommodations or other instructional practices can be included to make interventions more intense. 'That could be instructional materials, instructional programs, or a combination of both instructional practices and professional development. Any combination of those would constitute the current platform.' (NCII, 2014).[108] Schools' intervention platforms may vary greatly, depending mostly upon the profiles of the students, and the platforms may be subject to structural and logistical limitations within the school.

Dr Sharon Vaughn

108 National Center on Intensive Intervention (NCII) (18 September 2014). What is an intervention platform? [Youtube] Available at: https://www.youtube.com/watch?v=HIKBXz25Cw s [Accessed 27 January 2023]

Limitations

- Student attendance in intervention lessons.
- Consistency in assessment timelines and designation of staff responsible for intervention assignment and grouping decisions.
- Lack of research on the effective grouping practices for intervention in Year 4 and secondary settings.
- Small group intervention raises logistical concerns for schools, such as securing adequate resources (reading specialists or education assistants, space, materials, training).
- Strategic resource allocation where schools must align their budget with their needs. School funds should be spent on interventions that have been rigorously evaluated in research studies and have demonstrated meaningful effects on important student learning outcomes
- The achievement gap: secondary students are more likely to require one-on-one intervention because their learning needs might vary greatly.
- The slump in engagement and motivation during the middle years of schooling. NAPLAN data has consistently shown a pronounced drop in performance from Year 7 to Year 9, when students are 14–15 years old. Research has shown the middle years of schooling are a challenging time for many students. Their bodies and minds are changing rapidly, the demands of secondary school and their social lives become more complex, and the level of disengagement and disaffection with school rapidly escalates.
- Parents' and students' consent prior to interventions.
- Prioritising the investment in teacher training to build teacher capacity and expertise. For example, many middle and secondary school content area teachers, in fields such as science, math, and social studies, do not possess the information or skills needed to teach reading and do not believe that it is their job to teach reading strategies.
- Some middle and secondary schools may not have the specialised personnel, time and resources to conduct efficient screening assessments for students to identify their reading needs.

Key recommendations for teachers

- **Use valid and reliable assessments to support decision making prior to adjusting intervention**
- **Match the intensiveness of the intervention to the needs of the students who struggle**
- **Increase instructional time, dosage, frequency and reduce teacher-student ratio**
- **Include adaptations about what to teach (content) and how to teach (pedagogy), especially providing explicit and systematic instruction in reading skills**
- **Use more frequent progress monitoring to adjust the degree of intensity**
- **Motivation and engagement strategies should be integrated within the intervention**
- **Measure the fidelity of implementation**
- **Consider logistical limitations; e.g. attendance, securing resources, training**
- **Older struggling readers tend to have a slower rate of progress**
- **Measure the gain not the gap**

The intensification of interventions is not a single approach or a preset formula. It is not a program you can pull off the shelf or buy online. It is also neither more of the same instruction nor a repetition of the core instruction over time. Rather, it is instruction that differs in terms of content and/or mode of delivery, often combined with increased learning time or changes to the instructional setting. Experts agree that it requires highly skilled educators to make frequent adjustments based on student data until students reach proficiency in reading.

Chapter 6

Five conditions for establishing an ecosystem to prevent reading failures nationwide

Throughout the Fellowship interviews, key themes were repeatedly discussed and identified as part of the ecosystem required to address reading failures. A brief description for each will be illustrated with international examples.

Initial Teacher Education provision

International reports recommend systematic, explicit, synthetic phonics instruction and wide reading of quality literature to support early reading development. However, many in-service teachers feel unprepared to teach basic language and reading skills. There is a gap between research and teacher preparation, with most Australian universities not mentioning synthetic phonics as a desirable method to use for beginning reading instruction. According to the National Inquiry into the Teaching of Reading (2005), less than 10% of time in compulsory subjects/units is devoted to preparing student teachers to teach reading. Professional development is needed to provide required knowledge of language concepts related to early literacy instruction for instructors to integrate into their pre-service reading courses. International initiatives are underway to address pre-service teacher training in this area.

The Center for Reading Science at Mount Saint Joseph University (Ohio, US)

Mount Saint Joseph University (MSJ) has established a prominent position as a leader in evidence-based literacy preparation through the Science of Reading. MSJ's Reading Science graduate program[109], which was founded 12 years ago, aims to equip educators with effective and research-based methods for teaching reading. It was among the first nine programs in the US to be accredited by the International Dyslexia Association, and its popularity has increased exponentially, with an initial yearly enrolment of eight students in 2008 growing to 60 students within three years, and over 200 students attending the course by 2012.

MSJ's Reading Science program includes a practicum based on structured literacy instruction with LETRS[110], and Orton-Gillingham (OG), a program designed to help struggling readers by explicitly teaching the connections between letters and sounds. However, one of the program's primary challenges has been finding sufficient placement in schools where students can observe and practise scientifically based reading instruction rather than incidental phonics instruction or strategies promoting the three-cueing system. To ensure that student teachers are placed in settings where they can apply scientifically research-based reading instruction, Dr Amy Murdoch actively developed partnerships with Cincinnati public schools. This means she ensures that her students access the support of highly skilled mentor teachers, whose teaching practices are grounded in the Science of Reading. The goal is to have students generalise skills they learn in the courses to their classroom settings.

Having partnerships with Cincinnati public schools provides highly skilled mentor teachers whose teaching practices are grounded in the Science of Reading.

MSJ has experienced significant growth and now offers several Reading Science programs, including undergraduate and doctoral programs designed for working professionals, which focus on scientifically based reading research. Dr Laura Saylor, the Dean of MSJ's Schools of Education, and Dr Murdoch emphasised that literacy instruction grounded in reading research must be incorporated into all undergraduate programs. Before the review of undergraduate courses, candidates used to receive conflicting messages, with some faculties teaching whole language and other approaches to reading instruction, and only some instruction aligned with the Science of Reading. Now student teachers are getting a consistent message. MSJ has also launched a new Doctor of Education program in Reading Science, with the first cohort of 21 students beginning the three-year program in May 2021.

109 Mount St. Joseph University (30 June 30 2020). Mount St. Joseph University Launches Reading Science Doctoral Degree Program [online]. Available at: https://www.msj.edu/news/2021/06/mount-launches-reading-science-doctoral-degreeprogram.html [Accessed on 13 February 2023]

110 Language Essentials for Teachers of Reading and Spelling (LETRS) is a training course developed by Louisa Moats and Carol Tolman, both literacy experts and consultants. Available in Australia with DSF (Perth, Western Australia). https://dsf.net.au/our-services/workshops-and-events/letrs

Higher Education Literacy Steering Committee (Ohio, US)

The Ohio Department of Education (ODE) established the Higher Education Literacy Steering Committee (HELSC) to assist higher education institutions in implementing the Science of Reading in teacher preparation programs. The committee developed a set of four model syllabi and supporting documents that serve as an example of how to teach reading, grounded in evidence[111], in collaboration with the faculty of Mount St. Joseph University's Reading Science Program.

In addition, Ohio has introduced several state initiatives to promote evidence-based reading practices in higher education and schools, including awarding grants to seven Ohio institutions of higher education to align their reading core with the Science of Reading. Beginning in the 2023–24 school year, all teachers in Ohio who teach first year of compulsory schooling and first grade, including those providing special education instruction, will be required to complete approved professional development courses on the Science of Reading (see the Texas Reading Academies below). Ohio also requires primary teacher candidates to pass the state's Foundations of Reading Test, covering the five components of scientifically based reading instruction.

Here are some courses in Australia that align with reading science:

- La Trobe's Science of Language and reading (SOLAR) lab offers a series of online short courses on the science of language and reading, designed for teachers, literacy leaders and allied health professionals to integrate evidence-based approaches into classroom practice. See The Science of Language and Reading short course and the course on secondary school perspectives) (LaTrobe University, Melbourne)
- The University of Edith Cowan (Western Australia) offers a three-day course, The Science of Reading: Translating research to classroom practice, which aligns with the Science of Reading Unit in the Master of Education and the Graduate Certificate of Education course.
- In 2023, a new literacy center and reading clinic, the Australian Centre for the Advancement of Literacy, was established at the Faculty of Education and Arts at the Australian Catholic University (Sydney) and will offer new courses.

Professional learning opportunities that align with evidence-based reading instruction

The methods used to teach reading vary, and so does the expertise of teachers and leaders in schools. To remedy this, high-quality professional development should be provided for classroom teachers and in schools that promote evidence-based teaching practices. As suggested from my Fellowship observations, to reduce reading failure we must know the research. There have been promising worldwide transformative initiatives aimed at supporting schools and equipping teachers and school administrators with evidence-based content and methods that best support the teaching of reading.

The Texas Reading Academies and the Science of Teaching Reading (US)

In the State of Texas, the House Bill 3 of the 2019 Texas Legislative Session requires all first year of compulsory schooling through to third-grade teachers and elementary principals to complete the Texas Reading Academies before the end of the 2022–23 school year, as part of the state's reforms for public education. The Bill also requires beginning teachers to pass the Science of Teaching Reading (STR) exam to demonstrate their proficiency in the field.

Texas Reading Academies is an 11-month professional development program that supports teacher knowledge and implementation of evidence-based practices based on the Science of Teaching Reading in school contexts to positively impact student literacy achievement. Reading Academies were intentionally designed to provide choice in implementation to meet local needs and priorities post-pandemic. School districts and open-enrolment charter schools must

111 Accessed on 1 February 2023: https://www.readingscience.org/implementing/

ensure that by no later than the 2022–23 school year each classroom teacher of the first year of compulsory schooling or first, second, or third grade and each principal at a campus with a first year of compulsory schooling or first, second, or third grade has attended a reading academy. To date, 90,000 teachers have completed or started Texas Reading Academies. Some challenges have been raised, including the content variations between the many authorised providers and the fact that schools might choose different local implementation approaches.[112]

The French Scientific Council of National Education (France)

In 2018, the former French Minister of Education Jean-Michel Blanquer introduced the constitution of the Scientific Council of National Education (CSEN), which aims to address inequalities in schools and lift student outcomes and is responsible for providing advice and expertise on education. The CSEN is led by Professor Stanislas Dehaene, Professor of Experimental Cognitive Psychology, Collège de France and director of Neurospin. The council is composed of a multidisciplinary team including 25 members, some coming from Harvard or MIT, others coming from Barcelona, Belgium, or France, divided into 12 working groups that cover a vast array of topics and whose investigation results have a direct impact on educational reforms and policies. For example, the first working group is called 'evaluation and interventions' and helps with providing more appropriate and accurate data to measure student needs and progress, using tools inspired by the Phonics Check in England (see chapter 2: the EvalAide program, including national standardised screening tools for Reading and Maths).

Members of the French Scientific Council of National Education with the former Education Minister Jean-Michel Blanquer.

Another working group has analysed both the content and design of primary teacher handbooks and reviewed the instructional methods promoted in these manuals for the teaching of reading. In France, there are 35 teacher manuals currently commercialised and commonly used to teach reading in primary schools. It was found that only a couple aligned with the Science of Reading and that most were outdated and rarely renewed in schools from year to year. One significant related finding was the importance of teacher expertise. A study was conducted in 131 classes showing that teachers can obtain the same results in student outcomes regardless of the manuals they use to teach reading. What matters most is their instructional approach to reading. Aligned with reading research, the key aspects favouring learning are: 1) the speed at which the teacher introduces the phoneme-grapheme correspondence at the beginning of the school year (from 12 to 14 correspondences in the first six weeks); 2) the use of decodable texts (that contain at least 60% of words that incorporate the letter-sound relationships that students have been taught; and 3) practising reading aloud as well as combining decoding (sound out) and encoding (spelling/writing) activities. This working group also developed a rubric with specific guidelines for the design and selection of manuals used in the teaching of reading.

With a focus on meaningful research that is practical for schools, the CSEN holds a non-negotiable position within the Education Ministry by advising and influencing research-based decision making in education. Not only do they work in close collaboration with the ministry and with public schools to conduct research projects, but they also organise two educational

112 Texas Education Academy (2023) 2023–2023 Texas Reading Academies Implementation[online]. Available at: https://tea.texas.gov/about-tea/news-and-multimedia/correspondence/taa-letters/2022-23-texas-reading-academies-implementation [Accessed 30 Jan. 2023]

conferences each year (free of charge), with the support of the Ministry of National Education and Youth. The purpose of these events is to provide evidence-based instructional practices for all teachers in public schools. Since its creation, the CSEN's influence has grown rapidly with the implementation of several promising and innovative activities.

In November 2022, for example, they launched the IDEE platform, which stands for Innovations, Data and Experimentations in Education (Innovations, Donnees et Experimentations en Education). For the first time, an effort is being made to link higher education institutions with practitioners while promoting evidence-based educational research. The project aims to provide a range of professional learning opportunities for teachers and to make school data available for broader use in colleges and universities, using the national evaluation tools (i.e. EvalAide). Not only does the baseline data provide information for teachers, but it does so also for researchers, who, as a result will be able to reduce the cost involved in collecting data when conducting research studies. To this end, the project will foster relationships between scientists, educators, education organisations and politicians to promote high-quality research studies, the results of which will be used to shape new education policies at a national level. IDEE will also provide services to advise scientists on how to develop an experimental design for a research study and/or provide support to implement it, including data collection, recruiting schools, ethics protocols, and more.

The creation of schools network (England)

1) **The Teaching School Hub program**[113] in England was created to establish a national network of designated school-led centres of excellence for teacher training and leadership development. Thirty-four primary schools have been selected as specialist English hubs based on their excellence in teaching phonics and being in disadvantaged areas. The hubs aim to collaborate with other schools, provide access to training and showcase excellent practice throughout the academic year. Each hub will run events and receive funding to employ extra staff as literacy specialists who can work with other schools and submit action plans for improvement.[114]

The newly appointed schools will each receive funding from September 2023 until July 2026 to support other local schools to improve student outcomes through better use of evidence.

There is limited evidence available on the effectiveness of the English hubs in England, as they are a relatively new initiative. The only report available was released by the Education Policy Institute (EPI) in 2020 and found that the impact of the English hubs on school outcomes was unclear. The report suggested that while the English hubs have had some positive impact, such as providing support to schools and developing resources, it is difficult to determine their overall effectiveness due to a lack of data and evaluation. Further research is needed to fully evaluate the impact of the English hubs.

2) **The** Research Schools Network is a network of schools which support the use of evidence to improve teaching practice. Launched in 2016 and funded by the Education Endowment Foundation (EEF), the network combines 38 schools that lead the way in the use of evidence-based teaching, building affiliations with a larger number of local schools in their region, and supporting the use of evidence at scale. Through the network, they share what they know about putting research into practice, and support schools in their region to make better use of evidence to inform their teaching and learning so they can make a difference in the classroom.

Most recently, six schools have secured £210,000 in funding across three academic years to form new research schools, joining the Education Endowment Foundation's (EEF) network of research schools across England. The newly appointed schools will each receive funding from September 2023 until July 2026 to support other local schools to improve student outcomes through better use of evidence. They will provide local and regional support to other schools by

113 TeachingFirst.org (2023). Teaching school hubs [online]. Available at: https://www.teachfirst.org.uk/teaching-school-hubs
114 Teachingfirst.org (March 13, 2019). English hubs and extra funding for phonics [online]. Available at: English hubs and extra funding for phonics (tts-group.co.uk)

sharing research evidence and supporting the translation of this into practice through training, modelling of best practices and school-to-school support. The EEF will be accountable for the development, support and quality assurance of the work of each of these new research schools.

Organisations and conferences aligned with the Science of Reading (US)

Despite the recommendations included in the National Inquiries, the implementation of evidence-based reading practice in Australian schools has been rather slow. To speed up the spread of information and support educators on their journey toward the Science of Reading, several individuals and organisations have used social media platforms, including blog sites (e.g. The Snow Report by Pamela Snow, Spelfabet by Alison Clarke), Facebook pages (e.g. Reading Science in Schools, Think Forward Educators), and web pages (e.g. CodeRead Dyslexia Network, Five from Five), to name just a few in Australia.

In the United States of America there are four major annual conferences dedicated to sharing expertise about the Science of Reading and how evidence-based strategies can help every child become a skilled reader. The conferences are held by the Reading League, the International Dyslexia Association, the Society for the Scientific Study of Reading, and Plain Talk. During my Fellowship travels I was privileged to attend:

- The 6th Annual Conference of the Reading League, held from 20–22 October 2022 in Syracuse, New York
- The 2022 International Dyslexia Association (IDA) Annual Reading, Literacy & Learning Conference, held from 10–12 November 2022 in San Antonio, Texas

Both conferences brought in experts from all over the world and were dedicated to reading, literacy, and learning, with the aim of educating attendees on the latest research, remediation and more.

Promote instructional coaching approaches to improve teaching and learning

Instructional coaching has become a reality in many schools. It involves one teacher working with another teacher (expert teacher/coach) to help them take small, personalised steps to improve their practice. From my many Fellowship visits to schools, coaching practices were observed to be fully adopted as a part of each school's professional development. However, the role of an instructional coach was often implemented in different ways, some more successful than others.

	OUTCOMES **% of participants who demonstrate knowledge, demonstrate new skills in a training setting, and use new skills in the classroom**		
TRAINING COMPONENTS	Knowledge	Skill Demonstration	Use in the Classroom
Theory and Discussion	10%	5%	0%
Demonstration in Training	30%	20%	0%
Practice and Feedback in Training	60%	60%	5%
Coaching in Classroom	95%	95%	95%

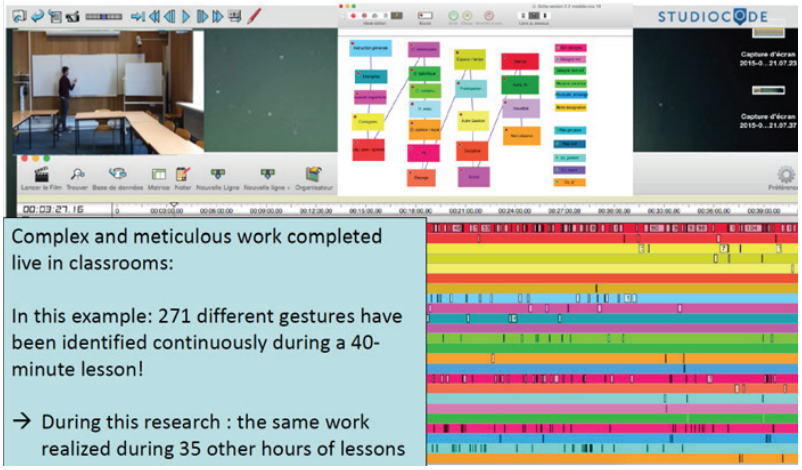
Table 8: Training outcomes in terms of percentage of participants impacted (Joyce & Showers, 2002)

There is a strong body of research supporting the effectiveness of instructional coaching for teacher efficacy. As can be seen from the data in Table 8, the application of skills is much higher when professional development includes coaching with follow-up as well as theory, demonstration and practice with feedback (Joyce and Showers, 2002). These four components are critical to help teachers learn new strategies and skills and should not be used in isolation, but rather must be included in any model for effective professional development. Instructional coaching has the potential to positively impact the way teachers teach and students learn in schools, and when effectively implemented, it can also positively affect the way school leaders lead.

From the interviews conducted with researchers, leaders, teachers and literacy coaches, it was suggested that a data-informed coaching model is more likely to help schools improve processes with effective sustainable practice changes. Within this context, the instructional coach supports teachers in using data to guide classroom practices to optimise students' outcomes. Different approaches and several coaching tools were encountered for fostering deliberate practice change in schools during my Fellowship travels.

An observation tool for teacher education training at the Institute of Educational Management (Mons, Belgium)

To improve pre-service teachers' teaching performance in training, Dr Marie Bocquillon[115] and her team at the Institute of Educational Management of the University of Mons in Belgium developed an observation tool. The tool was built after a scientific literature review of effective teaching practices focused on explicit instruction. It includes a rubric mapping evidence-based teaching approaches, mostly based upon the work of Rosenshine[116] and Archer.[117] The rubric also maps teachers' instructional delivery methods and their interactions with students (see the colour coding in the screenshot on this page, with each colour representing a teaching method). During my Fellowship visit to Mons university, Marie Bocquillon explained how she employed technology like wireless cameras, microphones and software from Noldus and other companies in order to improve the training of teachers using the design of the rubric. 'We are observing things like what kind of questions are asked, what kind of feedback do the future teachers provide to their students? Do they check for understanding? Are they interacting with each student, and not only with the two or three good students?' As a researcher and teacher trainer in education training, Dr Bocquillon believes the observation of teaching practices is a lever to develop effective classroom learning and student outcomes.



Screenshot of the software codifying explicit teaching practices

After the observation is conducted, the software provides teachers with a report quantifying ('scoring') their professional gestures, focused on how they manage the learning process, using classroom management strategies, as well as looking at teacher/student interactions. Dr Bocquillon uses two labs: an observation lab,

115 Delbart, L, Baco, C, Bocquillon, M & Derobertmasure, A (October 2021). Observation of practices, a lever to develop effective teaching practices [online] ResearchED Conference.
116 Rosenshine, B (1986). Synthesis of research on explicit teaching. *Educational Leadership, 43*(7), 60–69.
117 Archer, A & Hughes, CA (2011). Explicit instruction: Effective and efficient teaching. Guilford Publications.

where trainee teachers are videotaped while giving a lesson to their peer students, and an interaction lab, where the video feedback sessions take place. These feedback sessions were conducted based on a video of the trainee's teaching practice performance that has been annotated by the supervisor. During debriefing, the supervisor and the trainee teacher watch and discuss how the trainee teacher acted during the lesson. This innovative observation tool helps train future teachers to look critically at their own performances to achieve a higher level of practice. The software was used with secondary school teachers in French-speaking Belgium and findings have already shown promising results. The tool (i.e. observation grid inserted into software) is also used in secondary schools, not just in labs, to observe and give feedback to future teachers.

It is important to notice how Dr Bocquillon's research strategically aimed to connect theory and practice in teacher education where mentors/trainers can use the tool to observe, analyse and evaluate elements of teaching practice with a view to advising and helping teachers to readjust their practices over time. As we know, quality classroom instruction is one of the most critical system components needed for learning.[118]

Steplab: a professional learning platform (Blackpool, England)

Steplab is a UK-based organisation providing a professional learning platform for schools that promote data-driven instructional coaching methods to improve teaching.[119] The platform has been used in Blackpool Secondary schools as part of the KS3 literacy project (see Chapter 3). At South Shore Academy, leaders described the many benefits of using Steplab for making instructional coaching work in their school. They explained that Steplab allowed them to identify evidence-based teaching goals as well as ensuring that staff use a common language and approaches that align with the priorities of the school. The tool was customised at South Shore so that its content included high-quality teaching and learning practices expected to be visible in every classroom and broken down into a sequence of manageable steps (based on the work of Barack Rosenshine and Doug Lemov). When conducting walkthroughs, the leaders were then able to evaluate current practice against teaching goals, record and upload videos of effective teaching and facilitate the provision of feedback by emails, using the Steplab online platform. The tool also allowed leaders to prioritise and structure their coaching program, considering factors like time allocation, communication with staff, scheduling class observation and feedback sessions. From the interviews conducted with staff, coaching has become highly valued in the school.

A Student-Focused Coaching model (US)

After attending the IDA conference, interviews were conducted with Dr Jan Hasbrouck and Dr Daryl Michel, co-authors of the book Student-focused coaching model, Instructional coach's guide to supporting student success through teacher collaboration.[120] The main takeaways include the following:

- the importance of collaboration and communication between teachers and instructional coaches which requires mutual engagement and commitment to improve student success
- the role of instructional coaches in providing professional development, support and feedback to teachers
- the need for data-driven decision making in the classroom to inform instruction
- strategies for effective coaching, including active listening commands providing specific feedback, and modelling instructional strategies
- ways to build relationships in trust with teachers, including being approachable, building rapport and maintaining confidentiality
- the use of coaching cycles to support ongoing teacher growth and development
- the importance of celebrating successes and acknowledging progress towards goals
- the need for ongoing professional development for both coaches and teachers to continually improve instructional practices.

118 Listen to the interview with Dr Bocquillon and me discussing coaching in Education. Available at: https://orbi.umons.ac.be/handle/20.500.12907/45531.

119 To learn more about Steplab, see the beginner's guide to instructional coaching : https://steplab.co/resources/papers/BP6w3bcs/A-Beginners-Guide-to-Instructional-Coaching

120 Hasbrouck, J & Michel, D (2022). *Student-focused coaching: A model for reading coaches*. Paul H, Brookes Publishing, US.

The authors advocate for a coaching model that focuses on the coach as a partner and problem-solver, rather than a directive model. In contrast, Hammond and Moore's study found that teachers who participated in professional development and a directive instructional coaching model showed significant improvements in their implementation of explicit instruction (2018). They were able to apply the strategies they learned in the model to their practice, leading to a lift in student outcomes. The use of video feedback can also enhance the effectiveness of coaching sessions and is proven to be a valuable tool.

In-class coaching: the National Institute for Direct Instruction (Eugene, Oregon)

The National Institute for Direct Instruction (NIFDI) is a non-for-profit organisation founded in the late 1990s by the creator and senior author Dr Siegfried Engelmann. NIFDI works with schools to establish a comprehensive implementation of DI school-wide and across all grade levels, with an emphasis on student performance at a high level of mastery.

During the Fellowship visit to NIFDI, their team provided insights into how in-class coaching can help teachers develop the critical skills needed to implement Direct Instruction in the classroom. Their model is intended to improve teachers' mastery of DI techniques while building their confidence in their abilities to enhance learning and improve student achievement. Within this context, the coaching involves observing teachers instructing groups, with a focus on student performance and behaviour, and providing specific feedback on what was observed. Coaches also demonstrate DI lessons.

After the first year of implementation, it was reported that coaching responsibilities had begun to shift to school-based coaches (rather than having external coaches come into schools)

Given DI programs are technical, Kurt Engelmann, the Administrative Director and President of NIFDI, noted the importance of regular coaching visits over time to ensure teachers implement a practice and/or a program with fidelity. 'Especially if we want teachers to hone and maintain skills', he said. Kurt also stressed the importance of school support in implementation and the key role of administrators in ensuring that teachers have appropriate training and adequate preparation time, that they maintain optimal student schedules and placement, and check student progress. According to the NIFDI members, it can take several years for schools to develop practices and norms that support optimal implementation, including the development of school-based coaches.

During the Fellowship travels, classroom observation and interviews were conducted in school networks that had successfully embedded sustainable coaching models to assist teachers with the implementation of DI programs. Networks included the Thales Academy School Network and the Arthur Academy Network (Chapter 4). After the first year of implementation, it was reported that coaching responsibilities had begun to shift to school-based coaches (rather than having external coaches come into schools). Schools started to focus on building leadership capacity through the development of peer coaches. Leaders noted that it was one of the keys to achieving high levesl of success with school-wide implementation of DI. This is because peer coaches were able to provide much-needed and timely support to teachers, especially when NIFDI consultants were not on site. Another advantage with peer coaching is that teachers know they can turn to a close colleague with problems and questions, which helps foster a collaborative atmosphere in the school. Having local coaches also benefits schools in the long term because it can address the impact of teacher turnover on student learning and ensure the quality of the implementation does not decline over time. Across the many sites visited, teachers and administrators reported positive feedback about their overall coaching experience. They felt more comfortable and skilled in delivering programs.

School-based partnerships to bridge the gap between research and practice

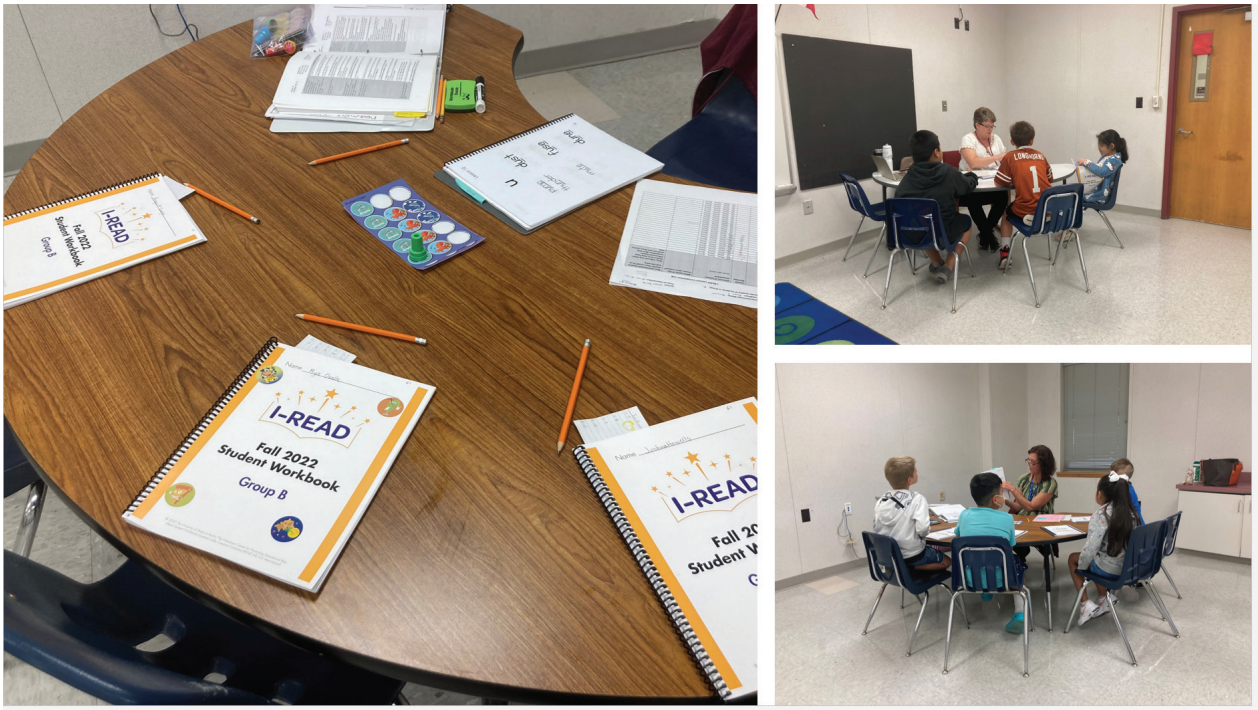
On one hand, research needs to be practical and relevant to schools for successful implementation. On the other hand, schools must ensure their practice is aligned with the most up-to date evidence-based educational research. The next two examples illustrate school-based partnerships with organisations and universities and how we can link faculty members with classroom teachers to improve student outcomes in reading.

The project I-READ: a collaboration between the Meadows Center for Preventing Educational Risk (MCPER) and five primary schools (Austin, Texas)

First created in 2008 and under the direction of Dr Sharon Vaughn, the Meadows Center for Preventing Educational Risk (MCPER) at the College of Education at the University of Texas conducts research projects in partnership with schools. The centre is a unique collaboration of researchers from multiple disciplines and sites who support educators with tools and practical knowledge rooted in high quality research to improve outcomes for all students, especially those at risk. The centre has been receiving funding from various state, federal and non-for-profit organisations to conduct high-quality research studies that have reached more than 2 million students. One of their recent projects is called I-READ (Improving Reading Efficiency and Decoding).

Project I-READ aims to develop an intervention for improving reading skills for primary school students with, or at risk for, word-level reading disability. Across a four-year period, researchers will conduct a series of intervention studies to test a set of theoretically based instructional practices aimed at improving students' word knowledge. The project is led by Dr Nathan Clemens, Associate Professor in the Department of Special Education at the University of Texas, and currently involves 100+ student participants in five primary schools, including Clear Fork Elementary School, in Lockhart.

From the visit to Clear Fork, classroom observations were conducted to learn more about the project and observe the delivery of reading interventions in small groups for students from Year 2 through to Year 4. The program includes 10 weeks of reading lessons (one time per day, 20–30 minutes each, five days a week), including reading tests (45 minutes) at the beginning and end of



Observation of small group interventions using I-READY materials at Clear Fork Elementary School

the study. The students were selected based on evidence that they had significant word-level reading difficulties (with, or at risk for, dyslexia). Then children were randomly assigned to receive either a) research-based phonics instruction or b) research-based phonics instruction that also included spelling practice. There was no control group in this study. All students received research-based phonics instruction and each child had a one in two chance of receiving either instruction condition.

Instruction specifically targeted students' ability to efficiently connect word spelling to pronunciations and meaning, aiming to improve students' ability to read words and text with greater fluency. All reading lessons were delivered by experienced intervention teachers employed by the University of Texas (independently from the school), who attended a two-day training about how to deliver the program and monitor student progress. The tutors were responsible for keeping a log and collecting daily information to send to the research staff members in charge for later data analysis. Megan Osbon, the project coordinator, used to visit each school in person on a three-week rotation so she could better support the interventionists and observe their instruction delivery, the pacing of the lessons and the program adherence and fidelity. She was also in charge of organising fortnightly check-in meetings with all the interventionists across multiple sites as well as liaising with all stakeholders involved in the study (i.e. the university, schools, intervention teachers).

There are many benefits from collaboration between schools and universities. One is the participation of 'real' children in the study, where engagement and assessment are captured in authentic school settings. Another related point is the consideration of feedback gathered from students and tutors participating in the project. To this end, resources were modified and adjustments were made from year to year. Most importantly, the findings from the project will improve education research, help refine effective instructional practices and thus benefit many more students.

The Reading League partnerships with schools (Syracuse, New York)

The Reading League is a national education non-profit organisation led by educators and reading experts dedicated to promoting knowledge to accelerate the national movement toward evidence-aligned reading instruction. They train and support classroom teachers and school leaders, and, by extension, they also serve parents, specialists and researchers. During my visit to the Reading League (TRL) headquarters, Maria Murray (CEO) reported on the ongoing professional development partnerships they have with numerous schools in the United States and Canada. They work with schools to design learning plans that suit their needs, calendars and budgets. Their formats may include face-to-face and virtual professional development sessions, book club facilitation, virtual coaching, and regular strategic meetings with instructional leaders.

'Reading is at the heart of all achievement. Without it, the American dream is out of reach. With it, anything is possible.'

Pleasant T Rowland

Parent and community involvement

Parents need to know as much as teachers about the research on how children learn to read because they can play a pivotal role in preventing reading difficulties from occurring. Unfortunately, in most cases we hear that parents are informed about their child's reading difficulties well after the optimal period of intervention, past Year 3 (Chapter 1). By asking their child how reading is taught in schools, or by asking teachers if they use a scope and sequence, parents can easily determine whether a child is receiving research-based reading instruction. If the child is not, parents might want to take action.

Parent-led advocacy groups (Columbus, Ohio)

In the US, UK, Australia and beyond, there has been a growing number of parent-led groups advocating for their children with learning difficulties such as dyslexia. During the Fellowship trip in the state of Ohio, interviews were conducted with Mike McGovern, President of the International Dyslexia Association Central Ohio Branch (Chapter 2) and Brett Tingley, founder of Parents for Reading Justice, a not-for-profit organisation, and President of OH-KID (Ohio Kids Identified with Dyslexia), a grassroots parent group dedicated to ensuring all children in Ohio learn to read. She is also the executive producer of the documentary *Our Dyslexic Children*[121] and a board member of the International Dyslexia Association Central Ohio. They both became strong advocates after discovering that their children were not making progress in reading. Mike's son and Brett's daughter experienced ineffective reading instruction, late identification and inadequate intervention while in primary school. Together, the parents contributed to a successful system change in Ohio School districts and beyond.

In the early 2000s, Brett's daughter experienced reading difficulties at Upper Arlington Public School in Ohio. Despite her attempts to address the issue with the school, it was not acknowledged, and she discovered that other parents were facing similar challenges. In response, a group of parents, students and graduates filed a group complaint with the Ohio Department of Education for the failure to identify and support students with reading difficulties.[122] The state subsequently found Upper Arlington Schools in violation of federal and state laws, revealing the dysfunction of school processes with early student identification and eligibility for special education services, and mandated teacher training and student screening for dyslexia. Because Upper Arlington schools were using what is referred to as a 'whole language approach' to reading instruction – a discredited approach that is still used in many public schools – they also had to invest and retrain teachers so students would be taught to read using a highly structured phonic-based approach. What started from a parents' initiative has now led to schools changing their identification and screening methods, while updating literacy strategies based on the latest reading research and now achieving greater results with students.

Brett Tingley

As a result, Brett saw the utility of bringing parents together and started coaching other parent groups in Ohio, helping them bring their districts to the Science of Reading. She formed the OH-KID, including 25 groups, which serves school districts with over 185,000 children, and she continues to empower parents with the development of a masterclass to support them when dealing with schools.[123]

Collaboration between families and schools is essential to achieving quality outcomes for all children and the impact on student outcomes can be significant when they form family-school partnerships to support learning. As Mike McGovern emphasised, parents are the best advocates for their children because they know them better than anyone else. Therefore, schools and families must work together as partners in the education of children, with support from universities, education departments and systems, to prevent and address reading failures effectively.

121 *Our Dyslexic Children* (2020) full movie: https://www.youtube.com/watch?v=oJ7xa6meD2Q Ohio colleges get mostly low grades from National Council on Teacher Quality - cleveland.com

122 Video (14 November 2014) 'How every child is learning how to read at Upper Arlington School District' [online] YouTube. Available at: https://www.youtube.com/watch?v=doN4eT9kIT0&embeds_euri=https%3A%2F%2Fwww.apmreports.org%2F&feature=emb_logo

123 Available at: https://parentsforreadingjustice.org/course-1

Conclusion

My Fellowship experience, travelling across France, Belgium, England, in the UK and the US, made me realise that educators are facing the same issues globally: ineffective teaching practices, poor translation of research into classroom practice, and a growing number of pupils who are struggling to read. Too many students are still entering secondary school unable to read because of wait-to-fail approaches. Education systems are not proactively identifying students in need of more support in the early years and do not reliably ensure that such support is provided.

By the time NAPLAN comes in Year 3, Australian students have already had several years of schooling and may have fallen significantly behind their peers in reading proficiency. Identifying reading difficulties in students as early as possible is crucial because it allows for early intervention and support to be put in place. Research has shown that the most effective window for intervention and remediation is before Year 2.

To help support systematic reform, Australian governments should employ and train literacy coaches who work closely with teachers to enhance the quality of instruction provided to students.

The mandating of early literacy universal screening from first year of compulsory schooling through to Year 2 might be controversial but the many older students with reading difficulties represent a preventable problem. Just as clinical and public health medicine promotes screening tests to detect potential health issues, the same approach should apply to education. Australian governments should train teachers to become better diagnosticians and to apply evidence-based teaching practices aligned with a preventive model, using valid assessments to identify strengths and weaknesses of students.

Many teaching approaches used in schools are not informed by findings from evidence-based research. Teachers are not provided with a clear understanding of why, how, what and when to use particular strategies, or how to analyse data. This has important implications for pre-service teacher education and ongoing teacher professional learning. Australian governments must invest in and improve teacher training, ensuring teachers who are qualified to teach first year of compulsory schooling through to Year 6 deliver the critical components of reading instruction, and identify, instruct, and support students with reading difficulties. The Grattan Institute report Investing in Our Teachers, Investing in Our Economy[124], shows that investing in teacher effectiveness is not only the most valuable reform for improving school education but is the best investment available to governments to increase productivity and long-term economic growth. A 10% increase in teacher effectiveness would lift Australia's students to among the best performing in the world and add $90 billion to the Australian economy by 2050.

Substantial evidence has also confirmed what I experienced in my teaching role: the longer we wait to remediate reading difficulties, the harder this becomes. When students reach secondary school unable to read, it might already be too late. Secondary schools struggle to afford the allocation of additional hours of instructional time during the school day, let alone the staffing and scheduling small group intervention with literacy specialists. Most of the work needs to happen in primary schools.

Applying these recommendations will have positive economic impacts on our nation, both in the short and long term. Because early intervention can help prevent students from falling so far behind, it will reduce the need for special education services, which can be expensive. Also, students who receive scientifically based reading instruction and early targeted intervention are more likely to succeed academically and enter the workforce with the skills they need to be productive. This can also lead to reduced crime rates and poverty levels. As mentioned in the Rowe Report (2006), investing in evidence-based approaches to the teaching of reading is one of the most cost-effective investments that a government can make.

124 Jensen, B (2010). Investing in our teachers, investing in our economy (pp. 1-22). Melbourne: Grattan Institute. Available at: https://grattan.edu.au/report/investing-in-our-teachers-investing-in-our-economy/

To help support systematic reform, Australian governments should employ and train literacy coaches who work closely with teachers to enhance the quality of instruction provided to students. This has shown to be a promising initiative, with the deployment of literacy coaches in the state of Mississippi (US), where Year 4 students became among the top readers nationwide in 2019. Similarly, the work of the Literacy Guarantee Unit in South Australia has seen the Phonics Screening Check results in 2022 climb for the fifth consecutive year.

In summary, responding to this report's findings and implementing its recommendations will take work. This will require many partners to come together to implement change. It will also take time. Many principals I spoke to, who have successfully shifted schools to a structured literacy approach with teaching practices that align with cognitive science, agreed it will take at least five years to improve student outcomes and sustain positive changes. We must stay the course and sustain our commitment to address the inequities in learning to read that many Australian students currently face. It is time for a change.

Recommendations

Because the findings and recommendations of this report concern overall equity in education, Australian governments should provide adequate funding to implement these recommendations.

RECOMMENDATION 1: Australian federal, state and territory governments must increase monitoring and accountability for poor reading outcomes by mandating standardised evidence-based universal screening assessments in all schools to identify students at risk for reading difficulties. Following identification, there need to be immediate, early, tiered interventions using the data to target policy and resources more effectively. (Chapter 2)

RECOMMENDATION 2: Australian federal, state and territory governments must support primary and secondary schools to implement a Multi-Tiered System of Support (MTSS) framework and deliver interventions for students who have fallen behind in reading. This framework will ultimately improve reading outcomes for all learners and optimise support delivery. (Chapters 3 & 5)

RECOMMENDATION 3: Australian federal, state and territory governments must invest in teacher effectiveness and promote education reforms that bring effective reading instruction into every classroom, so that fewer students need intervention. (Chapters 1, 4, 6)

Recommendations for further research

- **Define what is meant by the term 'intensity' and determine how much instruction is required to be considered intensive in remedial settings.**
- **Answer questions about remediating reading difficulties with secondary students and discuss future directions for research using a multi-tiered instructional framework for students in secondary schools.**
- **Achieve a cost-effective instructional coaching model, at scale, to sustain evidence-based reading instruction in schools and classrooms.**

Dissemination and implementation

My Fellowship report will be disseminated to specific target audiences with a tailored letter and an invitation to discuss my work and recommendations further, with the intention of making the findings usable for the intended stakeholders, who are:

- Australian government ministers with responsibility for federal, state and territory Departments of Education
- Panel members of the National School Reform Agreement (NRSA)
- The National Catholic Education Commission (NCEC)
- The public, catholic, and independent school sectors
- The Grattan Institute
- Australian Education Research Organisation (AERO)
- Australian Universities
- Learning Difficulties Australia (LDA)
- The Australian Federation of SPELD Associations (AUSPELD)
- The Dyslexia SPELD Foundation (DSF)
- Australian Dyslexia Association Inc
- Catholic Primary and Secondary Principal Associations
- Not for profit organisations: Australia Schools Plus, Fogarty Foundation, Snow Foundation, Social Ventures Australia, Evidence for Learning
- Advocacy groups: Code Read Dyslexia network, Dyslexia Information for the Canberra region, ACT Alliances for Evidence-Based Practices, Thinking Forward Educators (TFE), Reading Science in Schools (RSiS).
- Fellowship contacts in the UK, the US, France, and Belgium.
- Referees for my Churchill Fellowship application.

This report will be uploaded to the Winston Churchill platform as well as to my website for efficient distribution and accessibility to primary and secondary school educators. To promote the application of my findings, I will create a series of webinars (45 minutes each) that delve deeper into the findings of the report with the contribution of the people I met during my travels. This is to be completed in 2023.

Upon return, I have been able to transfer what I learned directly to my work in the Catholic Education Archdiocese of Canberra and Goulburn, especially when advising schools about evidence-based reading instruction, on a day-to-day basis. I will continue to expend my influence as a newly nominated member of the Literacy working group within the National Catholic Education Commission.

I also shared my findings when I presented at the Teaching Matters - Science of Learning National Summit held on 2–4 April 2023 in Hobart (Tasmania), the Sharing Best Practice Bendigo held on 18 February (Victoria) and the Literacy Guarantee Unit Conference in Adelaide on 27 April. Additional events are scheduled this year to share the content of my report and share my work: 1) the Sharing Best Practice Gippsland event on 24 June, 2) the ACARA English network meeting on 10 August, and 3) the Society for the Scientific Study of Reading pre conference in Port Douglas on 19 July. Meanwhile, I am responsible for the organisation of the inaugural Sharing Best Practice in Canberra on 9 September 2023, a platform which will be used to disseminate evidence-based practices in schools and promote networking across education systems.

I will present papers to local, state and/or national conferences, including the annual Australian Association of Special Education conference, the DSF Language, Literacy and Learning conference, and to other education-related organisations (i.e. ResearchED, Science of Teaching and Learning Australia). Media releases and interviews will also raise awareness about evidence-based assessments that could be appropriate for universal screening, both in the early years of schooling and for the transition to secondary school, and promote effective reading intervention suitable for older students.

Detailed implementation plan

Goals	Timeline
• Once approved, disseminate the report with a tailored letter and invitation to discuss my work and recommendations.	May 2023
• Disseminate and apply findings across the 56 schools in the Catholic Education Canberra and Goulburn (CECG) by: ◦ Presenting at relevant events, i.e. Leaders' Day, Classroom Support teachers' day, Catalyst System Day, staff meetings, Pupil Free Day, etc. ◦ Supporting staff to identify assessments, monitor and adjust interventions over time during my regular school visits ◦ Providing support to central schools and secondary schools and help them with the implementation of a MTSS framework in secondary schools. ◦ Contributing to the review of the systemwide literacy evaluation process, involving key stakeholders. Refining CECG screening procedures from Kindergarten through to Year 6 using DIBELS 8th to guide instruction and inform the decision making process at a system level, as well as school, cohort, class and student levels • Applying for a grant to attend the annual Direct Instruction conference in Eugene, Oregon (completed, grant awarded)	June – ongoing
• Send my executive summary and key recommendations to the relevant stakeholders.	June–July
• Contact experts and organisations from my Churchill travels and request their contribution for a series of webinars. • Organise a planning sheet and recording schedule for the webinars. • Liaise with the Australian Centre for the Advancement of Literacy (ACAL) at the Australian Catholic University, LaTrobe University (Melbourne) and the Australia Education Research Organisation to seek collaborative partnerships.	April–May
• Start recording online webinars and release the first recording onto my website. Promote and share via social media platforms and networks. • Continue the recording of webinars. • Promote and share via social media platforms and network.	Sem 2, 2023
• Attend the Society for the Scientific Study of Reading conference (Port Douglas) and the annual Direct Instruction conference in Eugene (Oregon) – reconnect with experts I met during my trip.	19–31 July
• Create a Catalyst instructional handbook to provide guidelines about evidence-based teaching practices aligned with cognitive science. • Create a Catalyst literacy handbook to provide guidance and protocols about assessment tools, decision-making processes for the implementation of MTSS in primary and secondary schools within CECG. • Seek feedback from literacy experts and submit a brief to CECG Director.	Sept–Nov
• Host the Sharing Best Practice conference in Canberra at Merici College to promote evidence-based practices to lift students' literacy outcomes.	9 Sept
• Liaise with organisations and universities • Discuss implementation funding and grant applications with the Churchill Trust to create a MTSS-literacy course targeted to secondary schools. • Apply for Impact Funding to support the design and release of training modules for upskilling secondary teachers about the Science of Reading, reading interventions, assessment protocols, in partnership with Australian Universities and/or other international organisations (i.e. ORTIi, the Meadows Center for Preventing Education Risk), ensuring the content is applicable to an Australian context.	2023–24 2nd round of application in August 2023
• Co-design and release a course for secondary schools in collaboration with literacy experts aimed at upskilling secondary teachers' knowledge about language and literacy and provide them with practical classroom teaching strategies to support older strugglers across the curriculum.	2024–25
• Provide professional learning and coaching for secondary schools with the implementation of an MTSS framework and targeted interventions.	2025

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Appendix 1: Itinerary

Date	Location	People	Institute/Organisation	Further information
18/09/22 to 2/10/22	FRANCE Paris	Stanislas Dehaene Cassandra Potier-Watkins Anne Valat Patrick Début	The Scientific Council of National Education: working group meeting attendance The College of France Plenary session at the Ministry of National Education	The official website of the CSEN: https://www.education.gouv.fr/le-conseil-scientifique-de-l-education-nationale-au-service-de-la-communaute-educative-309492
				The CSEN professional learning platform https://www.reseau-canope.fr/conseil-scientifique-de-leducation-nationale.html
				the EvalAide brochure explaining the implementation of the national evaluation: (54 pages) https://eduscol.education.fr/document/7736/download
28/09/22 to 1/10/22	BELGIUM Mons	Marie Bocquillon, Marc Demeuse, Antoine Derobertmasure, Christophe Baco, Fanny Merchez	The University of Mons The Institute of Educational Management (INAS)	https://web.umons.ac.be/semf/la-vie-de-linas/
				Seminar co-presented with Marie Bocquillong about explicit instruction in Australia and French-speaking countries. https://www.enseignementexplicite.be/WP/wordpress/index.php/2022/09/30/seminaire-australie-europe/
2/10/22 to 14/10/22	ENGLAND London Birmingham Oxford Blackpool	Kathleen Rastle, Jessie Ricketts Visiting guest: Danielle Colenbrander	The Royal Holloway University The Language and Reading Acquisition (LARA) lab	https://pure.royalholloway.ac.uk/en/ https://lara.psychologyresearch.co.uk/
		Margaret N Clark OBE	Visiting Professor at Newman University	
		Kate Nation, Sean McCarron, Nicola Dawson Gillian West	St John's College, the University of Oxford Nuffield Foundation OxEd and Assessments – LanguageScreen	https://www.sjc.ox.ac.uk/ https://www.nuffieldfoundation.org/ https://oxedandassessment.com/
		Sarah Smith Rebecca Warhurst, Bev Priestner, Emma Greenwood, John Woods, Simon Blackwell, Natalie Morgan, Estelle Bellamy, Lynette Parkinson, Zoe Walsh	The Right To Succeed: the Key Stage 3 Literacy Project Visit to three secondary schools: • South Shore Academy • Blackpool Aspire Academy • Montgomery Academy	https://righttosucceed.org.uk/working-collectively/key-stage-3-literacy-project/ https://www.southshoreacademy.bright-futures.co.uk/ https://blackpoolaspireacademy.co.uk/ https://montgomeryschool.co.uk/
14/10/22 to 25/10/22	UNITED STATES Syracuse/The Bronx (New York)	James Waslawski (Principal at DSS) Louisa Moats, Anita Archer, Maria Murray	School visit at New Direction Secondary School (DSS) The 6th Annual Reading League Conference The Reading League Headquarters	https://www.ndssonline.org/ https://www.thereadingleague.org/
25/10/22 to 28/10/22	Columbus (Ohio)	Mike McGovern, Brett Tingley, Louise Dechovitz Terri Hessler (online) Rebecca Tolson Amy Burrows	International Dyslexia Association Central Ohio (IDA) Ohio State University Neuhaus Education Center Eucational consultant	https://coh.dyslexiaida.org/ https://www.osu.edu/ https://www.neuhaus.org/
25/10/22 to 28/10/22	Cincinnati (Ohio)	Andrea Rowson	Upper Arlington City School District	https://www.uaschools.org/
		Laura Saylor Amy Murdoch Stephanie Stollar	Mount St Joseph University (School of Education) The Center for Reading Science Project READY The Reading Science Academy The Center for Literary and Learning	https://www.msj.edu/reading-science.html https://www.readingscience.org https://www.readingscienceacademy.com/pages/about-us https://mycll.org/
28/10/22 to 4/11/22	Raleigh Knightdale Wake Forrest (North Carolina)	Heather Brame, K-5 Administrator Janice Holton, Lindsey Marion Wanda Evans Jill Ellison, Laurie Matthews and teachers	Visit to the Thales Academy, a college preparatory network of K-12 independent schools, including classroom observations at: • Raleigh Thales Academy • Knightdale Thales Academy • Wake Forrest Thales Academy	https://www.thalesacademy.org/

04/11/22 to 13/11/22	Austin Lockhart San Antonio (Texas)	Jessica Toste Sharon Vaughn, Phil Capin, Sarah Fishstrom	The University of Texas (Department of Special Education) Meadows Center for Preventing Educational Risk (MCPER)	https://www.jessicatoste.com/ https://meadowscenter.org/
		Elizabeth Allan, Donald D Hammill	PROED Inc. Publisher of standardised tests	https://www.proedinc.com/
		Megan Osbon, and Chiara, Lynn, Cindy (interventionists delivering I-READY)	Observation of small group reading interventions as part of the I-READY project, trialled at Clear Fork Elementary School	https://cfes.lockhartisd.org/
		Rebecca Tolson Nadine Gaab Jan Hasbrouck Daryl Michel Carol Tolman	IDA 2022 Annual Reading, Literacy and Learning Conference Meetings with researchers and educational consultants, discussing literacy coaching practices, reading interventions and professional development opportunities for teachers of language and literacy	https://dyslexiaida.org/ https://www.gaablab.com/ https://www.janhasbrouck.com/ https://www.ba-change.com/ https://www.lexialearning.com/letrs
13/11/22 to 18/11/22	Eugene Portland Tigard (Oregon)	Owen Engelmann, Charlene Tolles-Engelmann, Evan Haney, Linda Carnine	The Engelmann-Becker Corporation, meetings with K-12 Direct Instruction program co-authors, incl. intervention programs	https://engelmannfoundation.org/
		Kurt Engelmann, Bryan Wickman, Tamora Bressi, Rochelle Davisson	The National Institute for Direct Instruction, Institute on becoming a DI trainer, meeting with trainers	https://www.nifdi.org/
		Marilyn Nippold (online) Gina Biancarosa, Beth Harn	University of Oregon, College of Education DIBELS 8th: Universal screener, progress monitoring assessment	https://education.uoregon.edu/
		Marilyn Sprick	Meeting with the author of Third Quest (Ancora Publishing), a reading program for older struggling students	https://ancorapublishing.com/
		Roland Good (online)	Acadience Reading: universal screener and progress monitoring assessment	https://acadiencelearning.org/acadience-reading/k-grade6/
		Bonnie Grossen (Chair member) Stephani Walker (Executive Director) Richelle Owen (Principal David Douglas) Kandice Burton (Principal Gresham)	Visit to the Arthur Academy Charter School network, including class observations and meetings: • Gresham Arthur Academy • David Douglas Arthur Academy	https://www.arthuracademy.org/
		Beth Ferguson, Jonathan Potter, Lisa Bates	The Oregon Response to Instruction and Intervention (ORTIi), meeting with literacy coaches	http://www.oregonrti.org/
		Jessica Swindle (Principal), Joyce Hanner and teachers	Visit at Metzger Elementary school, including classroom observation and meetings (Tigard-Tualatin School District)	https://www.ttsdschools.org/metzger
		Anita Archer	Meeting with an educational consultant to school districts on explicit instruction and author of remedial programs	https://explicitinstruction.org/
18/11/22 to 23/11/22	CANADA Vancouver (BC)	Viji Shanmugha, Navshina Savory	The Richmond School District, meetings	https://sd38.bc.ca/
		Steve Bissonnette (online from Quebec)	The University TELUQ	https://www.teluq.ca/site/en/

* A broad range of stakeholders were considered when drafting the itinerary of this Fellowship, including universities, education departments, private and public schools, school administrators, teachers, parents, students, philanthropist organisations, advocacy groups, publishers and authors.

Appendix 2: Suggestions for language screeners for preschoolers

It is possible to assess children as young as four years of age in order to give each child the opportunity to reach their full reading potential.[125] Below are three examples of preschool language screeners supported by scientific evidence that can be implemented in Early Learning Centres (ELCs) in Australia. The ultimate purpose of these assessments is to monitor children's development in early literacy skills, to identify those who need additional support and immediate interventions, and to guide classroom instruction.

1. LanguageScreen App (England)

In England, a team of researchers from Oxford University, including Professors Charles Hulme, Maggie Snowling and Gillian West, have developed the Language Screen App: a quick screening test aimed at helping education professionals to identify children (between ages three and a half and five – before formal education) who may benefit from support in developing their language skills. An interview was conducted with Gillian West, the app's design and implementation lead, who explained that the LanguageScreen App was initially created to evaluate the benefits of the Nuffield Early Language Intervention (NELI). NELI involved the testing of 6,000 children with the aim of remedying weakness in oral language skills for children in ELCs. The early assessment tool has proven to be effective in allowing school staff to identify children with language difficulties and to determine how best to support them in educational settings.

The LanguageScreen App also provided an accurate measure of the improvements made by the children accessing the NELI intervention in terms of language skills. NELI was designed in response to findings from the Nuffield Learning to Read Project[126] which showed that weak oral language skills at age four are predictive of risk for reading failure. The study shows that the implementation of an oral language intervention just before school entry produces positive effects in reading comprehension. In 2020, the Education Endowment Foundation (EEF) published the results of a large-scale effectiveness trial of the NELI intervention (Sibieta, 2016; Dimova, 2020).[127] The statistically significant results from 193 schools demonstrated that the programme increased the language skills of four- to five-year-olds by an additional three months.

Post Covid-19, the Education Department decided to release funds to implement the NELI program in state-funded schools, including the use of the LanguageScreener App. Both were made available, free of charge, in the period from 2020 to 2022, for public schools with first year of compulsory schooling classes that were willing to opt-in with a minimum of a one-year commitment. The LanguageScreener App was rolled out to 11,000+ participating schools, including over 350,000 children, and continues to be expanded. Discussions are currently taking place about the opportunity of implementing the screener in some schools in Queensland (Australia), starting in 2023. The team is also currently working on two other screeners for reading and maths.

2. EarlyBird Education (US)

EarlyBird is an early literacy assessment created by Dr Nadine Gaab.[128] It is a proactive, preventive and comprehensive assessment that identifies reading issues early in the window when intervention is most effective. The tool provides the teacher with a report that connects them to the right interventions and includes markers of dyslexia. EarlyBird is game-based and combines proven predictors of reading as well as being scientifically validated in school settings.

3. Project READY[129] and the Preschool Early Literacy Indicators (US)

At the university of Mount Saint Joseph in Cincinnati (Ohio), Dr Amy Murdoch, Assistant

125 Gaab, N & Tridas, E (November 2022). From the Pediatric Practice to the Classroom: Early Identification of Children at Risk of Literacy Problems. Presentation at the International Dyslexia Association Conference, San Antonio, TX.

126 Duff, F. J., Nation, K., Plunkett, K., & Bishop, D. V. (2015). Early prediction of language and literacy problems: Is 18 months too early? *Peer Journal, 3*, e1098.

127 Dimova, S, Ilie, S, Brown, ER, Broeks, M, Culora, A & Sutherland, A (2020). The Nuffield early language intervention.
Sibieta, L., Kotecha, M., & Skipp, A. (2016). Nuffield Early Language Intervention: Evaluation Report and Executive Summary. Education Endowment Foundation. Available at: Nuffield Early Language Intervention (NELI) boosts young children's language skills by three months - Nuffield Foundation

128 Gaab, N & Petscher, Y (2021). Earlybird Technical Manual. Retrieved from: https://www.researchgate.net/publication/354132272_EarlyBird_Technical_Manual

129 Murdoch, A, Warburg, R, Corbo, E & Strickler, W (2022). Project Ready! An early language and literacy program to close the readiness gap. *Reading & Writing Quarterly, 38* (4), 340–358 Available at: https://www.tandfonline.com/doi/full/10.1080/10573569.2021.1954570

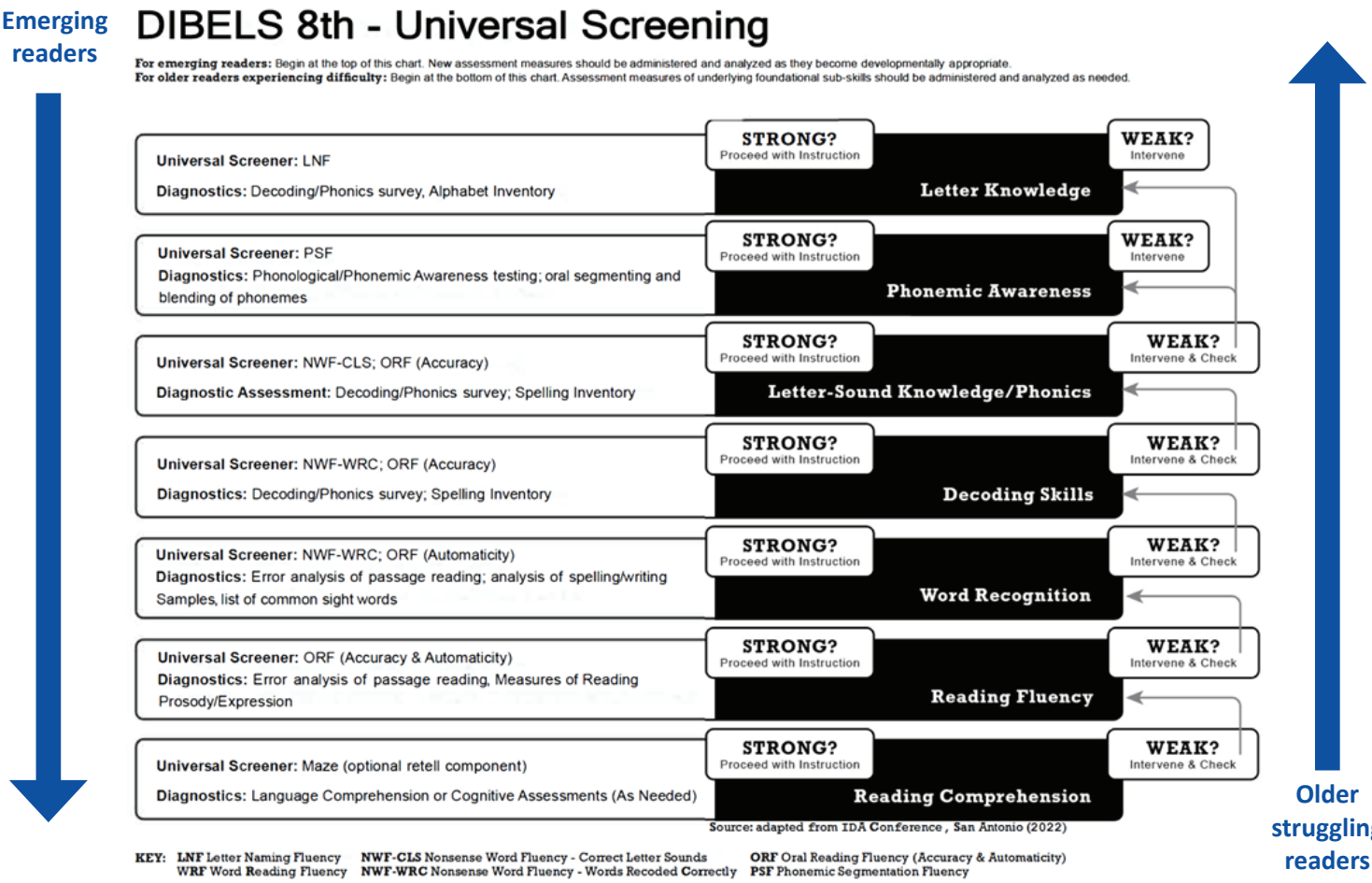
Dean directing MSJ's Reading Science graduate and doctoral programs, worked in collaboration with teachers in schools on the initiative to develop a free and open-source, research-based, early learning curriculum with a strong focus on language skills, early literacy skills and content

Dr Amy Murdoch

knowledge. To evaluate the effectiveness of her program, she tested all children involved in the project three times during the school year, using the Preschool Early Literacy Indicators (PELI) by Acadience learning Inc.[130] This tool offers an assessment solution to help educators gauge pre-literacy and oral language skills of 3–5 year-olds and it is formatted like a storybook so it feels like a shared reading activity. The PELI assessment is untimed and takes approximatively 15 minutes to administer. It measures alphabet knowledge, vocabulary and oral language, phonological awareness and listening comprehension.

Throughout this Fellowship it was reported that early screening can result in children receiving extra help sooner and prevent them from falling behind. However, Dr Murdoch raised a concern about screening for dyslexia and the problem with any assessment by saying that we cannot understand disability without understanding instruction and a child's response to instruction. She said, 'We cannot just rely on a screening tool, carrying the risks of over-identifying young students, but instead we should focus on instruction and support teachers and families.' The primary purpose of universal screening is to inform instruction. 'Screen to see if your instruction is enough. If there are needs, fill the needs,' she added.

Appendix 3: DIBELS 8th Universal Screening – Decision-making process[130]



130 Adapted from the presentation 'Supporting teachers in using formal and informational assessment data for instruction decision-making' by Deborah Lynam and Alison Pankowski at the International Dyslexia Association Conference, San Antonio, TX (November 2022).

Appendix 4: Reflection tool for implementing MTSS framework

Reflection tool						
Multi-Tiered System of Support						
What levels of support are provided at your school?			How often does your team meet to review progress?		Who is responsible for scheduling interventions?	
Assessments	**Screening**		**Diagnostic**	**Progress monitoring**	**Outcome evaluation**	**National Evaluation**
What assessments are administered? For what purpose?						
Who administers?						
Who conducts the assessment training?						
When given?						
What Year level use them? All students or some?						
Data analysis: Who? How? When?						
Reading interventions						
What reading interventions are provided to students at your school?	Any commercially published programs or school-based interventions:					
Do they address multiple skill needs of reading instruction? (Tick any box)	**Phonemic Awareness**	**Phonics**	**Fluency**	**Vocabulary**	**Comprehension Text structure & monitoring**	**Spelling/writing**
Who teaches interventions?						
What training did they receive?						
Scheduling						
How does your school schedule reading intervention?	Frequency (e.g. twice a week)		Duration per session	Length of intervention	Group size	
When does the intervention occur?						

What do students miss out if they are taken out? i.e. core instruction, subject						
Are the interventions evidence-based? See the DSF criteria (highlight any box) How do you know?	Systematic reviews	Explicit instructional methods	Distributed and cumulative review		Sequential and built on what have already been learned (i.e. scope and sequence)	
	Appropriate pace	Cover all relevant areas of reading (The big 6)	Dual coding		Systematic From easier to complex	Regular ongoing assessments
Implementation fidelity						
Does your school have a system for checking fidelity of interventions?	YES	NO	Where can you find it?		Comments	
1. Student engagement						
2. Program specificity						
3. Adherence						
4. Exposure/duration						
5. Quality of delivery						
Whole School Reading Culture						
How do you promote reading opportunities at your school?						
Challenges						
What are the main challenges you face at your school?				How could you overcome these challenges?		

Appendix 5: Ethan's story about how and when to intensify an intervention

This case study uses a fictional Year 1 student, Ethan, who has been previously identified as at risk with reading difficulties.

During the Fellowship interview, Dr Roland Good, co-owner of Acadience Reading Inc., discussed the Outcomes-Driven Model as a way to improve academic outcomes for students with reading difficulties.[131] The model includes five steps: (1) identify need for support, (2) validate need for support, (3) plan and implement support, (4) evaluate and modify support, (5) review outcomes.

At the start of the school year, the results from the Acadience universal screening assessment show that Ethan is well below benchmark in reading and requires additional support **(Step 1)**. He appears to have difficulty with phonemic awareness and the alphabetic principles and basic phonics. Although his teacher has faithfully implemented the school's literacy curriculum aligned with evidence-based instructional principles in reading, this does not seem to be effective for Ethan and some other students. Dr Good recommends repeat assessment or using other pieces of information to validate the need for support **(Step 2)**. Given time is a precious commodity in schools, this might not be realistic, but it will increase teacher confidence in their educational decision.

Following the MTSS procedures, Ethan and his fellow students requiring support are then recommended for receiving supplemental instruction (Tier 2) in small groups with an education assistant. A goal is set for how much progress the students should be expected to achieve (see the goal line, modelling the student trajectory of learning in figure X below) and an intervention program is selected **(Step 3)**. Careful consideration is given to ensure that empirical evidence supports the selected instructional methods and/or that the remedial reading program is proven to be effective for students with challenges like Ethan and some of his peers.

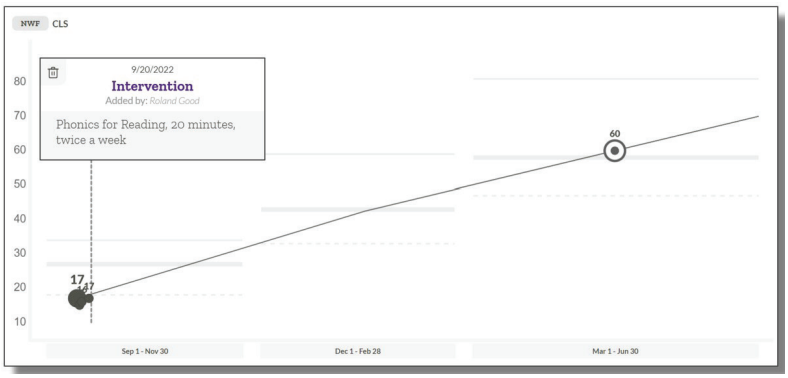


Figure 24: Step 3 Plan and implement support. © 2022 Acadience Learning Inc.

Given Ethan's difficulties with decoding, he starts receiving 20 minutes of phonics instruction twice a week in a small group, in addition to Tier 1 **(Step 4)**. The data is carefully collected and graphed weekly and used to guide instructional decisions. The most recent three data points are analysed in relation to the goal line: if the points fall above the line, then the goal remains the same, and the intervention continues unchanged. If the points overlap with the goal line or are distributed around, then both the goal and the intervention are unchanged. Finally, if the points fall below the line, the goal is maintained but an intervention adaptation is considered.

Whereas most students respond well to this added support, each progressing to average performance levels (above the goal line), Ethan makes little progress. His last three consecutive assessments show the points below the goal line (Figure 25). The teacher concludes that the intervention is not adequately addressing his needs.

As described in Chapter 5 about intensification, there are many possible ways to adapt an intervention, including through the dosage, alignment, pacing, grouping, opportunities to respond, etc. Any one combination of these may be appropriate for a particular student. For example, in Ethan's case, the teacher concludes

131 Good, R (November 2022). Outcomes Based Model. Presentation at the International Dyslexia Association Conference, San Antonio, TX.

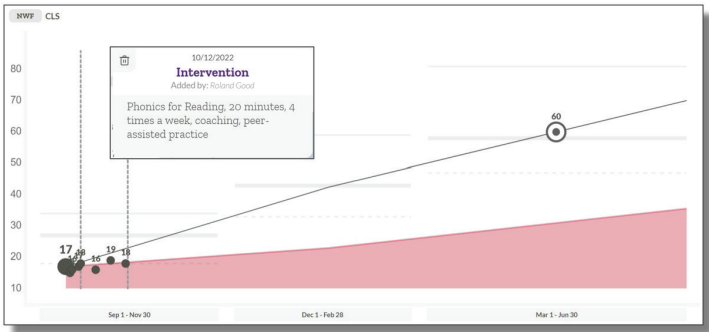


Figure 25: Step 4A Evaluate and modify support. © 2022 Acadience Learning Inc.

that Ethan requires additional practice with word recognition fluency. The intervention dosage is increased by adding up to four sessions per week (each 20 minutes) and delivered one-to-one so that Ethan is provided with increasing opportunities to respond and practice and to receive timely corrective feedback. His behaviour is not considered an issue. Meanwhile, the education assistant and teacher are given access to a coach to assist with the fidelity of the intervention.

As the now-adapted intervention starts to be implemented with close fidelity to its design, the teacher continues to monitor Ethan's progress. As illustrated below, Ethan is now making progress consistent with his goal line and on the typical progress pathway (in green).

The teacher decides to maintain the intervention and continues to monitor progress. The screener is administered again in the middle of the year to determine whether Ethan is catching up with his peers and on track to reach year level expectations **(Step 5)**.

Although the data collected so far has been useful to identify whether the intervention is working, it may not explain why and therefore cannot inform the nature of specific instruction adaptations. To understand why the intervention might no longer meet Ethan's needs, administering a diagnostic assessment is also recommended – in **step 4**. For example, Ethan's knowledge of phonics concepts taught up to this point in the intervention could be assessed and further investigation might focus on Ethan's ability to transition from decoding to

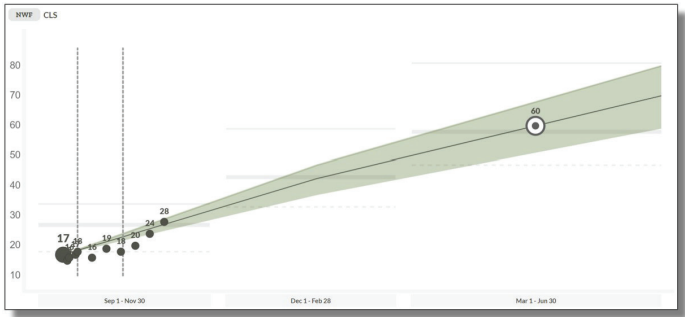


Figure 26: Step 4B Evaluate and modify support © 2022 Acadience Learning Inc.

automatic retrieval with words. While there are a variety of diagnostic assessments available, it is important to keep in mind that diagnostic testing is not required for all students – only for select students who may not be responding to the interventions based on progress monitoring and content mastery data.

In my interview with Dr Roland Good, he suggested teachers focus on the things they can change, such as assessments and instruction, rather than focusing on the things on which they have no control, such as a family history of reading difficulties. When adapting an intervention, it is more important to start with what the student will need. This might also mean that teachers try only one or a small number of changes or adaptations at a time before scaling. This makes it easier to be systematic in understanding the types of changes that improve a student's learning and behaviour, and it is more sustainable for teachers. In cases where these are not successful at accelerating pupil outcomes, the school must consider the need for referring a student to special education services.

Appendix 6: Checklist of practices for intervention intensity

The following table is intended to help educators think about the essential practices for intensifying interventions. This list is not exhaustive, and schools can add more practices over time.

Checklist of essential practices for intervention intensity	Notes
Dosage • Duration (minutes) • Frequency (e.g. twice a week) • Daily instructional time	
Adjust the organisation and physical environment of the classroom setting • Direct line of vision • Closer in proximity • Classroom desk arrangement	
Components of evidenced-based teaching principles (explicit instruction) • Activate Prior Knowledge • Simple direct language • Teacher modelling • Opportunities to respond and practice • Feedback and error correction procedures • Gradual fading • Distributed and cumulative review practice • Systematic and sequential instruction	
Assessments • Screening • Progress monitoring • Content mastery • Diagnostic	
Behaviour support • Self-regulation • Self-monitoring of engagement and progress • Strategies to reduce off-task behaviour • Memory	
Observation of students' behaviour • Correct/incorrect responses • Level of participation • Motivation • Attention • Persistence	
Evaluation of the effectiveness of the intervention based on the following: • Classroom observation tool • Student outcome data (e.g. assignment, report)	
Fidelity of implementation • Dose and quality of program delivery • Student responsiveness • Quality of teacher training • Teacher attitude • Program characteristics and differentiation • Alignment between the intervention and the core reading curriculum	
Grouping • One-on-on intervention • Group size (number of students) • Homogenous groups • Flexible vs fixed grouping • Timetabling	
Resource allocation • Staffing • Training • Current infrastructure • Technology • Attendance	

*Adapted from the handout: Intensive Intervention Practice Categories Checklist, designed by the National Center for Intensive Intervention (NCII).

Appendix 7: Additional International Resources for Educators

Books

Speech to Print (2020) by Louisa Moats
The Reading Mind (2017) by Dylan Willingham
Essentials of Assessing, Preventing, and Overcoming Reading Difficulties (2015) by David Kilpatrick
Equipped for Reading Success (2016) by David Kilpatrick
Teach Your Child to Read in 100 Easy Lessons (2020) by Siegfried Engelmann

Articles

Structured Literacy and Typical Literacy Practices by Spear-Swerling
Catch Them before They Fall. Identification and Assessment to Prevent Reading Failure in Young Children by Torgesen
Teaching reading 'is' rocket science: What expert teachers of reading should know and be able to do by Moats

Podcasts

Teaching, Reading and Learning Podcast from The Reading League
Emily Hanford Podcasts from APM Reports
Science of Reading: The Podcast from Amplify

Websites with Free Resources

The Reading League
The International Dyslexia Association
University of Florida Virtual Teaching Hub
The Texas Center for Learning Disabilities
The Meadows Center for Preventing Academic Risk
Florida Center for Reading Research
The Center for Dyslexia at MTSU
Reading Rockets
National Center on Intensive Intervention
National Center on Improving Literacy
Gaab Lab Dyslexia Myths
PaTTAN Literacy Resource Hub
Oregon Response to Instruction and Intervention
Jessica R. Toste Word Connections