

# Designing an intervention approach: Making staffing and timetabling decisions

May 2024



# **The Australian Education Research Organisation (AERO) is Australia's national education evidence body, working to achieve excellence and equity in educational outcomes for all children and young people.**

---

## **Acknowledgements**

AERO's work is made possible by the joint funding it receives from Commonwealth, state and territory governments.

AERO is grateful to the following schools for sharing their experiences: Como Secondary College (WA), Parramatta Marist High School (NSW), Parafield Gardens High School (SA), Craigmore High School (SA), Mount Rowan Secondary College (VIC), East Loddon P–12 College (VIC) and Reece High School (TAS).

AERO would also like to acknowledge the contributions of Melanie Henry and Julie Sonnemann, who both provided an expert review of this content.

## **Acknowledgement of Country**

AERO acknowledges the Traditional Custodians of the lands, waterways, skies, islands and sea Country across Australia. We pay our deepest respects to First Nations cultures and Elders past and present. We endeavour to continually value and learn from First Nations knowledges and educational practices.

## **Copyright**

All material presented in this publication is licensed under the [Creative Commons Attribution 4.0 International Licence](#), except for:

- photographs
- the organisation's logo, branding and trademarks
- content or material provided by third parties, where CC BY 4.0 permissions have not been granted.

You may copy, distribute and adapt the publication, as long as you attribute the Australian Education Research Organisation Limited ACN 644 853 369, ABN 83 644 853 369 (AERO), and abide by the other licence terms.

## **How to cite**

Australian Education Research Organisation. (2024). *Designing an intervention approach: Making staffing and timetabling decisions*. <https://www.edresearch.edu.au/research/research-reports/designing-intervention-approach-making-staffing-and-timetabling-decisions>

## **Publication details**

ISBN 978-1-923066-28-1 (online)

Cover image: AERO

# Contents

---

<b>Approach to developing this report</b>	<b>4</b>
---	----------

---

<b>Designing an approach to interventions in schools</b>	<b>4</b>
Adapting design to real-life contexts	5
High-quality teaching practice in interventions is key	5

---

<b>Staffing MTSS delivery</b>	<b>6</b>
A whole-school approach	6
The role of leaders in MTSS	6
Building an MTSS team	7
Professional development and support	10
Delivering intervention online	10

---

<b>Timetabling intervention</b>	<b>11</b>
---------------------------------	-----------

---

<b>Intensity of intervention</b>	<b>12</b>
Group size	12
Frequency, length and duration of intervention	13

---

<b>Next steps</b>	<b>14</b>
-------------------	-----------

---

<b>References</b>	<b>14</b>
-------------------	-----------

The Australian Education Research Organisation (AERO) recommends the use of a multi-tiered system of supports (MTSS) to better support Years 7 to 9 students struggling with foundational literacy and numeracy skills. If you're unfamiliar with the MTSS framework, we recommend you start with AERO's [Introduction to a Multi-Tiered System of Supports](#) explainer.

This research report uses evidence to provide guidance for secondary school leaders in making decisions about staffing, timetabling and intensity when delivering interventions in schools.

## Approach to developing this report

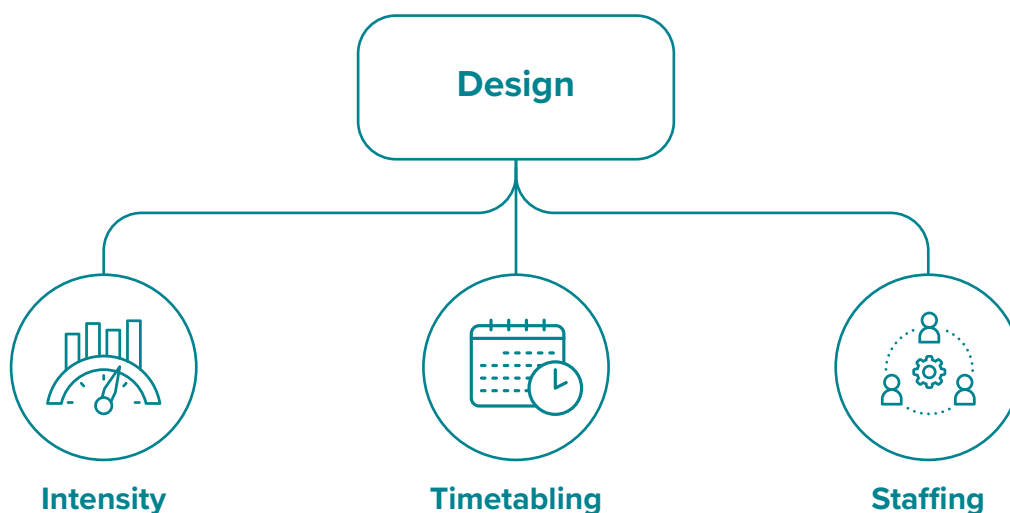
To develop this report, AERO drew on:

- **evidence summaries** by key research institutions and evidence intermediaries, as well as **major summaries** (e.g., meta-analyses) available in peer-reviewed journals. This included research on tiered interventions, supplemented by research in the areas of tutoring and special education.
- **learnings from visits to 7 schools** across Australia that have implemented a tiered intervention approach. This included interviews with key staff involved in leading, designing and delivering a tiered intervention approach, as well as observations of intervention sessions.

## Designing an approach to interventions in schools

'Design' refers to *how* an intervention approach might work in schools, as opposed to *what* intervention might consist of (that is, instructional content). It relates to how you plan the overall learning environment and experience to obtain desired results. This research report focuses on 3 key considerations in relation to organising intervention in schools (Figure 1).

**Figure 1:** Design considerations for organising interventions in schools



**Intensity**, refers to 4 considerations: group size, frequency, length and duration of interventions. These comprise how ‘intensely’ students experience interventions.

**Timetabling** refers to how schools make time for tiered interventions in their regular timetable. As such, timetabling and intensity are closely related.

**Staffing** refers to how schools develop a staffing structure that can support the delivery of intervention instruction.

Intensity, timetabling and staffing should be considered when selecting an intervention approach or program as they all influence the effectiveness of implementation.

## Adapting design to real-life contexts

‘It doesn’t have to be perfect – it’s messy. We give and take and there will be no right way to do it. But within any context, there are ways that you can work around things.’

–Prue Dawson, Diversity Coordinator, Parramatta Marist High School (NSW)

Some of the design research discussed in AERO’s resources may not apply in the same way to all school contexts. Professional judgment and understanding of local context are crucial to ensure the best possible support for specific cohorts of students. What is important is intentionality in working around constraints to observe ‘best’ possible practice.

This research report includes practical examples of how schools from diverse contexts across Australia have approached different design considerations.

Watch our video snapshots to learn:

- how some schools have approached [timetabling and intensity](#)
- how some schools have approached [staffing to deliver tiered intervention](#)
- more about [leadership](#).

## High-quality teaching practice in interventions is key

[High-quality instruction](#) is more important in achieving positive impacts than getting the ‘perfect’ design – for instance, a certain group size (Education Endowment Foundation [EEF], 2021a).

Professional development of staff to strengthen teaching practice is beneficial in raising student outcomes (EEF, 2021a). However, clear causal relationships between exact design specifications (such as a specific group size) and positive outcomes have yet to be established.

As such, schools should prioritise **effective teaching practices in interventions**, while bearing in mind the **‘best available’ recommendations regarding design**, based on trends in evidence presented in this report.

High-quality teaching should be provided both at the general education classroom level (‘Tier 1’), as well as in intervention sessions for students requiring additional support (‘Tier 2’ – and for students requiring more intensive support, ‘Tier 3’).

## Staffing MTSS delivery

### A whole-school approach

As with all whole-school programs, while only a dedicated group of staff lead and deliver interventions in a school, **all staff** must understand and back the need for MTSS in schools (American Institutes of Research [AIR], 2023).

**Staff delivering Tier 1 instruction** need to work closely with staff delivering Tier 2 and 3 interventions to:

- support careful screening and flexible movement of students across tiers based on data and teacher judgment
- liaise with intervention staff to strengthen connections between in-class and out-of-class learning, so that learning is coherent and effective.

This kind of cross-tier staff collaboration can be achieved via case management meetings that involve literacy and numeracy specialists, leadership, and teaching staff across all tiers.

It is also important that **staff teaching subjects outside of English/literacy and mathematics/numeracy** recognise how literacy and numeracy difficulties can affect student success across the curriculum, across different subjects, and in future academic and occupational success. This shared understanding supports staff in negotiating timetabling arrangements – for instance, where students may need to be withdrawn from elective subjects to participate in intervention.

### The role of leaders in MTSS

‘Planning and leadership support is crucial. I wouldn’t even be having this conversation today if it weren’t for the amazing support of our leadership team and their willingness to trust and support all the tiers of intervention that we’re doing. It’s important that we think about how all the tiers of intervention align to complement one another. All the tiers need to complement one another, and staff need to be able to work together for that to happen.’

–Christine D’Arcy, Senior Speech Pathologist, Parafield Gardens High School (SA)

An MTSS framework needs to be prioritised and championed by leadership (AIR, 2023). Leaders play an important role by:

- setting and articulating a **vision** for the effective delivery of tiered interventions
- creating an **environment** that encourages communication and collaboration
- being **‘gatekeepers’** of student and staff time, physical space and budget, and protecting these from being seen as available for other duties in the school
- **championing** and **encouraging buy-in** from staff, students and the wider school community. (AIR, 2023; White et al., 2022).

‘For schools with staffing shortages and a shortage of seats, the easy thing to do would be to take staff members out of an intervention program and have them back in the classroom. We’ve done everything we can to make sure that that doesn’t happen.’

–Steven Leed, Principal, East Loddon P–12 (VIC)

Protecting time and resources is particularly critical in the early months and years, as it typically takes time for intervention teams to set up the necessary systems and for improvements in student results to emerge. Staff time and resources will also be needed for running and maintaining assessment and intervention programs, initial and ongoing professional learning for staff, and purchasing and updating resources for intervention programs.

## Building an MTSS team

Schools need to set up dedicated teams to provide intervention support. Teams should comprise of:

- **trained teachers** – this might include staff with expertise such as special education teachers, and teachers who are primary education-trained
- **literacy and numeracy specialists**
- **paraprofessionals** such as teaching assistants (TAs)
- **specialists** such as speech pathologists and psychologists.

School leaders need to provide support, accountability and collaboration opportunities for intervention team members (EEF, 2021c), and intervention teams need specialised training in the delivery of interventions (Evidence for Learning [E4L], 2019).

For Tier 2 and 3 interventions, **trained teachers and specialists** are the most effective at providing instruction to raise outcomes. Prior studies show that qualified and experienced teachers typically provide intervention that can result in approximately 6 additional months’ progress per year (E4L, 2019).

**Paraprofessionals** can be almost as effective as teachers (EEF, 2021a, 2021b; Nickow et al., 2020) for Tier 2 intervention. ‘Paraprofessionals’ refers to adults who contribute to teaching and learning without holding teaching qualifications, like TAs and pre-service teachers.<sup>1</sup> Paraprofessionals can provide **1:1 or small group intervention that results in around 3 to 4 months’ additional progress over a year**. However, when paraprofessionals are deployed informally and are unsupported, this can result in only slightly positive, or even negative learning outcomes (EEF, 2021c).

<sup>1</sup> Paraprofessionals can come from varied backgrounds and are professionally engaged to support students – either during or outside of general education class time. They typically hold or are in the process of completing certification in education and human services. The term encompasses teaching assistants (also known as ‘learning support assistant’, ‘teacher aide’, ‘integration aide’ and ‘classroom assistant’) (E4L 2019), as well as external tutors (such as retired teachers). It does not include speech pathologists and occupational therapists (E4L, 2019).



**Paraprofessionals can be effective if they:**

- **deliver intervention that supplements** whole-class instruction, rather than feel they are expected to supplant the role of the general education classroom teacher (Jones et al., 2020)
- receive quality, ongoing **professional development** in relationship-building and behaviour management, as well as teaching skills (EEF, 2021a, 2021b)
- **deliver structured programs** (E4L, 2019)
- are **well-supported** throughout the duration they are providing interventions, with clear, open **accountability** lines (EEF, 2021a, 2021b)
- deliberately make **explicit connections** between whole-class instruction and intervention instruction (EEF, 2021c).

‘Across our team, we do have a lot of teaching assistants who work with particular students. We’re lucky enough that their timetable has been structured so that they are able to be participants in our professional learning.’

–Anne Thomas, Quality Teaching Coach, Reece High School (TAS)

**Non-professionals** (for example, parent tutors and community volunteers) have smaller but still positive impacts on student learning (The Education Trust/MDRC, 2021).

Traditional approaches to **in-class support (co-teaching)**, with special education teachers or paraprofessionals such as TAs, might not be sufficient to meet the needs of students, particularly those that require Tier 3 support (Fuchs et al., 2015; Jones et al., 2020; Solis et al., 2012). Providing dedicated space and time for intervention beyond the general education classroom strengthens learning and teaching processes.

Interdisciplinary leadership (involving specialists such as **speech pathologists** and **educational psychologists**) (Porter, 2022) provides support by delivering specialist advice (particularly at Tier 2) and helping students with specific needs (particularly at Tier 3). For instance, speech pathologists can facilitate and support the targeted learning of key skills in literacy interventions. Furthermore, psychologists can guide the effective selection and administering of necessary screening and monitoring assessments, as well as monitoring and supporting mental health.

Overall, an interdisciplinary team comprised of trained teachers, literacy and numeracy experts, paraprofessionals, speech pathologists and educational psychologists, help to maximise a school’s ability to deliver the best results for students.

Table 1 shows examples of staff members that comprise intervention teams in some Australian schools visited by AERO staff – noting that the staffing structure is fluid, and changes depending on factors such as staffing availability.



**Table 1:** Examples of MTSS staffing structure in schools

School	No. of enrolled students	Staff identified as directly involved in leading and delivering interventions (full-time unless explicitly mentioned)
Parramatta Marist High School	1,076	<ul style="list-style-type: none"> <li>• 1 x Principal</li> <li>• 2 x Assistant Principals (Learning and Achievement, Wellbeing and Growth)</li> <li>• 1 x Diversity Coordinator</li> <li>• 10 x Diversity Teachers (4x full-time, 6x part-time)</li> <li>• 8 x Diversity Teacher Aides (6x part-time, 2x casual)</li> <li>• 1 x Wellbeing Counsellor – Clinical Psychologist (part-time)</li> <li>• 1 x Wellbeing Counsellor – Social Worker (part-time).</li> </ul>
Parafield Gardens High School	1,226	<ul style="list-style-type: none"> <li>• 1 x Principal</li> <li>• 1 x Deputy Principal</li> <li>• 1 x Inclusive Education Assistant Principal</li> <li>• 1 x English Coordinator</li> <li>• 1 x Literacy Lead Teacher</li> <li>• 1 x Senior Speech Pathologist</li> <li>• 3 x Teachers</li> <li>• 3 x Teaching Assistants.</li> </ul>
Craigmore High School	1,290	<ul style="list-style-type: none"> <li>• 1 x Principal</li> <li>• 1 x Senior Leader, Literacy</li> <li>• 2 x Speech Pathologists</li> <li>• 5 x Teachers</li> <li>• 2 x Literacy Teaching Assistants</li> <li>• Multiple other Teaching Assistants (varies depending on number of students requiring support).</li> </ul>
Reece High School	518	<ul style="list-style-type: none"> <li>• 1 x Principal</li> <li>• 2 x Assistant Principals</li> <li>• 1 x Quality Teaching Coach</li> <li>• 2 x Advanced Skills Teachers (1x Math, 1x English) per grade</li> <li>• 6 x Teachers (3x English, 3x Maths) per grade</li> <li>• 2–4 x Intervention Specialist Teachers</li> <li>• 3–5 x Teaching Assistants.</li> </ul>

## Professional development and support

Staff across all tiers need to be supported to carry out an MTSS approach. This involves support in delivering effective teaching practices. AERO's [model of learning and teaching](#) describes what these practices involve:

1. developing a teaching and learning plan that will support a change in long-term memory, and takes into consideration [how students learn](#)
2. managing the cognitive load of learning tasks
3. maximising retention, consolidation and application of learning to support changes in long-term memory
4. fostering the conditions of a learning-focused environment.

In the early stages of intervention implementation, schools should focus their professional development **on developing a tiered model and how they might plan for the appropriate infrastructure to support ongoing implementation** (AIR, 2023).

**All staff involved in leading and delivering the interventions need to be well-trained in the program they are delivering** (AIR, 2023). This enables staff to deliver interventions with fidelity.

Regular meetings between staff involved in leading and delivering intervention form a key place for support and development. Effective meetings include discussions about:

- student data and data-informed decision-making (such as moving students between tiers)
- challenges and concerns, including individual students' behavioural or academic difficulties staff might want further guidance on
- successes staff see in the daily running of the program
- plans made for specific students based on need (AIR, 2023).

'We are a literacy intervention team. It doesn't matter who you are, if you are the speech pathologist, the literacy leader, the literacy SSO [school services officer] or the teacher. We've all done the same training. It means that there is always someone in our intervention classes who is properly trained. The students feel really supported, that they have a team around them, and staff also feel supported that they have a range of people who they can come to and ask detailed questions.'

—Janette Bandjak, Senior Leader, Literacy, Craigmore High School (SA)

## Delivering intervention online

Providing learning support online for students can be effective (Abdul Latif Jameel Poverty Action Lab, n.d.; Centre for Education Statistics and Evaluation [CESE], 2022; EEF, 2021b; Nickow et al., 2020; The Smith Family 2021, 2022). Even 100% online interventions can substantially increase learning outcomes (Carlana & La Ferrara 2021; Gortazar et al., 2022).

However, there are also **challenges** that come with delivering interventions online, including maintaining student engagement and attendance, building rapport and technical challenges (CESE, 2022).

One challenge is access to technology such as internet connectivity, which can result in lower attendance and achievement. Family engagement can also have an impact on student engagement with interventions. Where these challenges can be overcome, using a partially online (educational hybrid) approach could be an option for schools.

## Timetabling intervention

One important consideration for schools is how to timetable or schedule Tier 2 and 3 intervention.

Intervention is particularly effective when **used in addition to** whole-class instruction in core subjects such as English and mathematics (Jones et al., 2020; Nickow et al., 2020; Hunter & Sonnemann, 2022). Withdrawing a student can reduce opportunities for academic learning (as students ‘miss out’ on whole-class instruction) and for peer interaction (EEF 2021b, 2021c; The Education Trust/MDRC, 2021). Intervention should **supplement, rather than replace** learning as part of whole-class instruction (E4L, 2020, 2020b), unless students are so far behind their peers that they struggle to benefit much from whole-class instruction.

The effect of providing learning support **during school hours** is almost twice as large as after-school tutoring programs, partly because attendance of after-school programs can be challenging (Nickow et al., 2020). Scheduling intervention during the day can also help in normalising intervention classes. Intervention should occur during time slots that are judged to have the **lowest opportunity cost** (for example, an elective subject that isn’t a student’s favourite subject). What this slot might be will vary between schools and students (Nickow et al., 2020). Thinking carefully about trade-offs is important, as recreational and extracurricular time is not only developmentally beneficial for students but can also serve as a motivator for attendance.

‘We have an agreement with our students that we never touch their favourite subjects. For students that are at risk of disengagement or absenteeism, taking away their favourite subjects might mean that we don’t get them here for the day.’

–Kathryn McDiven, Intervention Teacher, East Loddon P–12 (VIC)

Withdrawing students from other classes can lead to challenges in staff buy-in, particularly from the perspective of staff teaching subjects students are withdrawn from. One way to manage these challenges is to reiterate that foundational literacy and numeracy skills are essential for students’ success across all subjects, not just English or mathematics.

In summary, interventions are best timetabled:

- **additionally** to whole-class instruction time, with staff running interventions liaising closely with general education teachers to establish connections with whole-class instruction, which ensures students do not miss out on content
- **during** the school day
- at a time that is judged to have the **lowest opportunity cost** (not during students’ favourite subject, and potentially across different subjects to minimise impact on any one subject).

## Intensity of intervention

‘We knew that if we wanted to actually change our data, we had to give a greater time commitment to this. And so, we had to change our whole timetable essentially. It was a process of negotiation and balance. We really wanted to have enough times per week where we were able to provide students with the supports and practice they needed.’

–Vardis Rafiei, Leading Teacher: Teaching and Learning, Mount Rowan Secondary College (VIC)

Group size, along with 3 time-based factors (frequency, length and duration of interventions), are interrelated and together determine the ‘intensity’ of an intervention.

Where intervention meets the recommendations for intensity set out in this section, it has been shown to be effective in improving literacy and numeracy outcomes for older learners (Dobbie & Fryer, 2011; Fryer & Howard-Noveck, 2020). Schools should strive to conform to these in order to maximise learning outcomes, though budget or staffing constraints may mean this is not always possible.

### Group size

**The smaller the intervention group, the better.** Smaller groups provide more time for tailored feedback and instruction.

For Tier 2, group sizes of no larger than 6 are ideal. There is a considerable reduction in effectiveness of groups larger than 7 students to 1 staff member (EEF, 2021a, 2021b; Nickow et al., 2020).

For students requiring Tier 3 intervention, receiving instruction 1:1 or in groups of up to 3 is most effective (Vaughn et al., 2010). There is limited difference in effectiveness in participating in intervention 1:1, or in slightly larger groups of no more than 3 students to 1 staff, so small groups of 1:3 may provide a more sustainable, cost-effective option (EEF, 2021a).<sup>2</sup> Learning in small groups can also help to reduce stigma and promotes peer learning.

Close monitoring of students’ progress allows schools to keep groupings fluid, while maintaining appropriate ratios.

#### Ratios are important

Across the schools AERO visited, the typical intervention class size was around 10 students. Where groups were larger than 7 students, there were typically extra staff (such as teaching assistants) involved to keep the ratio low.

Across and within schools, group sizes also vary based on students’ personalities, attendance levels across the group, and academic and behavioural needs (with smaller groups where students were seen as having higher levels of need).

<sup>2</sup> While this research is at the primary school level, given limited evidence at the secondary level, researchers suggest drawing on primary-level research and applying it with caution.

## Frequency, length and duration of intervention

In terms of **frequency**, intervention should be conducted at least 3 times a week. Higher frequency allows more time to build staff–student relationships, consolidate knowledge and cover more content (E4L, 2020a, 2020b).

**Length-wise**, each session should last from around 20 minutes to an hour – not too long to avoid intervention fatigue, but still long enough to make substantial progress (E4L, 2020a, 2021b; Nickow et al., 2020). The way school timetables are structured will influence decisions regarding intervention length.

The **duration** (total time required for addressing a skill) of the intervention program for each student will vary depending on student needs, though research suggests at least 10 weeks is required to have a meaningful effect on student learning (EEF, 2021a).

‘Now, if I had my way, the students would be getting one hour of reading, spelling, math every day of the week. The way our school timetable is structured, it’s 4 hours per week. I wouldn’t go any less. So it’s 4 hours per week in one hour sessions for our students in reading, in spelling, in maths.’

–Digby Mercer, Principal, Como Secondary College (WA)

Table 2 provides examples of frequency and length of Tier 2 intervention in Australian schools visited by AERO staff.

**Table 2:** Examples of frequency and length of Tier 2 intervention

School	Frequency and length of Tier 2 intervention
Como Secondary College	<ul style="list-style-type: none"> <li>• 4 x 60min sessions/week for reading</li> <li>• 4 x 50min sessions/week for spelling</li> <li>• 4 x 60min sessions/week for numeracy.</li> </ul>
Mount Rowan Secondary College	<ul style="list-style-type: none"> <li>• 3 x 50min sessions/week for literacy</li> <li>• 3 x 50min sessions/week for numeracy.</li> </ul>
East Loddon P–12 College (literacy only)	<ul style="list-style-type: none"> <li>• 4 x 55min sessions/week.</li> </ul>



## Next steps

- **Explore what is possible and most impactful for your context, given resourcing constraints.** For example, although 1:1 interventions provide the most personalised support, you might run Tier 3 intervention in groups of 3 given available resourcing.
- When designing tiered interventions, ensure you consider your **whole-school approach to quality teaching**. Effective delivery of MTSS begins with Tier 1 high-quality instruction for all students. High-quality instruction relies on a deep knowledge of [how students learn](#).
- **Consider how your school will implement your tiered intervention approach.** We recommend drawing on the following resources to support this process:
  - AERO’s guidance on [readiness for change](#) and [strategic planning](#)
  - Evidence 4 Learning’s guidance on developing an [implementation plan](#).

## References

### Evidence summaries and guidance produced by major research organisations

Abdul Latif Jameel Poverty Action Lab. (n.d.) *Tutoring pre K–12: Evidence and Resources*. <https://www.povertyactionlab.org/tutoring>

Centre for Education Statistics and Evaluation. (2022). *COVID Intensive Learning Support program: Phase 2 evaluation technical report*. NSW Department of Education. <https://education.nsw.gov.au/about-us/education-data-and-research/cese/publications/cese-evaluations/covid-ilsp-phase-2-evaluation>

Education Endowment Foundation. (2021a.) *One to one tuition*. <https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/one-to-one-tuition>

Education Endowment Foundation. (2021b). *Online tuition pilot*. <https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/online-tuition-pilot>

Education Endowment Foundation. (2021c). *Making a difference with effective tutoring*. <https://educationendowmentfoundation.org.uk/news/new-eef-guide-making-a-difference-with-effective-tutoring>

Evidence 4 Learning. (2019). *Making best use of teaching assistants*. <https://evidenceforlearning.org.au/education-evidence/guidance-reports/teaching-assistants>

Evidence 4 Learning. (2020a). *Improving literacy in secondary schools*. <https://evidenceforlearning.org.au/education-evidence/guidance-reports/improving-literacy-in-secondary-schools>

Evidence 4 Learning. (2020b). *Improving mathematics in upper primary and lower secondary*. <https://evidenceforlearning.org.au/education-evidence/guidance-reports/improving-mathematics-in-upper-primary-and-lower-secondary>

Hunter, J., & Sonnemann, J. (2022). *Making time for great teaching: How better government policy can help*. Grattan Institute. <https://grattan.edu.au/report/making-time-for-great-teaching-how-better-government-policy-can-help/>

Jones, N., Vaughn, S., & Fuchs, L. (2020). *Academic supports for students with disabilities*. EdResearch for Action. <https://www.edresearchforaction.org/research-briefs/academic-supports-for-students-with-disabilities/>

The Education Trust/MDRC. (2021). *Targeted intensive tutoring*. <https://edtrust.org/resource/targeted-intensive-tutoring/>

The Smith Family. (2021). *Improving young Australians' literacy and numeracy: The Catch-up Learning Program*. [https://www.thesmithfamily.com.au/media/research/reports/improving-young-australians-literacy-and-numeracy-the-catch\\_up-learning-program](https://www.thesmithfamily.com.au/media/research/reports/improving-young-australians-literacy-and-numeracy-the-catch_up-learning-program)

The Smith Family. (2022). *The Catch-Up Learning program: Supporting students experiencing disadvantage through online tutoring at home*. <https://www.thesmithfamily.com.au/-/media/files/research/catch-up-learning/cul-report-lit-num-final.pdf>

What Works Clearinghouse. (n.d.). *Best practice for RTI: Small group instruction for students making minimal progress (Tier 3)*. <https://www.readingrockets.org/article/best-practice-rti-small-group-instruction-students-making-minimal-progress-tier-3>

## Individual studies and reviews by academic researchers

Carlana, M., & Ferrara, E. L. (2021, February). *Apart but connected: Online tutoring and student outcomes during the COVID-19 pandemic* (Working Paper No. 21-350). Annenberg Institute for School Reform, Brown University. <https://doi.org/10.26300/0azm-cf65>

Dobbie, W., & Fryer, R. (2011). *Getting beneath the veil of effective schools: Evidence from New York City* (Working Paper No. 17632). National Bureau of Economic Research. <https://www.nber.org/papers/w17632>

Fryer, R., & Howard-Noveck, M. (2020). High-dosage tutoring and reading achievement: Evidence from New York City. *Journal of Labor Economics*, 38(2), 421–452. <https://doi.org/10.1086/705882>



Fuchs, L. S., Fuchs, D., Compton, D. L., Wehby, J., Schumacher, R. F., Gersten, R., & Jordan, N. C. (2015). Inclusion versus specialized intervention for very-low-performing students: What does access mean in an era of academic challenge? *Exceptional Children*, *81*(2), 134–157. <https://doi.org/10.1177/0014402914551743>

Gortazar, L., Hupkau, C., & Roldán, T. (2022). *Online tutoring works: Experimental evidence from a program with vulnerable children*. Esade Centre for Economic Policy. <https://www.esade.edu/ecpol/en/publications/online-tutoring-works-experimental-evidence-from-a-program-with-vulnerable-children/>

Hempenstall, K. (2013). *What is the place for national assessment in the prevention and resolution of reading difficulties?* *Australian Journal of Learning Difficulties*, *18*(2), 105–121. <https://doi.org/10.1080/19404158.2013.840887>

Porter, S. G. (2022). It takes a well-organized village: Implementing RTI/MTSS models in secondary schools. In Information Resources Management Association (Ed.), *Research anthology on inclusive practices for educators and administrators in special education* (pp. 339–368). IGI Global. <https://doi.org/10.4018/978-1-6684-3670-7.ch020>

Nickow, A., Oreopoulos, P., & Quan, V. (2020). *The impressive effects of tutoring on PreK–12 Learning: A systematic review and meta-analysis of the experimental evidence* (Working Paper No. 27476). National Bureau of Economic Research. <https://www.nber.org/papers/w27476>

Solis, M., Vaughn, S., Swanson, E., & Mcculley, L. (2012). Collaborative models of instruction: The empirical foundations of inclusion and co-teaching. *Psychology in the Schools*, *49*(5), 498–510. <https://doi.org/10.1002/pits.21606>

Vaughn, S., & Denton, C. (2008). The role of intervention. In D. Fuchs, L. S. Fuchs, & S. Vaughn (Ed.), *Response to intervention: A framework for reading educators*. International Reading Association.

Vaughn, S., Denton, C., & Fletcher, J. (2010). *Why intensive interventions are necessary for students with severe reading difficulties*. *Psychology in the Schools*, *47*(5), 432–444. <https://doi.org/10.1002/pits.20481>

White, S., Groom-Thomas, L., & Loeb, S. (2022, August). *Undertaking complex but effective instructional supports for students: A systematic review of research on high-impact tutoring planning and implementation* (Working Paper No. 22–652). Annenberg Institute for School Reform, Brown University. <https://doi.org/10.26300/wztf-wj14>

## Other references

University of Wisconsin-Madison. (n.d). *Designing programs*. <https://fyi.extension.wisc.edu/programdevelopment/designing-programs/>

American Institutes of Research. (2023). *Implementation*. <https://mtss4success.org/implementation>



For more information visit  
[edresearch.edu.au](https://edresearch.edu.au)

