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Choosing, monitoring and modifying reading interventions in MTSS

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The Australian Education Research Organisation (AERO) recommends the use of a multi-tiered system of supports (MTSS) to better assist 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 practice guide explains how to provide targeted intervention to support the needs of students struggling with these skills. It provides a set of criteria to choose an intervention, and also how to adjust your approach based on the tracking of progress. It's the fourth part of a **series of guidance** created in partnership with the Dyslexia-SPELD Foundation (DSF).

In MTSS, Tier 2 and Tier 3 interventions are additional supports provided to students to address targeted needs. A good diagnostic assessment can identify these needs, providing insight into the component(s) of reading students are having difficulties with. This will allow you to choose an intervention that ideally targets students' specific area(s) of difficulty. Students should receive the tier of intervention (Figure 1) that matches their needs.

Figure 1: Tiers in MTSS
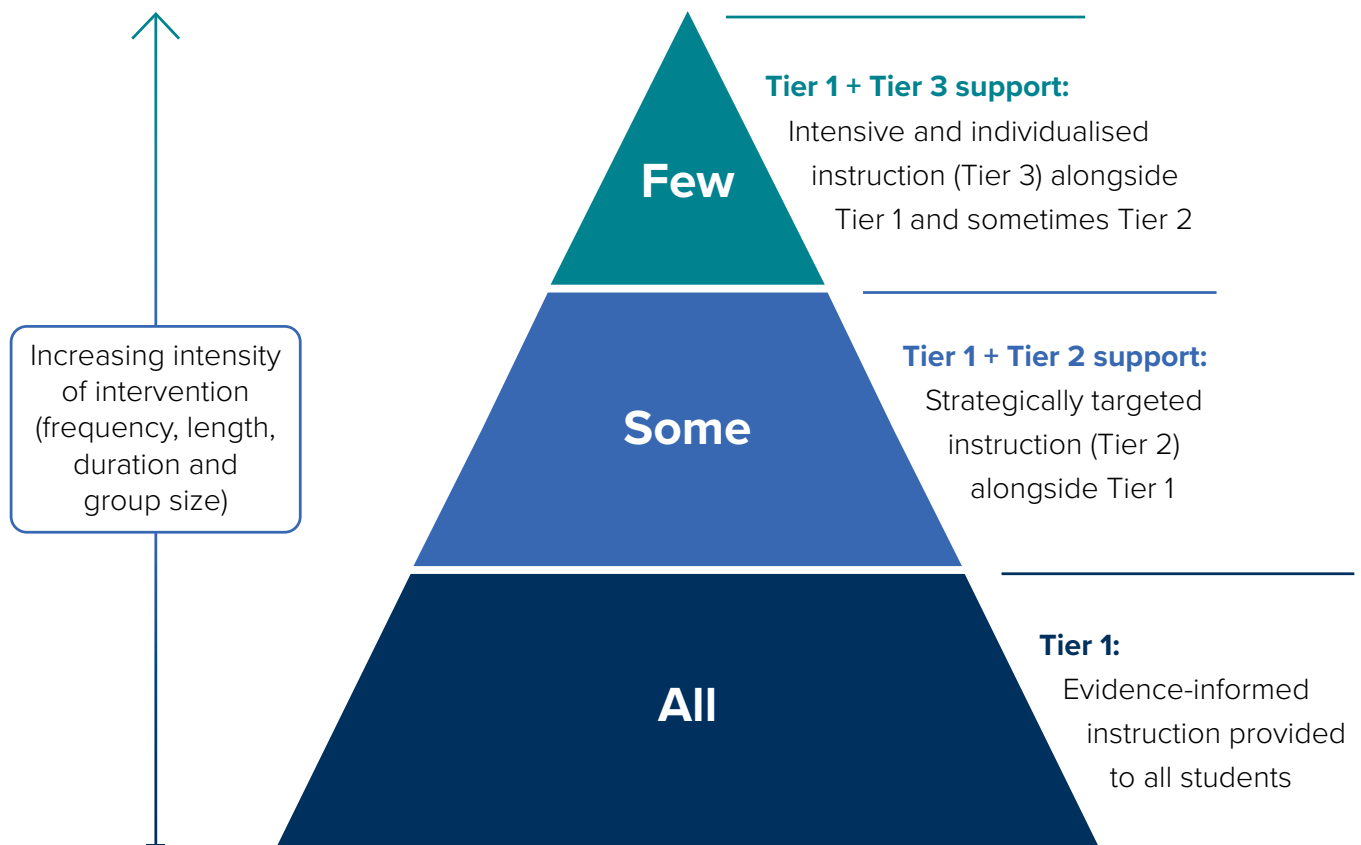
MTSS tiers aren't necessarily hierarchical, meaning a student shouldn't necessarily have difficulty responding to intervention at Tier 2 before progressing to Tier 3. For example, some secondary students with word reading difficulties have been unable to fully access the curriculum since middle primary school and will likely require intervention at Tier 3 as soon as possible.

Often, instructional and intervention programs that are very simple are better received by students.

Criteria for choosing reading interventions

The number of intervention programs available for reading is extensive and ever-expanding. This set of criteria (Table 1) will enable schools, school leaders and teachers to evaluate the suitability of an intervention program or instructional resource. These criteria are adapted from Understanding Learning Difficulties – A Practical Guide[1] by DSF Literacy Services (2021) and are consistent with AERO's review Supporting Students Significantly Behind in Literacy and Numeracy: A Review of Evidence-Based Approaches (2023).

Table 1: Criteria for selecting a successful intervention

Consideration	What to look for
Is the intervention evidence-based or evidence informed?	The effectiveness of a program should be supported by independent review – not just the evidence of the program manufacturer. In cases where an instructional approach or intervention hasn't been independently reviewed, it should be able to demonstrate consistency with evidence-based frameworks of reading.[2, 3]
Does the intervention utilise explicit and direct instructional methods?	A student who requires intervention in reading is considered a novice learner in particular reading skills. Novices experience higher cognitive load than experts when completing tasks,[4] and teaching practices that reduce cognitive load, such as explicit instruction[5] and direct instruction,[6, 7] result in better learning outcomes for novices.
Does the intervention follow a cumulative, systematic sequence?	The intervention builds on prior knowledge, ensuring that all skills and concepts required to succeed at the task are explicitly taught, and regularly revisited.[8, 9]
Is the scope of the intervention sufficiently broad to cover early, intermediate and advanced skills?	Students at secondary level may require remediation for low-level reading skills (e.g., basic phonics). However, if they're to succeed academically, secondary school students will also require instruction in the higher-order skills and knowledge possessed by typically achieving readers.[10, 11] Intervention programs with insufficient scope may limit what a school can achieve when responding to the needs of students struggling with reading.
Does the intervention increase the opportunities students have to review and revise concepts?	Students requiring intervention need *more* opportunities for practise and *more* revision of concepts than is expected for most students their age. This practice must have a high rate of success – students need to practise getting it *right*, instead of rehearsing errors, which are hard to shift.[12] Intervention must seek to increase these factors.
Does the intervention increase the intensity of instruction?	Similarly, students who require intervention are those who require an increase in instructional intensity – group size, frequency, length and duration.[13, 14, 15]
Is the intervention delivered at a pace that enables the achievement gap to close, while still allowing opportunity to practice?	By the time they reach secondary school, the gap between students struggling with reading and their peers may be large[16, 17] at a time when rate of annual gains in performance is slowing.[18, 19] Pacing must be suitably matched in response to student need while also allowing reasonable opportunity to practice.

Consideration	What to look for
Does the intervention include regular, ongoing assessment to facilitate progress monitoring?	Many off-the-shelf interventions programs come with their own assessment tools. The most ideal progress monitoring tools should evaluate student progress over very short periods (weeks or even days, rather than months), providing data that can be used to intensify and individualise intervention. It's not recommended that teaching staff develop their own progress monitoring tools,[20] but they can supplement results from existing tools with in-school data (such as curriculum grades, feedback from Tier 1 teaching staff and universal screening results).
Are the resources designed in a way that is appropriate for use with adolescents?	An effective intervention doesn't need to be specifically designed for adolescents, particularly if the skills being taught relate to knowledge of the phonic code. However, some reading programs have resources that are designed to appeal to very young children, in terms of materials, instructions and explanations. Receiving intervention that appears 'babyish' is unlikely to be protective of self-esteem for students who have spent many years struggling to maintain the progress of their peers. In secondary schools, instructional and intervention programs that are very simple (even bland) may be better received by students.
Is the intervention suitable for the school context in terms of financial, resource and staffing demands, and the number of students requiring the intervention?	This will vary between schools. However, intervention programs and instructional resources that are cost-effective, efficient and easily scalable have obvious advantages. It's strongly suggested that schools consider the level of need and their available resources before selecting an intervention approach. Resourcing interventions appropriately impacts the effectiveness of implementation.

Example interventions for word reading

There are many instructional programs designed to target word reading skills, which are usually intended for lower primary students receiving initial reading instruction, or older primary students requiring intervention. Few intervention programs and resources targeting reading accuracy and fluency have been specifically designed for secondary students, although there are high-quality examples. Many schools use programs such as Macqlit.[21] However, the underlying skills required for accurate and successful word reading don't differ between primary and secondary students.[22] For this reason, interventions don't need to be developed specifically with secondary students in mind to be suitable. The essential criterion for an appropriate intervention program is that it targets the skill gap the student presents with.

A sample of intervention programs that may be considered to target word reading skills and meet many of the criteria for selecting a successful intervention program are available in AERO's Example Interventions for Word Reading practice resource. This resource doesn't refer to extra resources – such as apps, decodable reading materials, and activity packs – that might be used to complement interventions by encouraging students to further practise their skills in reading connected text.

Example interventions for comprehension

This practice guide recommends interventions for language comprehension that directly target 2 critical components of comprehension – relevant background knowledge and vocabulary – embedded in the disciplinary literacy and curriculums of the core secondary school subjects. These interventions are largely Tier 2, curriculum-based, and should be delivered by a teacher with expertise in that subject.

Such interventions may not be readily available as an off-the-shelf program, due to the subject-specific nature of effective comprehension interventions. The important components to try to build into interventions are:

- incorporating higher levels of scaffolding, repetition and opportunities for practise in a smaller instructional group

- likely to incorporate instruction aimed at filling gaps in knowledge for that subject

- explicitly teaching vocabulary central to the subject

- featuring comprehension strategies and study of literary devices, organisational patterns, and English syntax, intended to help understand the content, rather than as a goal in and of themselves.

Tier 2 interventions will vary based on the subject being targeted and the constraints in a school's unique context. AERO's practice resource provides an example of how a Tier 2 subject-specific intervention for language comprehension (vocabulary and background knowledge) can be designed with reference to the Australian Curriculum.

Progress monitoring

The goal of progress monitoring is to evaluate how the student's skills are responding to intervention, and determine whether the intervention should continue, be modified, or be faded out or removed. It's not recommended that teaching staff develop their own progress monitoring tools.[23]

Progress monitoring can be carried out by a teacher delivering an intervention or another educator familiar with the content. It can be administered one-to-one, in a small group, or to a whole class (such as an intervention withdrawal class). Assessment conditions may be less formal than universal and diagnostic assessments.

Progress monitoring assessments may include staff-evaluated formative assessments embedded in each lesson, such as weekly (Tier 3) or fortnightly (Tier 2) curriculum-based measures of skills taught explicitly in an intervention,[24] and progress monitoring tools provided by intervention programs. Reliable and valid standardised assessments can be used to compare student results to a normative sample 2–3 times per year. More frequent use of standardised assessments isn't recommended since they may be insensitive to small improvements over shorter time frames. Compared to younger students, older students' progress may be slower to show on monitoring assessments, so monitoring improvements in raw scores and not just standardised results can be helpful.

The results of these progress monitoring assessments can be combined with:

- observations in intervention lessons

- feedback from subject-specialist teachers regarding the generalisation of intervention gains to their subjects

- observations from parents and the students themselves

- performance on formal assessments that aren't part of the MTSS assessment schedule (e.g., NAPLAN, school examinations).

Curriculum-based measures will necessarily differ between states and education jurisdictions that use different versions of the Australian Curriculum and related documents (e.g., the National Literacy and Numeracy Learning Progressions). Why Some Secondary Students Struggle with Reading shows how schools can match best-practice reading instruction (as explained in AERO's resources) with evidence-informed frameworks and curriculum documents. AERO has also captured videos of schools across Australia using progress monitoring.

Modifications to intervention

Deciding whether changes need to be made to an intervention program, and what those changes should be, is dependent on how much progress the student is making and how well they're able to generalise this new knowledge to the reading process outside of the intervention setting. The decision to continue, modify or fade out an intervention should be intentionally made, based on the student's progress towards a learning goal or benchmark rather than a predetermined time frame.Intervention can be modified based on several levers:[25]

- it can be made more or less intensive (modify the group size, frequency, length and/or duration of intervention sessions)

- the focus can be adjusted (to target prerequisite or more advanced skills)

- student groupings can be changed

- a different intervention program can be selected

- if the student exceeds the learning goal, intervention can be faded out altogether.

Monitoring should continue even after you make a modification or fade out an intervention, in case the student falls behind again.

Accommodations

Students with reading difficulties may struggle to access the curriculum, and demonstrate their skills, knowledge and understanding on an equal basis to their peers without reading difficulties. For this reason, students with reading difficulties may require 'accommodations', or adjustments, in addition to intervention.

Accommodations include the use of information and communications technology, such as reading pens and text-to-speech apps; instructional adjustments, such as modifications to the way information is delivered in the classroom setting; and examination accommodations, such as additional working time.

They're intended to reduce the functional impact of the student's reading difficulties, so accommodations that are appropriate for one student may not be effective for another, based on their profile of learning strengths and weaknesses. More information is available from DSF Literacy Services, AUSPELD and the Australian Government Department of Education.

More information

For examples of interventions that can be used to support the needs of students struggling with reading, see AERO's Example Interventions for Word Reading practice resource.

Five from Five's Reading Pledge contains information on reading intervention specifically for primary school students.

Acknowledgement

Endnotes

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