



LEARNING DIFFICULTIES AUSTRALIA

## 2023 RTI Conference Handouts

*Sunday 29th Oct*

***Session 5 - Designing Tier 3 Interventions by  
Dr Alison Madelaine***

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## Learning Difficulties Australia

Learning Difficulties Australia is an association of teachers and other professionals dedicated to assisting students with learning difficulties through effective teaching practices based on scientific research.



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## Dr Alison Madelaine

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 Senior Research Fellow, MultiLit Research Unit  
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 LDA Council Member  
 Editor, Australian Journal of Learning Difficulties

Bio: For many years, Alison was a lecturer in Special Education at Macquarie University Special Education Centre. She has taught in schools in Australia and the United States and acted as a consultant to MultiLit Projects in New South Wales and Queensland. She is currently the Clinical Director of the MultiLit Literacy Centres where she oversees interventions in reading, writing and spelling.



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## Designing Tier 3 Interventions for Students with Learning Difficulties

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## What is meant by 'Tier 3'?

How is Tier 3 different from Tier 2?

- Intensity of instruction
- Group size
- Person delivering instruction
- Frequency and duration of instruction
- Assessment



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## Instructional Considerations

- What?
- How?



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## Instructional Considerations: What?

- Which tests are needed to assess students who don't respond to Tier 2 instruction?
- Will Tier 3 instruction be different from Tier 2?
- Will a commercial/standardised program be used?
- Will a more individualised/clinical approach be taken?



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## Instructional Considerations: How?

- Who will plan and deliver the intervention?
- Group size: 1:1 instruction or small groups of 2 or 3?
- Frequency: Daily?
- Lesson Duration: How long will Tier 3 intervention lessons last?
- Scheduling considerations: When will Tier 3 intervention happen during the day?
- Instructional intensity: how has this been increased?



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## Assessment

- Norm-referenced tests
- Curriculum-based assessment
  - Teacher designed tests
  - Progress monitoring tests eg. curriculum-based measurement



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## An example of a test battery for Tier 3 intervention in reading and spelling

- Neale Analysis of Reading Ability – Revised (Reading Accuracy and Reading Comprehension Subtests)
- Martin and Pratt Nonword Reading Test
- South Australian Spelling Test
- Wheldall Assessment of Reading Passages (WARP)
- Peabody Picture Vocabulary Test

- WARP for regular progress monitoring



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## Research on Tier 3 Interventions

- Large body of research on effective interventions in different academic areas.
- Much less research documenting the progress of students who have been through Tiers 1 and 2 and are being provided with a Tier 3 intervention.
- More likely to be small n/single subject designs due to very small sample sizes



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## 1. Reading

Sanchez & O'Connor (2015)

Aim: To expand an implementation of RTI to Tier 3

Participants: 8 students in Years 3 & 4

Measures: Woodcock Reading Mastery Tests – Revised

Gray Oral Reading Test

DIBELS Oral Reading Fluency

Word Identification Fluency



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## 1. Reading

Intervention: 1:1 3 times per week for 40 minutes

Delivered by graduate students

Researcher-designed instruction in letter patterns, multi-syllabic words, sight word practice, reading aloud

Results: On average, the group made gains on all measures.

Students gained an average of 30 wcpm in 8 weeks



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## 2. Maths

Dennis (2015)

Aim: What are the effects of a Tier 3 intervention on the mathematics performance of students with inadequate responses to the Tier 2 intervention?

Participants: 3 students in Year 2

Measures:

Texas Early Mathematics Inventories-Aim Checks (TEMI-AC)  
AIMSweb Computational CBM



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## 2. Maths

Intervention: Explicit and systematic maths intervention which was the same as tier 2 (with a focus on numerical order, quantity comparison, addition and subtraction facts, place value & multidigit addition and subtraction)

1:1

More opportunities to respond

More prompts and student verbalisation

More time spent on daily lessons

Results: All 3 students made gains immediately after the intervention began.

2/3 students showed steady improvement.

Overall, a high PND (percentage of non-overlapping data) indicated that the intervention was a success.



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## 3. Writing

Walker et al. (2005)

Aim: What are the effects of the Expressive Writing Program on the acquisition and maintenance of narrative writing skills of high school students with learning disabilities?

Participants: N=3, 14-16 years old with learning disabilities

Measures:

Test of Written Language-3

Correct Word Sequences (CWS) on narrative writing assignments



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### 3. Writing

Intervention:

Expressive Writing 1 (Engelman & Silbert, 2005)

Small group

Daily intervention

Results: Overall TOWL quotient scores increased for all 3 students

Correct letter sequence scores increased for all 3 students (during intervention and maintenance phases) with a high PND.



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### References

Dennis, M. S. (2015). Effects of Tier 2 and Tier 3 Mathematics Interventions for Second Graders with Mathematics Difficulties. *Learning Disabilities Research & Practice, 30*(1), 29–42. <https://doi.org/10.1111/ldrp.12051>

Engelmann, S., & Silbert, J. (2005). *Expressive Writing 1*. SRA/McGraw-Hill.

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Walker, B., Shippen, M. E., Alberto, P., Houchins, D. E., & Cihak, D. F. (2005). Using the Expressive Writing Program to Improve the Writing Skills of High School Students with Learning Disabilities. *Learning Disabilities Research and Practice, 20*(3), 175–183. <https://doi.org/10.1111/j.1540-5826.2005.00131.x>



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### Questions?

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