The Story of MultiLit: Effective instruction for low-progress readers

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The MultiLit Research Unit

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Reading and Spelling: Development, disorders and remediation
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MultiLit is a research initiative of Macquarie University
Acknowledgements

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And associated research students: Simmone Pogorzelski, Lisa Limbrick, Jennifer Buckingham, and others.

We also acknowledge the program development work of Alison McMurtrie and her team at MultiLit.
Source

The work reported here is summarised in:


Hard copies available or via email:
sarah.arakelian@multilit.com
Once upon a time, twenty years ago now …
The Origins of MultiLit

• STEP-UP (Single Term Educational Program for Under-performing Pupils)

• Macquarie University Special Education Centre (MUSEC) School programs

• The Making Up Lost Time In Literacy (MultiLit) Initiative commenced at MUSEC in 1995
The MultiLit Reading Tutor Program (RTP)

• One-to-one individualised instruction
• Non-categorical approach to instruction
• Positive Teaching

(First published 1998)
The MultiLit Reading Tutor Program (RTP)
Target Group for MultiLit RTP

- Older low-progress readers (Year 3 and above)
- Originally defined as being two years behind average for their age peers
- Subsequently defined as bottom quartile of population
Program Content of RTP

Intensive, systematic, and direct instruction in:

- MultiLit Word Attack Skills (phonics)
- MultiLit Sight Words
- MultiLit Reinforced Reading

(30-40 mins per day of individual instruction for at least 4 days per week)
Early Research (1996-1998) Reported in:

- Executive summary available online: http://www.multilit.com/research/evaluation-report/
The MultiLit Clinic

- Continuously operating since 1996
- Initially intended for students who could not attend MultiLit programs at MUSEC School
- Now also more widely available as live tutoring via an online interface
Research on Efficacy of RTP

• Development research collecting pre/post data (see Wheldall & Beaman, 2000)
• Recent RCT on the new group version of RTP
• Carried out in a NSW public school serving a disadvantaged community
RCT of Group Version of RTP (cross-over design)

- N = 30 older low-progress readers (Phase 2 N = 26)
- Two phases each of three terms; one hour daily
- First phase: E group made greater gains than control on phonological recoding (large effect size)
- Second phase: Former C group (now E2) caught up with E1 on phonological recoding and outperformed E1 on four out of five other measures (with moderate or large effect sizes)
The Schoolwise Program for the Exodus Foundation
The Schoolwise Program for the Exodus Foundation

- Running two term programs for socially disadvantaged low-progress readers (mainly Years 4-6) continuously since 1996
- Originally 4 hour programs, then 3, now 2 (reaching twice as many students)
- Group version of MultiLit RTP plus additional programs eg Spelling Mastery
MultiLit Results from the Schoolwise Program for the Exodus Foundation, 2009-2011

- Results based on 362 students from all sites who completed two full terms of instruction
- Average age 10y:5m; typically 3 years behind age peers
- Instruction for three hours per day using small group group version of RTP and additional programs (eg Spelling Mastery)
Crude gains for the Schoolwise Program for the Exodus Foundation, 2009-2011

- 13 months in reading accuracy
- 6 months in reading comprehension
- 14 months in single word reading
- 20 months in spelling
- 20 months in phonological recoding
- and could now read 35 (50%) more words correctly per minute

(all gains p<0.0005; large effect sizes)
Working with boys

• First, contrary to popular belief, there are not that many more boys struggling than girls
• Second, the MultiLit programs are just as effective for boys as for girls
• Boys do not need different, special, ‘boy friendly’ programs
Working with Indigenous Students

- Students from Indigenous and non-Indigenous backgrounds both made similar, substantial gains in the ‘Schoolwise Program’ at Ashfield (2004)
- Indigenous students in remote communities in Cape York have also shown substantial gains
- Indigenous students do not need different, special, programs
Initial findings from the Cape York trials

Cape York MultiLit students, 2008-2010

- 146 students (79 boys, 67 girls); first two terms
- Initial mean age: 10y 2m
- Initial reading ages
  - Reading accuracy: 6y 7m (over 3 ½ years behind)
  - Reading comprehension: 6y 5m (almost 4 years behind)
### Cape York MultiLit Results (raw scores)

<table>
<thead>
<tr>
<th>Literacy Variable</th>
<th>N</th>
<th>Pre-test (SD)</th>
<th>Post-test (SD)</th>
<th>Gain (SD)</th>
<th>t*</th>
<th>Effect Size (Eta-squared)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neale Accuracy</td>
<td>146</td>
<td>20.4 (14.9)</td>
<td>30.2 (17)</td>
<td>9.8 (7.7)</td>
<td>15.4</td>
<td>.62</td>
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<tr>
<td>Neale Comprehension</td>
<td>145</td>
<td>5.8 (3.8)</td>
<td>7.9 (4.6)</td>
<td>2.1 (2.7)</td>
<td>9.2</td>
<td>.37</td>
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<tr>
<td>Burt Word Reading</td>
<td>146</td>
<td>32.3 (14.8)</td>
<td>41 (16.1)</td>
<td>8.7 (6.5)</td>
<td>16</td>
<td>.64</td>
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<tr>
<td>SA Spelling</td>
<td>146</td>
<td>21.8 (9.6)</td>
<td>28.1 (8)</td>
<td>6.2 (4.1)</td>
<td>18.4</td>
<td>.70</td>
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<tr>
<td>WARP (wcpm)</td>
<td>142</td>
<td>38.5 (31.7)</td>
<td>57.4 (38.4)</td>
<td>19 (13.9)</td>
<td>16.9</td>
<td>.65</td>
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<tr>
<td>PPVT</td>
<td>147</td>
<td>94.7 (19.9)</td>
<td>105.3 (19.5)</td>
<td>10.7 (12.3)</td>
<td>10.5</td>
<td>.43</td>
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<tr>
<td>Martin &amp; Pratt</td>
<td>146</td>
<td>14 (9.6)</td>
<td>21.8 (10.8)</td>
<td>7.8 (6.5)</td>
<td>14.6</td>
<td>.59</td>
</tr>
</tbody>
</table>

*p < 0.0005; large effect size ≥0.138
MultiLit results

Effect Size

Large (≥0.138)
MultiLit Results – after 18 weeks of instruction

Crude gains (months)

Text reading fluency: read 19 (50%) more words correctly per minute
What is MiniLit?

- Meeting Initial Needs in Literacy (MiniLit) is a program for young struggling readers (Years 1-2) (bottom quartile)

- Developed as a more cost-effective (and effective) alternative to Reading Recovery

- Small group instruction for 1h per day on at least 4 days per week (approx 20 weeks)
MiniLit consist of:

- Sounds and words activities (PA and phonics)
- Text reading
- Story Book reading
- 80 lessons
RCT of MiniLit (cross-over design)

- N = 22 young struggling readers (Phase 2 N = 14)
- Two phases each of three terms; one hour daily
- First phase: E group made greater gains than control on phonological recoding and single word reading (large effect sizes)
- Second phase: Former C group (now E2) caught up with E1 on phonological recoding; both groups gained on the other 3 reading measures
MiniLit Results from the Schoolwise Program for the Exodus Foundation, 2009-2011

- Results based on 161 students in Y1-3 from all sites who completed 15 weeks of instruction for four days per week
- Average age 6y:11m; typically well below floor of test norms, non-readers
- Instruction for one hour per day in small groups
# MiniLit Results (raw scores) from the Schoolwise Program for the Exodus Foundation, 2009-2011

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<tr>
<td>Burt Word Reading</td>
<td>161</td>
<td>16.0 (12.1)</td>
<td>25.6 (11.5)</td>
<td>9.6 (5.7)</td>
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<td>SA Spelling</td>
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<td>10.3 (8.5)</td>
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<td>WARL (wcpm)</td>
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<td>PPVT</td>
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<td>94.2 (24.2)</td>
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<td>0.83</td>
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<td>Martin &amp; Pratt</td>
<td>105</td>
<td>5.8 (6.4)</td>
<td>12.6 (7.7)</td>
<td>6.8 (5.4)</td>
<td>12.9</td>
<td>1.26</td>
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</table>

*p < 0.0005; large effect size = >0.8
Cape York MiniLit Students

- 103 students (59 boys, 44 girls)
- Initial mean age: 7y 6m
- Initial reading ages
  - Reading accuracy: <6y 1m (below test floor)
Cape York MiniLit Results

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<tr>
<td>Burt Word Reading</td>
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<td>11.7 (11.3)</td>
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<td>7.9 (8.3)</td>
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<td>14.0</td>
<td>.66</td>
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<td>Astronaut Invented Spelling</td>
<td>71</td>
<td>19.3 (14.5)</td>
<td>28.7 (12.2)</td>
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<td>12.4</td>
<td>.60</td>
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<tr>
<td>PPVT</td>
<td>102</td>
<td>73.8 (21.1)</td>
<td>85.5 (19.7)</td>
<td>11.7 (12.9)</td>
<td>9.2</td>
<td>.45</td>
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<td>Martin &amp; Pratt</td>
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*p < 0.0005;
Cape York MiniLit results (raw scores)

Effect Size

Large (≥0.138)
What is Pre-Lit?

• Program for young children prior to school entry (especially socially disadvantaged students)

• Comprises two strands: phonological awareness and oral language development

• Two 15 min sessions per day for large groups at least three days per week
Pre-Lit comprises:

- Phonological awareness focusing on blending and segmenting, identity tasks, and also print awareness

- Oral language development through structured storybook reading including an emphasis on explicit vocabulary instruction

- 108 lessons

- Large efficacy trial currently in progress
Assessment and Monitoring

- Wheldall Assessment of Reading Passages (WARP)
- Wheldall Assessment of Reading Lists (WARL)
- Wheldall Assessment of Reading Comprehension (WARC)
  (under development)
The WARP – Progress monitoring of individual students (Y4 low-progress reader)
The Latest Developments

• Imminent release of small group version of RTP for use in schools

• InitiaLit – a whole class program of initial instruction in reading and related skills for Years K-2 (in development)
How does all this fit into contemporary research and theory?

- Simple model of reading = Decoding X language comprehension
- Five ‘big ideas’: Phonemic awareness, Phonics, Fluency, Vocabulary, Comprehension
- Direct, explicit, systematic instruction
- Response to Intervention
Response to Intervention (RtI)

- Three ‘tiers’ of increasing intensity of instruction
- Careful monitoring of progress at each stage using fluency measures
The RtI model
Tier 1

• Quality, scientific evidence-based initial instruction
• For all children (100%) in first year of schooling
• *InitiaLit*, possibly preceded by *PreLit*
Tier 2

- Careful screening to identify struggling readers and continual monitoring of progress (WARL and WARP)
- Supplementary small group (3-4 students) instruction for bottom 25% of children
- Direct, systematic, explicit, scientific evidence-based instruction
- **MiniLit** for young, and **Group RTP** for older, low-progress readers
Tier 3

- Careful monitoring to identify ‘stragglers’ (WARL and WARP)
- Individual, one-to-one instruction for perhaps <5%
- Direct, systematic, explicit, scientific evidence-based instruction
- Individual **MiniLit** for young and **individual RTP** for older low-progress readers
Conclusions

• Non-categorical approach to instruction validated
• Using RtI to ensure that (almost) all children learn to read in school
• The aim of making ourselves redundant!
... And they all lived happily ever after.