Main evaluation findings: 16 August 2017
Dr S Taylor
Presentation Outline

- EGRS design & research significance
- Year 2 impact evaluation results:
  - Overall impacts on reading outcomes
  - When and where did it work?
  - Impact on classroom practice
- Recommendations and plans
Motivation Behind This Project

• Reading is at the heart of the quality challenge in SA
  – 58% of children not learning to read by grade 4 (Pre-PIRLS)
  – Root cause of school dropout in grades 10-12
• Robust impact evaluation
• Exploring mixed methods research for system-wide policy
• Developing partnerships – led by government
Sample: 230 schools in North West

3 Interventions targeting HL literacy (Setswana)

<table>
<thead>
<tr>
<th>Control group</th>
<th>“Training”</th>
<th>“Coaching”</th>
<th>“Parent Involvement”</th>
</tr>
</thead>
<tbody>
<tr>
<td>(80 schools)</td>
<td>Lesson plans, reading materials + central teacher training (50 schools)</td>
<td>Lesson plans, reading materials + on-site coaching (50 schools)</td>
<td>(50 schools)</td>
</tr>
</tbody>
</table>

2015: Grade 1
2016: Grade 2
2017: Grade 3 (Interventions 1 and 2 only)
Sample: 230 schools in North West
Theory of change: I1 & I2

• CAPS-aligned structured learning programme:
  1. **Lesson Plans:**
     • Improve curriculum coverage, pacing and sequencing
     • Facilitate adoption of new instructional methods and increase the teacher’s repertoire
     • (knowing → doing)
     • Can ensure usage of additional resources
  2. **New resources:**
     • Allow quality implementation of pedagogical methods
  3. **Coaches:**
     • Ongoing contact provides an additional mechanism to implement, evaluate, and re-implement

• But:
  – Reduce teacher autonomy
  – Could stifle differentiated instruction
Empirical backdrop

• **This project builds on earlier work in SA**
  – Systematic Method for Reading Success (Piper, 2009)
  – Triple cocktail of lesson plans, reading materials and coaching showed promise in Gauteng (Fleisch & Schoer, 2014)

• **Structured pedagogic programmes showing positive impacts elsewhere**
  – Highlighted by systematic reviews (Snilstveit et al, 2016; Popova et al, 2016)
  – Kenya (Piper, Zuilkowski & Mugenda 2014)
  – Liberia (Piper & Korda 2011)

• **Various questions remain**
  – Which mechanisms of these bundled programs work?
  – Under which conditions do LP work?
  – Does it depend on the type of monitoring and support?
Weekly meetings are held and well facilitated

Parents attend weekly meetings

Parents update knowledge and beliefs

Parents change education support practices

Changed practices at home impact on reading outcomes
Year 2 Results
(End of Grade 2)
Attrition & repetition

Attrition
Due to leaving school or to absenteeism
Related to gender, poverty and being in a specific district, but not to learner performance

Repeating Grade 1
Strongly related to grade 1 reading achievement, to being in a specific district and to gender.

In Grade 2
3726 pupils remain in the sample
**Orally administered learner assessments**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter sound recognition</td>
<td>EGRA item: 60 seconds</td>
</tr>
<tr>
<td>Word recognition</td>
<td>EGRA item: 60 seconds</td>
</tr>
<tr>
<td>Non-word recognition</td>
<td>EGRA item: 60 seconds</td>
</tr>
<tr>
<td>Paragraph reading</td>
<td>EGRA adapted item: 60 seconds</td>
</tr>
<tr>
<td>Reading comprehension</td>
<td>4 items based on paragraph</td>
</tr>
<tr>
<td>Phonological awareness</td>
<td>4 items</td>
</tr>
<tr>
<td>Writing</td>
<td>Letter dictation, word dictation, re-writing a short sentence</td>
</tr>
<tr>
<td>Maths</td>
<td>2 items</td>
</tr>
<tr>
<td>English</td>
<td>8 items: receptive &amp; expressive vocabulary</td>
</tr>
<tr>
<td>Composite score</td>
<td>Based on a factor analysis</td>
</tr>
</tbody>
</table>
Average Oral Reading Fluency: End of Grade 2

![Bar chart showing oral reading fluency for different groups and genders.](chart.png)
Impacts on sub-tests

- Estimated effect size (SD)

- Intervention 1 - Training
- Intervention 2 - Coaching
- Intervention 3 - Parents
Impacts on sub-tests

Estimated effect size (SD)

- Letters
- Words
- Non-words
- Paragraph reading
- Comprehension
- Phon. awareness
- Writing
- Math
- English

Intervention 1 - Training
Intervention 2 - Coaching
Intervention 3 - Parents
Impacts on sub-tests

Estimated effect size (SD)

<table>
<thead>
<tr>
<th>Sub-test</th>
<th>Intervention 1 - Training</th>
<th>Intervention 2 - Coaching</th>
<th>Intervention 3 - Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letters</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>Words</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Non-words</td>
<td>0.30</td>
<td>0.30</td>
<td>0.30</td>
</tr>
<tr>
<td>Paragraph reading</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Comprehension</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Phon. awareness</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Writing</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Math</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>English</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
</tr>
</tbody>
</table>
Impacts on sub-tests

![Bar chart showing estimated effect size (SD) for different sub-tests under three interventions: Intervention 1 - Training, Intervention 2 - Coaching, and Intervention 3 - Parents. The chart displays the following sub-tests: Letters, Words, Non-words, Paragraph reading, Comprehension, Phon. awareness, Writing, Math, English. The Intervention 3 - Parents intervention shows a significantly higher effect size in the Writing sub-test.]
Impacts on sub-tests

Estimated effect size (SD)

Intervention 1 - Training
Intervention 2 - Coaching
Intervention 3 - Parents
Word recognition: Coaching and Control

Percentage achieving at least this level

<table>
<thead>
<tr>
<th>Words per minute</th>
<th>Coaching</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>90</td>
<td>85</td>
</tr>
<tr>
<td>5</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>7</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>9</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>11</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>13</td>
<td>40</td>
<td>35</td>
</tr>
<tr>
<td>15</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>17</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>19</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>21</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

- Coaching
- Control
Oral Reading Fluency: Coaching and Control

Percentage achieving at least this level

Paragraph reading Words per minute

Coaching
Control
Main results:
Impact for those with 2 years of interventions

**Control:** 2 years of school

**Training:** About 19% of a year of learning

**Coaching:** About 40% of a year of learning

**Parents:** About 13% of a year of learning
Who benefits most from the interventions?

- **Boys** catch up to some extent
- Impact concentrated in **urban** schools
- **Large-classes** benefited most
Changes: Teaching practice and Parent behaviour

• Sources of information

1. **Background questionnaires** in all 230 schools
2. 60-school **lesson observation study**
3. 8 **case studies**
4. Class Act **monitoring data**
   • teacher curriculum coverage
   • attendance records of teachers & parents
## Changes: Teaching practice

### Teachers’ experiences of professional support

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Training</th>
<th>Coaching</th>
<th>Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;I feel supported and recognised for my work&quot;</td>
<td>53%</td>
<td>62%</td>
<td>82%</td>
<td>49%</td>
</tr>
<tr>
<td>&quot;I regularly meet with people who provide mentoring and curriculum support&quot;</td>
<td>52%</td>
<td>57%</td>
<td>84%</td>
<td>45%</td>
</tr>
</tbody>
</table>
Changes: Teaching practice

- More opportunities to read and handle reading materials

![Bar chart showing changes in teaching practice.

- No learner handles a book:
  - Coaching: 3
  - Training: 3
  - Control: 12

- No learner reads a reader:
  - Coaching: 3
  - Training: 3
  - Control: 18

Number of schools

Read to Lead
A Reading Nation is a Leading Nation

Department: Basic Education
Republic of South Africa
Changes: Teaching practice

- More opportunities to read and handle reading materials
- More frequent individualized attention and assessment
- Increased practice of group-guided reading
- More written work in learner exercise books

![Bar chart showing changes in teaching practice](chart.png)
Changes: Parent behaviour

Parent attendance challenge
Case Study Findings

• 2 sets of 4 case studies:

• Data Collection:
  – Lesson observation
  – Teacher interview
  – Document review
Case Study Findings

• **Successful areas of the programmes:**
  – Daily use of the EGRS lesson plans and EGRS curriculum coverage trackers
  – Regular phonics, handwriting, group guided reading and individual seatwork (writing)
  – The writing activities in the EGRS lessons encouraged teachers to give more writing tasks, and learners were completing written work on most school days
Case Study Findings

• **Factors inhibiting programme impact:**
  – **Large classes** made it difficult for teachers to provide individual attention
  – An **absence of a culture of reading** for enjoyment and limited exposure of Grade 2 learners to books besides EGRS readers and DBE workbooks
  – Teachers displayed a ‘**restricted’ understanding** of what it means to teach children to read independently
    • Over-reliance on teacher-directed strategies (e.g. telling learners what words were)
Conclusions, recommendations & plans

1. **Structured pedagogic programmes can make a difference:**
   - Aligned to the NCS
   - With high quality reading support materials

2. **Coaching better than direct centralised training:**
   - Scant evidence about effective large-scale teacher support modalities;
   - On-site coaching, including modelling of lessons, can be a cost-effective strategy;
   - Promotes deeper understanding of the methodologies
   - Promotes persistence in sticking to the programme

3. **Direct centralised training better than ‘train-the-trainer’ models:**
   - Direct in-service training of teachers (4 two-day workshops over the
Conclusions, recommendations & plans

4. **Existing subject advisers cannot fulfil the role of a coach:**
   - Low ratio of subject advisors to schools (especially in the Foundation Phase);
   - Different recruitment process, oversight structures and modus operandi

5. **Prioritize schools for special support:**
   - On-site coaching interventions could be implemented in priority schools (e.g. 100 or 500 schools in a province)
   - The cost for 100 schools would be about R6 million at current prices.

6. **Develop reading norms in the African languages:**
   - Reading norms cannot simply be adapted from one language into another;
   - It is a complex exercise requiring longitudinal data.
   - The EGRS data could be used
Conclusions, recommendations & plans

7. **Learning from EGRS:**
   - Other large scale intervention initiatives (e.g. NECT) could draw on the lessons of the EGRS and extend successful programmes to selected schools and districts.

8. **Parental involvement needs further research & may be promising:**
   - The catch 22 of parental involvement
   - Remains a potentially cost-effective intervention

9. **Learning what works in deep rural settings:**
   - Further research is needed to establish what might work in deep rural settings.
Conclusions, recommendations & plans

10. Measuring long-run EGRS impacts:
   • Future data collections on the same sample of learners

11. EGRS for EFAL in Mpumalanga:
   • EGRS 2 is underway measuring the effectiveness of two alternative interventions on EFAL (USAID funded)

12. Early Grade Mathematics Study:
   • EGMS over the next 2 to 5 years, beginning with a scoping study to identify and design promising interventions
Thank you!

www.education.gov.za
facebook: DBE SA
twitter: @DBE_SA
callcentre@dbe.gov.za
callcentre: 0800 202 933