Making Data Useable for Improvement

Improving Early Literacy in Baltimore
Our Problem

High literacy failure rates of children in Kindergarten and Grade 1.

50% to 60% of children were not meeting grade level expectations each year.
Our Work

One NIC
Two Grades
Ten Schools
Focused on Improving Early Literacy
Within Baltimore City Public Schools
**Group Aim:** Increase by 20 percentage points the number of students meeting proficiency standards on DIBELS and TRC in First grade from BOY to EOY by June 2018 at all ten schools.

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**Aim and Driver Diagram**

- **Core Instruction**
- **Word Study Protocol**
- **Small Group Instruction**
- **Materials for small groups**
- **Data Analysis**
- **Grouping Process**
- **Student Behavior**
- **Transition Protocols**
- **Home Learning**
- **Data Dashboard**
Learning about Data

**Constraints:**

- Oversimplified data
  - Green, Yellow, Red

- Not enough time for teachers to analyze
  - 45 minute planning period

- Questions about what to do next
  - Lack of teacher knowledge to accelerate learning
Our Design Challenge
Make data more actionable for teachers
Attacking the Problem
What We Did

- Created a grouping protocol that eliminated color coding
- Focused on raw data across multiple assessments
- Segmented the population into 4 distinct student profiles
- Developed Instructional Recommendations based on the profiles
- Used a PDSA to test the changes for the profile and intervention
Regrouping Process

<table>
<thead>
<tr>
<th>TIME</th>
<th>MATERIALS</th>
<th>GOALS</th>
</tr>
</thead>
</table>
| 45 minutes | - Post-its & Sharpie  
- Regrouping Mat Worksheet (printed large)  
- Amplify Assessment Data | - Analyze DIBELS and TRC data and group students in functional groups based on skill deficits.  
- Identify instructional materials to use for each group of students that will accelerate progress in targeted areas. |

1. **Label**
   Create a post-it note for each student.
   Include name, PSF, NWF (CLS and WWR), and TRC level.

2. **Cluster**
   Cluster your students around skill deficits, scores, and similar score patterns.
   - Phonemic Awareness and Phonics (PSF Less than 35 and CLS Less than 20, and TRC less than D).
   - Phonics (PSF Greater than 35, and CLS Less than 20, TRC less than D).
   - Phonics Blending (PSF Greater than 35, CLS greater than 20 and WWR less than 5).
   - Comprehension and Fluency (Green on all DIBELS, TRC below proficient E).
   - Advanced (Proficient in each tested area): For classes with many high performing students, you may need to identify multiple groups.

3. **Rearrange**
   - Rearrange based on your knowledge of the student and how they might work best with other students.
   - Identify a goal for each group. How much progress are you looking for in 3 weeks?
Regrouping Process

④ Prepare
- Identify possible materials and instructional components for the next 3 weeks.
- How will you know that progress is being made?

⑤ Schedule
- Identify the schedule and when each group will be instructed for the next 3 weeks.

⑥ Plan Follow-Up
- Plan the follow-up assessments.
- Who will test each student, on what skill, by when?
Data for Improvement

• Empower teachers to make decisions

• Embrace data for learning, not accountability
# Instructional Implications

First Grade Small Group
Instructional Considerations & Materials

<table>
<thead>
<tr>
<th>P.A. and Basic Phonics (PSF &lt;25 and NWF &lt;15, and TRC &lt; C)</th>
<th>Basic Phonics (PSF &gt;25, and NWF 15-28, TRC &lt;C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sight words (start with Pre-Primer)</td>
<td>• Sight words (start with Pre-Primer and Primer)</td>
</tr>
<tr>
<td>• Sound segmentation, onset/ rime, syllables</td>
<td>• Review P.A. activities (phoneme manipulation &amp; segmentation)</td>
</tr>
<tr>
<td>• Phoneme manipulation: addition and deletion of sounds</td>
<td>• Sound-letter correspondence in isolation and in VC, CVC words</td>
</tr>
<tr>
<td>• Basic letter-sound correspondence (isolation first)</td>
<td>• Use predictable pattern and decodable text</td>
</tr>
<tr>
<td>• Use small group texts with a repeated language pattern with about 3-6 words per page</td>
<td>• Texts build from 3-7 words per text to 2-5 lines per text (A-C). Dialogue is introduced at level C with apostrophes and the word, said.</td>
</tr>
</tbody>
</table>

*Florida Center for Reading Research (FCRR), Fundations, Elkonin Boxes, Dolch Sight Words, Big Books for modeling, A level repeated pattern text from Reading A-Z*

<table>
<thead>
<tr>
<th>Phonics and Blending (PSF 40+, NWF 29+ and TRC &lt; C)</th>
<th>Decoding, Fluency and Comprehension (PSF 40+, NWF 40+, and TRC &lt;D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sight Words (Pre-Primer, Primer, First Grade)</td>
<td>• Sight Words (Pre-Primer, Primer, First Grade)</td>
</tr>
<tr>
<td>• Fluency of blending VC, CVC, CVCC, CCVC words</td>
<td>• Start with long vowel teams</td>
</tr>
<tr>
<td>• Blends (sk, pr, l, br, sl, gr, dr, sw)</td>
<td>• Build to diphthongs, r-controlled vowels (ar, er, ir, ur, or) &amp; advanced consonants (tch, dge, soft g, kn, gn, wr)</td>
</tr>
<tr>
<td>• Digraphs (ch, th, sh, wh, ng, nk, ph)</td>
<td>• Multisyllabic word decoding and -le</td>
</tr>
<tr>
<td>• Use predictable pattern and decodable text</td>
<td>• Use decodable text and leveled text</td>
</tr>
<tr>
<td>• Texts build from 3-7 words per text to 2-5 lines per text (A-C). Dialogue is introduced at level C with apostrophes and the word, said.</td>
<td>• Use leveled text 2-3 levels above independent reading level of students</td>
</tr>
</tbody>
</table>
| • Use leveled text 1-2 levels above independent reading level of students | *Accelerated Fundations, Scholastic leveled Book Room & comprehension cards, Scholastic Short Reads, Blending boards/ mats, Fluency strips, Fluency passages, Reading A-Z lessons and materials*

*Accelerated Fundations, Chip kits, Blending boards/ mats, Nonsense word fluency (WWR), Reading A-Z lessons and materials*
Change in Student Proficiency
School #1

Cecil Student Progress DIBELS Composite First Grade
EOY +18 percentage points (Exceeded Goal)

Cecil Student Progress TRC First Grade
EOY +46 percentage points (Significantly Exceeded Goal)
Change in Student Proficiency
School #2

Maree G. Farring Student Progress DIBELS Composite Kindergarten
EOY + 9 percentage points

Maree G. Farring Student Progress TRC Kindergarten
EOY + 25 percentage points (Significantly Exceeded Goal)
Shift in Mindset

Teacher ownership of the data

Higher expectations

Shared learning across the network

Better instructional recommendations for each group
Lessons Learned

Improvement Science

Christian Licier
Marc Stein
Faith Connolly
### The Problem

- Conjecture
- General to Specific
- Find the Real Issues

**Attendance Comparison Report by Month**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
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<tbody>
<tr>
<td>SEP</td>
<td>59.2</td>
<td>74.7</td>
<td>74.4</td>
<td>80.2</td>
<td>75.6</td>
</tr>
<tr>
<td>OCT</td>
<td>61.1</td>
<td>74.6</td>
<td>75.9</td>
<td>80.0</td>
<td>76.3</td>
</tr>
<tr>
<td>NOV</td>
<td>69.7</td>
<td>70.7</td>
<td>75.4</td>
<td>76.9</td>
<td>73.8</td>
</tr>
<tr>
<td>DEC</td>
<td>68.0</td>
<td>70.1</td>
<td>75.3</td>
<td>74.5</td>
<td>71.2</td>
</tr>
<tr>
<td>JAN</td>
<td>68.9</td>
<td>73.3</td>
<td>71.4</td>
<td>68.9</td>
<td>75.3</td>
</tr>
<tr>
<td>FEB</td>
<td>67.7</td>
<td>70.2</td>
<td>74.7</td>
<td>73.2</td>
<td>73.2</td>
</tr>
<tr>
<td>MAR</td>
<td>66.6</td>
<td>69.3</td>
<td>74.1</td>
<td>74.8</td>
<td>72.0</td>
</tr>
<tr>
<td>APR</td>
<td>65.5</td>
<td>69.5</td>
<td>72.6</td>
<td>72.1</td>
<td>0.0</td>
</tr>
<tr>
<td>MAY</td>
<td>67.7</td>
<td>71.0</td>
<td>70.0</td>
<td>69.5</td>
<td>0.0</td>
</tr>
<tr>
<td>JUN</td>
<td>69.3</td>
<td>69.7</td>
<td>71.4</td>
<td>60.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Yearly Summary</td>
<td>65.8</td>
<td>71.5</td>
<td>73.6</td>
<td>73.9</td>
<td>74.1</td>
</tr>
</tbody>
</table>
Examining Data

- Students Reaching CA (626 Total)
Examining Data
## Examining Data

<table>
<thead>
<tr>
<th>Period</th>
<th>Begin</th>
<th>End</th>
<th>Total Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous</td>
<td>14-Sep</td>
<td>7-Jan</td>
<td>80</td>
</tr>
<tr>
<td>Current</td>
<td>14-Sep</td>
<td>1-Feb</td>
<td>90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Absences</th>
<th>Days Present</th>
<th>Days until Chr. Abs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full</td>
<td>Half</td>
<td>Total</td>
</tr>
<tr>
<td>Previous</td>
<td>12</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Current</td>
<td>15</td>
<td>8</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>EOY Projection</th>
<th>Chrabs? (10%)</th>
<th>Chrabs? (20 Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absent</td>
<td>Present</td>
<td>Abs %</td>
</tr>
<tr>
<td>Previous</td>
<td>34</td>
<td>146</td>
<td>18.8</td>
</tr>
<tr>
<td>Current</td>
<td>38</td>
<td>142</td>
<td>21.1</td>
</tr>
</tbody>
</table>

### Period Attendance and Tardiness

<table>
<thead>
<tr>
<th>Class</th>
<th>Present</th>
<th>Tardy</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amer. Hist</td>
<td>55</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Health/PE</td>
<td>74</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Alg Int.</td>
<td>61</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Alg Fun.</td>
<td>62</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>English</td>
<td>59</td>
<td>3</td>
<td>28</td>
</tr>
</tbody>
</table>
1. List is run on every Friday in September.

2. Cohort teams will call and identify issues:
   - Sick
   - Will not attend
   - Procedural problems
   - Minor illness
   - Chronic illness
   - Transfer/withdrawal
   - Truancy/class cutting
   - Detained/home and hospital
   - Bad contact info
   - Family responsibilities

3. Cohort teams log contact in call log and folder is created for that student.

4. A list is completed by attendance team by Wed, forwarded by Thursday to bucket teams.
HELPING FAMILIES INITIATIVE
Better Futures for Students, Families and Communities

A program of
Volunteers of America®
SOUTHEAST
55 Reasons
Our Compelling Focus provides:

The People of the Helping Families Initiative help students suspended from school for truancy or other bad behaviors build productive futures while improving the safety and learning environment for all students.

We do this with in-depth family assessments that identify the root causes of these bad behaviors. Our Inter-Agency Teams plan and deliver combinations of services that meet individual and family needs. We communicate human and statistical results to the public and other stakeholders.
Our Promise to Communities:

Better Futures for Students, Families and Communities
Targeted Benefits:

• Safer and more secure schools
• Better attendance, behavior and grades
• Improved graduation rates
Targeted Benefits:

• Improved safety and function of families, neighborhoods, and communities
• Fewer violent crimes
• Increased effectiveness of public and private service agencies
HFI Structured Process

1. Triggering Event
2. Engagement
3. Assign Case Officer and Conduct Family Assessment
4. Inter-Agency Team: Individualized Intervention Plan
5. Referrals
6. Follow up Assessment
Seeing the system that produces the current set of outcomes
HFI Driver Diagram

**AIM:**
75% of HFI Children will demonstrate positive changes in child well-being within 120 Days of Program Entry, as indicated by an average 2 point improvement from baseline on the North Carolina Family Assessment tool.

- **Primary Drivers**
  - Engagement
  - Responsive Service Delivery
  - Family Functioning

- **Secondary Drivers**
  - Intervention Planning
  - Family Assessment
  - Family-Service Provider Interactions
  - Coordination of Services
  - Appropriate Agency Referral
  - Family-Institutional Connectivity
  - Family Resourcefulness
  - Family Decision Making

- **Key Change Ideas**
  - Engage families in ID of needed services and solutions
  - Assess and serve families based on their strengths and challenges
  - Engage all members of family in Assessment Process
  - Provide services within 14 days of completed IIP
  - Conduct weekly follow-up to promote service access/engagement
  - Convene Multi-Disciplinary Team of Service Providers
  - Identify service providers that have capacity to provide services in timely manner
  - Identify service providers who cooperate with other providers
  - Provide family with list of service providers that can support particular family needs
  - Secure transportation Assistance for all HFI families
  - Help families problem solve (i.e., identify options, evaluate them & execute)
Initial Improvement Questions

• How is family engagement distributed across the different “levels” of the HFI System?
• What is the vulnerability profile of families who become engaged in case managed family services?
• How do families generally proceed through the HFI service pipeline?
• What design improvements might be needed to facilitate family access to needed services?
How do families interact with HFI?

- 60% Receive Letter Only
- 20% Receive One-Time Services
- 10% Receive School Support
- 5% Engage in Full-Range of HFI Interdisciplinary Services
- 5% do not engage
HFI Family Vulnerability Profile

% of Families with Vulnerability

Families with 3 or ...
Families with Prior ...
Families with Prior ...
Families with ...

% of Families with Vulnerability
Average Number of Days to Service Access/Delivery from Intake

Jan-18    Feb-18    Mar-18
Average Time from Home Visit to Engagement in Interagency Services Team

Jan-18  Feb-18  Mar-18

Upper Bound

Average Days Intake to Interagency Team

Lower Bound
Average Time from Intake to Engagement with IAT Referred Services

- **Upper Bound**
- **Average Days from Intake to Access of IAT Services**
- **Lower Bound**

Data points:
- **Upper Bound:**
  - January 2018: 50 days
  - February 2018: 55 days
  - March 2018: 60 days

- **Lower Bound:**
  - January 2018: 30 days
  - February 2018: 35 days
  - March 2018: 40 days
Service Referral Process by Family Need

- Avg. Days to Referral to Financial/Housing Assistance
- Avg. Days to Referral to Mental Health/Trauma Services

Jan-18 | Feb-18 | Mar-18
--- | --- | ---
0 | 0 | 0
Average Time from Home Visit to Engagement in Interagency Services Team

Families with 1 Primary Vulnerability

Families with 3 or More Vulnerabilities

Jan-18    Feb-18    Mar-18
Quick Takeaways

• Important Need/Opportunity to Understand Experiences of those who do NOT receive formal HFI Services and Supports

• HFI appears to prioritize family services based on severity of family needs.

• There is a significant lag in access to MH and trauma services (which is common).

• This lag may require longer term case management efforts and/or different service processes to fit different family need profiles.
• How might you apply these ideas to your projects?
• What’s one thing you might do differently when you return to your site?
Questions & Discussion
THANK YOU!