Dyslexia and the Science of Reading

Presentation to the Ohio State Board of Education
International Dyslexia Association Central Ohio
December 10, 2018
Parent Story

➔ Older son not identified & held back 3 times
➔ Older son drops out of school - never graduated
➔ Younger son - trying to get services
➔ District lacks knowledge & training
➔ 3 hour round trip drive to Dyslexia Center for younger son
➔ Younger son big improvement after just a few months
➔ Dyslexia knowledge and experience needed
Common Options and Results

➔ Private tutor - expensive, typically not aware of dyslexia and associated training
➔ Marburn – Lawrence – Springer - $25K
➔ Dyslexia focused Parent Groups - 5 in last 18-20 months
➔ Special Ed - Staggering amount $$$$$$ spent
➔ Failure – most student’s reality
IDA Central Ohio inspires action to transform education for learners with dyslexia

Our Mission:

➔ Increase awareness of dyslexia and related learning disabilities
➔ Train professionals, provide resource info and advice for families
➔ Promote the use of effective teaching methods based on the science of reading
➔ Disseminate scientific research-based knowledge related to neuroscience, cognitive science, technology and equity

Our Impact:

Learners with dyslexia will achieve success in K-12 and make a positive transition to college, trade schools and careers.
Definition of Dyslexia

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.
Informal Dyslexia Definition & Myths

➔ Easy definition of dyslexia
➔ NOT reversal of letters - NOT vision issue
➔ Compare other assessments - artistic, athletic
➔ CEO of Cisco, Richard Branson, Charles Schwab
➔ 35% entrepreneurs – dyslexia - Daymond John, Barbara Corcoran, Kevin O'Leary (these are the exception)
63% 4th graders NOT proficient in reading
64% 8th graders NOT proficient in reading
63% 12th graders NOT proficient in reading
These percentages have remained relatively stable since 1992 ranging from 63% – 71% that are NOT proficient
Ohio’s Plan to Raise Literacy Achievement

→ 62%  Ohio’s 4th graders NOT proficient in reading

→ 64%  Ohio’s 8th graders NOT proficient in reading

→ Since 2007 levels ranged from 66% – 61% that are NOT proficient
Failing Significant Percent of Population

→ We know with 100% certainty – current reading programs are not working for a large portion of student population
→ Poverty & English Language Learners explain certain part of it
→ 1 in 5 have dyslexia (Yale University)
→ Approximately 350,000 Ohio students have dyslexia
→ Dyslexia by far biggest of 13 disability categories under IDEA for Specific Learning Disability students
→ Fortunately there are decades of scientific research studies that show us how to teach reading effectively
Reading Panel Studies

➔ 100,000+ studies on reading 1966 – 1997
➔ About 80,000 studies eliminated due to lack of science based research

➔ **Conclusion**: All reading programs must contain 5 components (AKA 5 Big Ideas)
Action Plan As Result of Reading Panel

➔ Reading Panel recommendations largely ignored
➔ Not implemented in colleges & school districts
➔ Was not mandated
Story Changes For Some

➔ Years of failure for significant portion of students
➔ Some teachers pursued answers - Structured Literacy - Orton Gillingham (OG)
➔ Method allows children to crack code of written word
➔ Highly successful with students with dyslexia and
Reading Specialist Story
First Grade Classroom

6 Students serviced in 2 small groups using Structured Literacy Groups

17 Students serviced in 4 small groups using Guided Reading Methodology

Structured Literacy Groups
  Mean growth  -  187.8
  Median growth -  185

Guided Reading Groups (not SL)
  Mean growth  -  114.7
  Median growth -  121

Conclusion: Greater overall gains in Structured Literacy groups
Second Grade Classroom
Tier 1 - Fundations (Structured Literacy based Gen. Ed. curriculum)
Tier 2 & 3 - Fundations + Structured Literacy based programming

On Benchmark (On Grade Level)
On-Watch
Intervention
Urgent Intervention
Elementary A
CTOPP-2
Results
Elementary A - Children Identified with a Specific Learning Disability In Reading
Kindergarten Performance Before and After Science of Reading Training


<table>
<thead>
<tr>
<th>SCHOOL (low-income%)*</th>
<th>2015</th>
<th>2018</th>
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<tbody>
<tr>
<td>Asa Packer (28%)</td>
<td>47%</td>
<td>95%</td>
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<tr>
<td>Calypso (63%)</td>
<td>35%</td>
<td>100%</td>
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<tr>
<td>Clearview (66%)</td>
<td>51%</td>
<td>100%</td>
</tr>
<tr>
<td>Donegan (97%)</td>
<td>30%</td>
<td>69%</td>
</tr>
<tr>
<td>Farmersville (28%)</td>
<td>64%</td>
<td>93%</td>
</tr>
<tr>
<td>Fountain Hill (90%)</td>
<td>28%</td>
<td>60%</td>
</tr>
<tr>
<td>Freemansburg (83%)</td>
<td>51%</td>
<td>93%</td>
</tr>
<tr>
<td>Governor Wolf (54%)</td>
<td>36%</td>
<td>76%</td>
</tr>
<tr>
<td>Hanover (13%)</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>James Buchanan (55%)</td>
<td>60%</td>
<td>72%</td>
</tr>
<tr>
<td>Lincoln (78%)</td>
<td>32%</td>
<td>83%</td>
</tr>
<tr>
<td>Marvine (94%)</td>
<td>40%</td>
<td>72%</td>
</tr>
<tr>
<td>Miller Heights (26%)</td>
<td>62%</td>
<td>88%</td>
</tr>
<tr>
<td>Spring Garden (41%)</td>
<td>51%</td>
<td>92%</td>
</tr>
<tr>
<td>Thomas Jefferson (73%)</td>
<td>75%</td>
<td>92%</td>
</tr>
<tr>
<td>William Penn (77%)</td>
<td>42%</td>
<td>81%</td>
</tr>
<tr>
<td>DISTRICT (56%)</td>
<td>47%</td>
<td>84%</td>
</tr>
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SOURCE: Bethlehem Area School District. *Low-income is defined as the percentage of students who qualify for free or reduced-price lunch. 2017-18.
### School Summary

<table>
<thead>
<tr>
<th>% Students</th>
<th># Students</th>
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</thead>
<tbody>
<tr>
<td>30%</td>
<td>246</td>
</tr>
<tr>
<td>20%</td>
<td>152</td>
</tr>
<tr>
<td>At risk for Tier 3: 2 or More Levels Below</td>
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### Detail by Grade

#### Student Distribution across Tiers

<table>
<thead>
<tr>
<th>Grade</th>
<th>Tier 1: On or Above Level</th>
<th>Tier 2: 1 Level Below</th>
<th>At risk for Tier 3: 2 or More Levels Below</th>
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</thead>
<tbody>
<tr>
<td>Grade 7</td>
<td>54% (221)</td>
<td>19% (77)</td>
<td></td>
</tr>
<tr>
<td>Grade 8</td>
<td>46% (182)</td>
<td>21% (81)</td>
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Lacked systems and structures to effectively plan for and implement evidence-based literacy instruction
Essential Additions/Changes at MEVSD (taking on root causes)

➔ Raised awareness and understanding of all Big 5 Ideas in Reading
➔ Revised assessment battery (K-8) & implemented dyslexia screener (K/1)
➔ Adopted a diagnostic prescriptive approach to teaching and learning
➔ Created MTSS process that works and is consistent across all K-8 buildings (simple view of reading)
Most prevalent challenges/obstacles

➔ Accountability/Training
➔ Serving multiple masters
  ◆ Evidence based instructional practice v the implementation of evidence based instructional practice
  ◆ KRA and SLO Windows
Wolf in Sheep’s Clothing?

→ Structured Literacy method is not trendy - decades of research

→ If I’m owner of reading program and see this reading movement happening: Change marketing material and presentation of program

→ What to look for in reading programs – see thru marketing
We Know What Needs Done

➔ ODE’s Plan to Improve Literacy is a good start
➔ Dyslexia Pilot Project already proved what needs done
➔ Accountability & Forcing Issue
What do we recommend?

➔ Form Advisory Group with IDA expert’s recommendations
➔ Group will help advise as plan is developed
➔ Will include creating model district programs based on current successful district programs (roadmap - working on it now)
➔ Create plan to evaluate reading programs to assure 5 components are PROPERLY & EFFECTIVELY included in programs
2014 Sally Shaywitz of Yale University in testimony before Congressional Committee on Science, Space, and Technology

“In dyslexia, there is an abundance of high quality scientific knowledge so that we have not a knowledge gap, but an action gap. It is our hope that hearing the depth and extent of the scientific knowledge of dyslexia will alert policy makers to act and to act with a sense of urgency.”
Analogy: Forcing right handed methods on left handed kids

Decades of data supporting what we discussed is overwhelming

Improvement in literacy results from school districts with Structured Literacy (OG) based programs is unquestionable

We need to stop failing hundreds of thousands of kids