Wanted: Teachers with Knowledge of Language and Literacy

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AIM Academy, 2014

Educational Intervention for “Word Blindness” (Instruction!)

- Linguistic concepts
- Systematic
- Explicit
- Cumulative
- Multisensory
- Intensive
- Applied to purposeful reading and writing

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Poor Readers Typically Not Wired for Phonology and/or Word Recognition

(Fletcher, Lyon, Fuchs & Barnes, 2007)

1st Grader, Phonological Confusion

- fan
- wait
- chunk
- blade
- coach
- fright
- dream
- bright
- stick
- sled
- rope
- snowing

Vowel Chart: Articulation

- ø
- yú
- ø
- œ
- ae
- au
- ao
- ou
- oí
- er
- ar
- or

Consonant Phonemes by Place and Manner of Articulation

<table>
<thead>
<tr>
<th>Stops</th>
<th>/p/</th>
<th>/b/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasals</td>
<td>/m/</td>
<td>/n/</td>
</tr>
<tr>
<td>Fricatives</td>
<td>/f/</td>
<td>/θ/</td>
</tr>
<tr>
<td>Affricates</td>
<td>/pf/</td>
<td>/θt/</td>
</tr>
<tr>
<td>Glides</td>
<td>/l/</td>
<td>/n/</td>
</tr>
<tr>
<td>Liquids</td>
<td>/l/</td>
<td>/r/</td>
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How We Recognize Words

Units of Analysis

unreachable  word
un-reach-able  morpheme
un-reach-a-ble  syllable
u-n-r-e-a-ch-a-b-le  grapheme
u-n-r-e-a-c-h-a-b-l-e  letter

Configuration is not helpful in identifying words.

Words are not recognized by shape.

Context Does Not Drive Word Recognition

• “….Don’t know that word? Well just keep reading and see what might make sense here…”

We read this way:

Knowledge of word form is related to knowledge of word meaning (Perfetti, 2011)

Antonym
connotation

word

Synonym
denotation
Multiple meanings

Examples in context:

Sounds, spelling, meaningful parts; words it is to be distinguished from.

The Challenges of Syntax

• The white van was hit head-on by the motorcycle
• We had no reason to think that she was unstable
• He put the paper aside to read the book
  He put the paper beside the book
  He put the paper inside the book
• This is a major problem; this is the major problem
Reading Difficulties Should Be Differentiated
(Fletcher et al., 2007; Aaron, Joshi et al., 2008)...

Relationship Between Reading Fluency and Verbal Comprehension Changes Over Time

Do Teachers Learn These Things? NCTQ Report (2006)
- Much of current reading instruction remains mired in a view of reading instruction that is incompatible with the science of reading.
- The process of becoming a reader is described as a natural, organic process, despite the fact there is no evidence to support such a view.

Nat’l Council on Teacher Quality 2013
- Overall ratings on 608 institutions
- Additional data on another 522 institutions
- Altogether, data on where 99% of new teachers are trained

"We have lots of information technology. We just don't have any information."
Teachers’ Disciplinary Knowledge: A Topic of Discussion for Years…

- Wanted: Teachers with Knowledge of Language - Lyon & Moats, 1996
- Informed Instruction for Reading Success - Brady & Moats, 1997
- Teaching Reading is Rocket Science - AFT (Moats), 1999
- Knowledge to Support the Teaching of Reading - Snow, Griffin, & Burns, 2005

Some Studies of Teachers

- Moats & Foorman, 2003; Moats, 2009
- Bos et al., 2001
- J. Cornier, 2004
- Piasta, Connor, Fishman, & Morrison, 2009
- Brady et al., 2009
- Joshi et al…

“Basic” Concepts are Elusive! (900 Teachers in One State…)

How is the word “gl-ue” divided?

- a. syllable
- b. onset-rime
- c. phoneme
- d. none of the above

37% correct

English is Complex!

Which of the following groups of words is an example of the spelling principle, “we spell by the position of a sound in a word?”

- a. gymnasium, photograph, cello
- b. fun, puff, rough
- c. spectator, respect, inspection
- d. medicine, medicinal, medical

(900 Teachers - 24% Correct)
"Philosophy" Does Matter

- “…[1st grade teachers’] philosophical framework about reading instruction was germane to the extent teachers learned the content of direct methods of reading instruction.
- Those with a “whole language” orientation were less responsive to PD in phonology, phonics, and spelling.

(Brady et al., 2009)

Disciplinary Content Knowledge is Not Obvious, Natural, or Intuitive

- Cunningham et al. (2009) asked teachers how they would prefer to teach reading.
- “…it appears that a philosophical orientation towards literature-based instruction tends to be more exclusive of other instructional approaches.”
- Teachers’ preferred practices do not conform to current research and policy recommendations for teaching 1st graders.

What Teachers Know, Affects What They Do (Brady et al., 2009)

- “…Teachers who performed well on phonics tasks [on the knowledge survey] prefer spending more time on explicit and systematic instructional practices and less time on unstructured literature activities.”
- Prior knowledge [of language] plays a role in teachers’ choice of instructional activities.

What Teachers Know, Affects What Students Learn

- Students enrolled in classrooms (K-3) where the teachers had the lowest knowledge of phoneme-grapheme relationships made the least growth in spelling development.


Teacher Learning Takes Time (McCutchen, Abbott et al., 2002)

- “…with K-1st Grade teachers, gave a 10-day summer course focused on increasing teachers’ own linguistic knowledge; observed frequently during the year; 3 more days of inservice focused on students’ progress and instructional needs
- Taught phonology and phonological development; structure of orthography; importance of code learning within a comprehensive lesson framework. Spelling samples used diagnostically.

Knowledge and Mentoring Matter (McCutchen et al. (2009)

- 10 days of summer institute with 30 teachers of Grades 3-5
- “…teachers’ linguistic knowledge uniquely predicted lower-performing students’ end-of-year scores on Gates-MacGinitie Vocabulary, narrative composition, WIAT Spelling, and WRMT-R Word Attack (ps < .05)
Good Instructional Programs Do Not Supplant Teacher Training
Piasta et al. (SSR, 2009)
• Students’ gains were predicted by the interaction between teacher knowledge and amount of explicit decoding instruction students received
• Highly scripted core curricula “cannot replace the expert teaching of highly knowledgeable teachers”
• More code instruction by teachers with low levels of knowledge did not produce student gains

Teacher Educators Need Better Preparation in the Content
Binks-Cantrell, Joshi, & Washburn, “Peter effect in the preparation of reading teachers” (2012), Scientific Studies of Reading

<table>
<thead>
<tr>
<th>University faculty</th>
<th>First Year Teachers</th>
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<tbody>
<tr>
<td>define and count the number of syllables correctly</td>
<td>≥ 92%</td>
</tr>
<tr>
<td>Identifying the definition of a phoneme</td>
<td>98%</td>
</tr>
<tr>
<td>correctly recognize that &quot;chef&quot; and &quot;shoe&quot; begin with the same sound</td>
<td>92%</td>
</tr>
<tr>
<td>correctly recognize a word with two closed syllables (napkin)</td>
<td>65%</td>
</tr>
<tr>
<td>correctly recognize the definition of phonological awareness</td>
<td>58%</td>
</tr>
<tr>
<td>No. of morphemes: heaven Observer Frogs Name all the 5 components of NRP</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>15%</td>
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Summary: Why We Need Stronger Preparation Programs
• Low standards for entry and licensing
• Inappropriate/absent course content
• No requirements for language study
• Concepts themselves are difficult, complex, and elusive; they take time (and practice) to learn
• Application requires mentoring, coaching, appropriate tools for teaching

IDA’s Knowledge and Practice Standards for Teachers of Reading
Adopted by the International Dyslexia Association and the Alliance for the Accreditation and Certification of Structured Language Education (ALTA and IMSLEC)

Contributing Writers:
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Suzanne Carreker
Rosalie Davis
Phyllis Meisel
Louise Spear-Swerling
Barbara Wilson
Purpose of Standards

• …to guide the preparation, certification, and professional development of those who teach reading and related literacy skills in classroom, remedial, and clinical settings;
• …to specify what **any individual responsible for teaching reading** should know and be able to do, so that reading difficulties, including dyslexia, may be prevented, alleviated, or remediated.

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Purpose of Standards

• …individuals who teach in public and private schools, as well as those who teach in clinics, are prepared to implement **scientifically based** and **clinically proven** practices.
• To **protect the interests of the consuming public** by establishing the content knowledge and practices unique to the profession.

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Accomplished to Date…

• Standards-aligned process of higher education program review
• Second round of reviews getting underway
• Progress toward adoption of a licensing exam aligned with the KP Standards

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Thank you so much!

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