The Challenge of Identifying and Supporting English Learners with Dyslexia: What Can be Done?

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Questions to discuss

• What do you think is the most challenging aspect of distinguishing between language acquisition and learning disability?
• How do your English learners do in comparison to other students?

Agenda

• A problem of practice: differentiating between language acquisition and dyslexia – important questions
• What is dyslexia?
• What instruction should look like within an MTSS/RtI framework for culturally and linguistically diverse students
• Assessments

What Should be Considered to Distinguish Between Language and Reading Disability?

• Compared to English, for how long has the student been speaking and exposed to the home language?
• Are the difficulties present in home language and English?
• Have appropriately explicit instruction and intervention been provided?
• Has this instruction produced improvement?
Dyslexia Defined

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.


Reading Comprehension Framework for L2 Learners (Geva & Wiener, 2014)

What Do We Know?

Dyslexia...
- is a language-based problem
- is inherited (runs in families)
- does not mean seeing things backwards or making reversals
- exists across all levels of intelligence
- is not caused by a lack of motivation
What Else Do We Know?

- Occurs at all socioeconomic levels
- Occurs slightly more often in boys than girls
- May develop even with optimal classroom instruction
- Often occurs with other developmental problems (e.g., ADHD, executive function, written expression)
- Can be mitigated with high-quality instruction
- Not the only type of RD (see next slide)

Recognized Subtypes of Poor Readers (Fletcher et al. 2007; Aaron, Joshi et al., 2008)

- 70-80% of poor readers with phonological deficit
- 10-15% of poor readers with language comprehension
- 10-15% of poor readers with fluency/naming speed

High quality instruction makes a difference

- Many children eventually identified with dyslexia can be taught to read with early identification and explicit, comprehensive reading/language arts instruction
- Remediation of dyslexia after Grade 2 requires high intensity and a comprehensive approach to reading instruction

BRAIN PATTERNS THAT DYSLEXIC STUDENTS MAY SHOW

- LEFT FRONTAL REGION: Important for compensation
- LEFT TEMPORAL-PARIETAL REGION: Important for phonological processing and grapheme-phoneme association
- LEFT OCCIPITO-TEMPORAL REGION: Important for orthographic processing

BRAIN PATTERNS THAT NON-DYSLEXIC STUDENTS MAY SHOW
Core Deficit is Phoneme Awareness

- The ability to separate mentally the speech sounds within spoken words.
- Consciously separating speech sounds is an unnatural, acquired skill for those who learn to read and write because words are undivided bursts of sound.
- Awareness of the separate speech sounds enables children to make a mental map of the correspondences between the letters in the printed words and the sounds they represent.

(Moats & Dakin, 2008)
English learners and Phonemic Awareness

English learners often struggle with basic phonemic awareness and may experience reading difficulties because they lack English vocabulary; therefore, English learners are highly likely to experience reading difficulties because of limited English proficiency.  
(California Dyslexia Guidelines, 2017, p. 36)

Phonological Awareness and Phonemic Awareness

- Phonological awareness in Spanish or English predicts reading achievement.
- In fact, Spanish phonological awareness may be a better predictor of English word reading than English or Spanish oral proficiency (Durgunoglu, Nagy, & Hancin-Bhatt, 1993).
- A student can be given a phonological test in the home language by a speaker who is trained.

Phoneme Awareness (basic)

**NOTE:** this would all be oral, not written words

**Oral Blending:** (hear sounds, then say word)
- /f/ /a/ /n/… “blend”… fan
- /s/ /i/ /t/… “blend”… sit

**Segmentation:** (hear & say word, then say sounds)
- “say sat” … “sat” … “sound sat” … /s/ /a/ /t/
- “say tray” … “tray”… “sound tray” … /t/ /r/ /a/

Phoneme Awareness (Advanced) Manipulation*

**NOTE:** this would all be oral, not written words

**(Deleting sounds)**
- “say cram”… “cram”… “drop /k/, what’s left?” … “ram”
- “say truck”… “truck” … “drop /k/, what’s left?” … “tru”

**(Adding sounds)**
- “say at”… “at”… “add /rrr/”… “new word?” … “rat”

**(Substituting sounds)**
- “say man”… “change /mm/ to /ff/ … “new word?” … “fan”

*Key activity to promote orthographic mapping
Orthographic Mapping

Orthographic mapping explains how students turn unfamiliar words into instantly accessible sight words, with no sounding out or guessing. This is something that weak readers do very poorly, and as a result, they have limited sight vocabularies and limited reading fluency.

p. 18, Kilpatrick, 2015

Thus, orthographic mapping involves a connection-forming process in which the oral phonemes in spoken words are “bonded” (Ehri, 2005a) to the letters used to represent those phonemes. The phoneme sequence of the word that is already established in long-term memory acts as the anchor for the written sequence of letters used to represent that phoneme sequence.

p. 122, Kilpatrick, 2015

Look at but don’t read the following word…

Horseradish

• You can’t help but read it, can you?
• This behavior is “pre-cognitive.”

Name the COLOR of the squares as fast as you can…

Name the COLOR of the WORDS as fast as you can…

Brown
Black
Blue
Green
Look at but don’t read the following word…

hovolupshim

- Wasn’t quite the same, was it?
- What do you have to do?
- Did you recognize any chunk of it right away?

Transparent vs Opaque Orthographies

**Transparent**
- Spanish, Italian, Finnish
- Consistent rules
- Usually one-to-one correspondence
- Decoding skills developed faster
- Students with dyslexia struggle more with fluency than accuracy (accuracy still poor compared to typical peers).

**Opaque**
- English, French
- More complex spelling patterns
- Context-dependent rules
  - Read – red
  - Much less one-to-one correspondence
- Decoding problems (accuracy) are more evident. Fluency also a challenge.

Adapted from Enciso, 2017

Opaque vs Transparent Orthographies

Deficits in decoding and phonology are more common in opaque orthographies (Wimmer, 1993; Wimmer & Mayringer, 2001), while deficits in reading rate and processing speed are more common in transparent orthographies in which most letters have only one sound each associated with them (Holopainen, Ahonen, & Lyytinen, 2001; Jiménez, 2012; Tressoldi, Stella, & Faggella, 2001)
Opaque vs Transparent Orthographies

Accumulating evidence with bilingual learners of two alphabetic languages suggests that learning in a phonologically transparent orthography (e.g., Spanish) might improve children’s phonological reading skills and increase the strength of left superior temporal activation in their phonologically-opaque language (e.g., English).

Bilingual children with dyslexia who are learning to read in a phonologically transparent orthography (Italian) have also been found to have better phonological literacy skills in their phonologically-opaque language (English) than their monolingual English peers with dyslexia (Kovelman, Bisconti, & Hoeft, 2016).

Understanding L2 Acquisition: 3 theories of cross-language transfer interact with each other

1. Typological perspective (Lado, 1957)
   a. Transfer is easiest with phonologically similar languages (Spanish-English vs Chinese-English)

2. Interdependence Hypothesis (Cummins, 1981)
   a. Academic language proficiency transfers across languages when students have developed literacy in L1
   • Task demands, language proficiency, nature of the task can inhibit this transfer

Genesee (2006) suggests that the typological perspective assists transfer of spelling, vocabulary, & word recognition while Cummins’ theory assists transfer of higher order literacy skills.

Understand L2 Acquisition: 3 theories of cross-language transfer interact with each other

3. Cognitive underlying processes framework (Geva & Ryan, 1993)
   a. Individual differences in working memory, RAN, PA, and phonological memory explain L1-L2 correlations and predict word reading, spelling, and fluency in both L1 & L2.
   b. Performance on these cognitive processes does not require high levels of oral language proficiency (OLP)
   • Many educators tend to attribute low OLP as the cause for poor decoding skills thus under identifying ELLs as LD who have persistent word recognition difficulties.
   • OLP does not drive the development of word reading skills in L2.

A Civil Rights Issue

The Exclusionary Clause of IDEA 2004

“A child shall not be determined to be a child with a disability if the determinant factor for such determination is (A) lack of appropriate instruction in reading, including in the essential components of reading instruction…; (B) lack of instruction in math; or (C) limited English proficiency” (IDEA 2004, Section 614.b.5)
Opportunity to Learn

Opportunity to learn must be established.

Some ELLs are identified as having LD not because they have disabilities, but rather because they have not received an adequate opportunity to learn.

Some ELLs are taught in “disabling contexts,” with too few opportunities to develop their language/literacy skills.

What IS Opportunity to Learn?

- Has tier 1 been high quality? Is the school implementing a strong curriculum?
- Are tiered interventions of increasing intensity afforded to English learners? Are there ways to assess intervention response?
- Is literacy instruction culturally and linguistically responsive?
- Is language and literacy developed across the curriculum? Are lessons meaningful?
- Are teachers including opportunities for structured academic talk in their instruction?

Important Literacy Domains and Strategies

- **Oral language**: Provide opportunities for students to interact around content. But also provide direct instruction in morphology, grammar/syntax, and vocabulary.
- **Phonemic Awareness & Phonics**: Consider using familiar sounds and words when working on phonics; use words students produce themselves that can serve as the basis for phoneme segmenting, blending, syllabication, etc.
- **Fluency**: Use repeated reading, modeled and shared reading, partner reading, voice technologies, etc.
- **Vocabulary**: specific word instruction, word learning strategies; use cognates as much as possible
- **Comprehension**: Build background, highlight key vocabulary, address syntax and teach specific strategies.

Reading Comprehension Framework for L2 Learners (Geva & Wiener, 2014)
Literacy Domains and Strategies continued

- **Cross-language connections**: Note similarities and differences between home language to English, understand the literacy skills students bring from L1; build on cognates
- **Writing**: Create functional writing opportunities, modelling and interactive writing
- **Connections to home and community**: Understand the practices and knowledge of the students and their families and bring that into the classroom.

Explicit Phonics Lesson Sequence
CORE Teaching Reading Sourcebook p. 175

1. Develop phoneme awareness
   - Include addition, substitution, and deletion activities
2. Introduce sound/spelling
3. Blend words
4. Build automatic word recognition
5. Apply to decodable text
6. Word Work for decoding and encoding

Introduce Sound-Spelling, part 1

Introduce Sound-Spelling, part 2
Blend Words & Build Automatic Word Recognition

See Video from internet

Apply to Decodable Text

Chapter 5

Reading a Decodable

Word Work for Decoding & Encoding

How is Learning to Read in English different for ELs than Learning to Read English for Native English Speakers

- **Phonological awareness**: 1st language may not include some of the English phonemes
- **Alphabetic principle**: Letters may look the same but represent different sounds; English has many spellings for the same sound
- **Fluency**: Opportunity to read aloud may be limited, accent may impede fluency
- **Vocabulary**: Prepositions, pronouns, multiple meaning words, idioms, false cognates present challenges
- **Comprehension**: Syntax, strategies, variations in text structure are potential challenges
### Phonological Skills

<table>
<thead>
<tr>
<th>Typically Developing ELLs</th>
<th>Indicators of possible learning difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform similarly to native speakers</td>
<td>On-going weaknesses in phonological awareness (e.g., inability to match sounds to letters, hear rhymes, to replace one sound with another, break a word into sounds, blend sounds together)</td>
</tr>
<tr>
<td>Possibly to have some difficulty if native language is phonologically very different from English</td>
<td></td>
</tr>
<tr>
<td>Apply phonological skills to both languages</td>
<td></td>
</tr>
</tbody>
</table>

Can be assessed using: DIBELS; Roswell-Chall Auditory Blending Test; Yopp-Singer Test of Phoneme Segmentation; Test of Auditory Analysis Skills; informal phonological segmentation, matching and blending tasks; identifying rhymes in songs; using “Pig Latin.”

*Phonological awareness is considered a key predictor of difficulties with word level reading and spelling. It can be reliably tested in English with ELLs.

(From Geva, E., & Wiener, J., 2014)

### Word Reading Skills: sight vocabulary and decoding skills

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<tr>
<th>Typically Developing ELLs</th>
<th>Indicators of possible learning difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make steady progress</td>
<td>Word reading difficulties in both languages*</td>
</tr>
<tr>
<td>Word-level reading at par with monolingual peers (after a few years of schooling in English)</td>
<td>Difficulty remembering or naming letters, sounds, and sight words</td>
</tr>
<tr>
<td>Read words* with reasonable fluency even if other skills are not native-like (oral language, grammar, vocabulary)</td>
<td>Not progressing despite targeted instruction in word reading</td>
</tr>
</tbody>
</table>

*Can be assessed with Dolch word lists, CORE Phonics Survey, reading decodable words out of context with accuracy, sounding out unfamiliar words, or pseudowords.

(From Geva, E., & Wiener, J., 2014)

### Spelling: sound, pattern, and morpheme levels

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<th>Typically Developing ELLs</th>
<th>Indicators of possible learning difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make steady progress</td>
<td>Persistent spelling errors</td>
</tr>
<tr>
<td>Learn from instruction</td>
<td>Difficulty with phonological awareness</td>
</tr>
<tr>
<td>Apply rules and patterns to new words</td>
<td>Spelling errors which are not attributed to influence of the first language</td>
</tr>
<tr>
<td>Apply rules and patterns to new words</td>
<td>Difficulty remembering how common words are spelled</td>
</tr>
<tr>
<td>May have errors that originate from influence of first language</td>
<td></td>
</tr>
<tr>
<td>Spell as well as native speakers with sufficient classroom instruction</td>
<td></td>
</tr>
</tbody>
</table>

(Adapted from Adelson, Geva, Fraser, 2014)

### Fluency and English learners

- Fluency at the word level reflects decoding ability
- Fluency at the text level reflects both decoding ability and oral language proficiency (Crosson & Lesaux, 2009)
- ELLs in Grade 2 were able to read single words as fluently as their monolingual English speaking peers (EL1); however, EL1 peers had better text-reading fluency because of their more developed oral language proficiency and ability to access meaning more easily (Geva & Yaghoub-Zadeh, 2006)
- Fluency at the word level may be appropriate to distinguish those ELLs with word level difficulties and/or dyslexia
Assessment Issues

English learners are a diverse group. For those who speak English only, there are reliable screeners to predict young students who are at risk for dyslexia or in need of early reading intervention. Extending these findings to English learners is complicated due to the variability in prior language experience, the general lack of English proficiency, the degree of linguistic variability in the 400-plus native languages spoken by English learners (Zong and Batalova 2015), and the lack of normed measures and qualified practitioners. (California Dyslexia Guidelines, 2017)

Something to consider...

...possible to reliably measure underlying cognitive processing skills in the L2 or L1 and that individual differences in skills such as phonological awareness and RAN measured in the L1 or L2 can predict accurate word recognition and pseudoword decoding, cross linguistically. (Geva & Wiener, 2014)

Two important types of assessment to administer

1. Phonological/phonemic awareness (in L1 and/or L2)
2. Rapid Automatized Naming (RAN) (in L1 and/or L2)
   • letters and digits more closely related to reading than objects/colors

   Compare to typically developing L2 students!

But also...

• Home background (languages spoken); history of reading difficulties
• Developmental history (language milestones in L1 & L2)
• Educational history (prior schooling + literacy instruction history)
• English language proficiency (4 domains)

Support for ELs during Administration

• Explicitly teach predictable structure of assessment to establish routines
• Repeat, adjust speed and complexity of language in oral instructions and explanations.
• Provide extra time for ELs to process the English language and respond.

Additional Considerations (ideal situations)

• If no staff is available to assess in native language, a community member competent in student’s native language and trained should administer the assessment
• Assess in both English and native language
Conclusion

With appropriate instruction L2 learners who are exposed to the L2 in the primary grades can develop accurate word-level skills in the L2 and that accurate word-level reading skills are not heavily dependent on OLP.

Persistent difficulties in developing decoding skills of students who begin studying in their L2 in the primary grades cannot be attributed simply to poor OLP in the target language. Performance should be compared to that of children from similar backgrounds and should be used to identify and provide appropriate interventions to L2 learners, who experience persistent difficulties in acquiring word-level reading skills.

(Geva & Wiener, 2014)
Good phonics instruction is one part of a comprehensive reading program. Phonics instruction is only one part of a total reading program. According to the National Reading Panel (2000), “phonics should not become the dominant component in a reading program, neither in the amount of time devoted to it nor in the significance attached.” Reading instruction should include phonics, so that students can learn how to decode, but must also develop the other aspects of reading, such as vocabulary and comprehension.

### Explicit Phonics Lesson Sequence

<table>
<thead>
<tr>
<th>1. Develop Phonemic Awareness</th>
<th>A variety of phonemic awareness activities help students make sense of the alphabetic principle and develop their phonics skills. Letters are incorporated into this explicit instruction.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Introduce Sound/Spelling</td>
<td>Phonic elements are explicitly taught in isolation.</td>
</tr>
<tr>
<td>3. Blend Words</td>
<td>Blending includes explicit instruction and practice in sounding out and reading words. Routines include sound-by-sound, continuous, spelling-focused, and whole word blending.</td>
</tr>
<tr>
<td>4. Build Automatic Word Recognition</td>
<td>Activities to develop automaticity focus on the rapid and effortless decoding and reading of words in isolation.</td>
</tr>
<tr>
<td>5. Apply to Decodable Text</td>
<td>Opportunities to practice reading and rereading decodable texts also develop automaticity. Decodable texts contain a high proportion of the words that are made up of previously taught sound/spelling correspondences.</td>
</tr>
<tr>
<td>6. Word Work for Decoding and Encoding</td>
<td>A range of activities leads students to practice sound/spelling patterns by building, manipulating, and sorting words. Word-work activities include word sorting, Elkonin boxes with letters, word building, and dictation.</td>
</tr>
</tbody>
</table>