Dual-Language Learners: Lessons Learned for Tier 2 and 3 Interventions

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Objects

- What do we know about
  - DLLs’ language and literacy acquisition?
  - DLLs who are struggling?
- Our Tier 2 and 3 intervention
  - Rationale
  - Protocol
  - Results
- What lessons did we learn?
Linguistic Interaction: Predictions

1. Transfer: Strong language and literacy skills in L1 → L2
   - Cummins’ Linguistic Interdependence Hypothesis

2. Neural pathways for reading are language-specific
   - Script-Dependent Hypothesis
   - Occurrence of transfer would depend upon similarity between the language systems
Linguistic Interaction: Predictions

1. Spanish and English: Similar orthographies
   > Similarities in phoneme-grapheme correspondences

<table>
<thead>
<tr>
<th>Spanish</th>
<th>a b c d e f g h i j k l m n ñ o p q r s t u v w x y z</th>
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<tbody>
<tr>
<td>English</td>
<td>a b c d e f g h i j k l m n o p q r s t u v w x y z</td>
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- Alphabet knowledge in Spanish → English
- Learning to read: Difficulty in Spanish → English
Linguistic Interaction: Predictions

2. Chinese and English: Different systems

- Literacy difficulties may exist in one language but not the other
Building Blocks for Reading Acquisition in English

- Phonemic Awareness
- Vocabulary
- Phonics
- Fluency
- Reading Comprehension

Are these universal?
**Phonological Awareness**

- **Alphabetic languages:** Evidence indicates that PA is a critical skill for reading acquisition
  - Consistent sequence of development:
    - Syllable → onset-rime → phoneme
- **Specific tasks and stimuli may vary across languages**
- **Non-alphabetic languages:** Also some evidence for role of PA
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Struggling DLLs

- DLLs overall are under-represented in special education. Variation by:
  - Geographic area
    - Higher % in urban areas
    - Lower % in rural areas
  - Category
    - Higher % with speech-language impairment, mental disability, emotional disturbance
    - Lower % with reading disability (often diagnosed 2 years later than English peers)
Struggling DLLs

- Learning difficulties often attributed to
  - Limited English proficiency
  - Dual language learning and “confusion”

- Achievement gap not due to dual language learning, but to myriad factors
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Rationale for Areas Targeted

- **K-1st grade DLLs**
  - **Phonological processing** measures differentiate normal from at-risk readers (Chiappe & Siegel, 1999; Lesaux & Siegel, 2003; Lindsey, Manis, & Bailey, 2003)
    - Most consistent indicator of difficulty across grade levels and languages (Gorman, 2009)
    - More than language proficiency in either L1 or L2 (Limbos & Geva, 2001; Durgunoglu, Nagy, Hancin-Bhatt, 1993)
  - **Letter identification** may also predict difficulty (U.S. Department of Education, 2004)
Rationale for Areas Targeted

- K-1st grade DLLs
  - **Vocabulary** is a significant predictor of later reading comprehension
    - Vocabulary instruction can improve DLLs’ reading comprehension (e.g., Carlo, 2004)
    - Best strategy for preventing reading comprehension difficulties in DLLs (Calderón, 2007)
Converging evidence of successful interventions (NRP, 2000):

- Systematic, balanced approach
  - Combines both explicit teaching and contextualized practice
- Delivered in small groups or individually
- Intense
In preschool, tiered intervention targeting phonological awareness has been successful for DLLs (e.g., Koutsoftas, Harmon, & Gray, 2009).

By first grade, tiered intervention for DLLs has integrated phonemic awareness, phonics, word decoding, fluency, reading comprehension, and writing (Vaughn et al., 2006a, 2006b).
Questions

- **Skills**
  - Some preschoolers present both limited PA and vocabulary/language skills
  - How successful is an integrated approach to tiered intervention for DLLs?

- **Dual language needs**
  - L1 supports L2
  - How effective is a dual-language tiered intervention?
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Participants

- Spanish-English DLLs in dual-language Head Start preschool classrooms
- Enrolled in Year 2 of the Wisconsin Reading Acquisition Program (WRAP), Early Reading First, U.S. Dept. of Education, 2008-2011
Protocol: Identification

- **Tier 2:** ≤25%ile on the Phonological Awareness Literacy Screening (PALS) and ≤1SD on one language measure (DIAL-3 Spanish or ROWPVT-SBE)
  - Progress monitoring measures: in progress

- **Tier 3:** four consecutive sessions of minimal modifiability (0-3 rating scale)
Protocol

- Spanish-only intervention group
- Bilingual intervention group (alternating days, Spanish first)
- 30 minute sessions, 10 weeks
- Tier 2: 2-3 days per week, small groups (logistics)
- Tier 3: 3 days per week, individually
Intervention Plan

- **Tiered Toolkits**
  - Based on books from curriculum
  - One book every two weeks

- **Targets**
  - Phonological awareness *(names)*, alphabet knowledge, vocabulary/language

- **Issues:**
  - Direct vs. Naturalistic approach
  - Problem-solving vs. Standard-protocol
Protocol: Teaching Components

- Set/Hook
- Purpose
- Input
- Modeling
- Check for understanding
- Guided practice
- Closure

Koutsoftas, Harmon, & Gray, 2009
Vocabulary/Language

- Dialogic Reading
  - Supported by What Works Clearinghouse Modified
  - Lesson plans to facilitate incorporation of CROWD and CAR elements
    - Completion, Recall, Open-Ended, “Wh”, Distancing
    - Comment, Ask, Repeat/Recast*
    - Preselected Tier 2 vocabulary words (5)
      - Each modeled 3 times minimum
Vocabulary/Language

Day 1:
- Activate background knowledge by asking world knowledge questions about the book theme.
- Preview vocabulary words and definitions.
- Dialogic reading, emphasizing vocabulary
  - Word knowledge through WH Questions
    - What toppings did she put on the pizza?
Day 2:
- Present book and title (book knowledge, print awareness)
- Story recall: recasts
- Review targeted vocabulary words
- Dialogic reading, emphasizing vocabulary
  - Word production and meaning through contextualized Cloze Sentences.
    - She added tomato sauce, pepperoni, olives, cheese and lots of other.... toppings.
Vocabulary/Language

Day 3:
- Present book and title (book knowledge, print awareness)
- Story recall: recasts
- Review targeted vocabulary words
- Dialogic reading, emphasizing vocabulary
  - Word meaning through definitions (category/function + attribute) and extension.
    - What is a topping? What kind of toppings do you like on your ice cream?
Vocabulary/Language

Day 4:
- Narrative knowledge (details, sequencing, story grammar) incorporating targeted vocabulary (e.g., using book, sequence cards/felt board).
- Who, where, what
- First, then, next, finally
- Problem
- How, why
- Prediction, distancing
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Results: Data

- Phonological awareness
  1. Weekly probe-growth toward individualized goals
  2. Weekly IGDIs probes-lack of growth
  3. Pre-post PALS growth, but not for beginning sounds (similar to Tier 1 children)

- Alphabet knowledge
  1. Weekly probe-growth toward individualized goals
  2. Pre-post PALS uppercase letter-growth

- Vocabulary
  - Biweekly vocabulary probe-growth
  - Pre-post formal vocabulary tests-growth
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Lessons learned

- Spanish-only and Bilingual conditions produced similar results (also similar to non-DLLs)
- Potential of modifiability rating to support Tier 3
- Integrated approach possible
  - PA
    - Children responded to names as stimuli
    - Longer guided practice to increase PA gains
    - Need for Spanish progress monitoring probes
    - Enhanced Tier 1 instruction
  - Vocabulary
    - 5-6 hours of dialogic reading yielded significant gains (e.g., Lonigan, et al., 1999; Whitehurst et al., 1994)
Summary

- Continued investigation of best practices of Tiers 2 and 3 for DLLs
- Appropriate measures needed for accurate early identification
- DLLs’ performance should be compared to similar peers to the extent possible
- Imperative that early signs of reading disability are identified as early as possible.
Early Warning Signs Can Be Identified in Preschool DLLs

- History of speech/language delay or impairment in the native language
- Communication difficulties at home
- Significant family history of learning disability/reading disability
- Difficulty developing literacy skills in the native language despite instruction
- Limited progress compared with similar peers despite high-quality intervention
Helpful websites

- Multicultural tools and resources
  - [http://www.asha.org/practice/multicultural/](http://www.asha.org/practice/multicultural/)

- Assessment tools for CLD populations

- Phonemic inventories across languages
  - [http://www.asha.org/practice/multicultural/Phono.htm](http://www.asha.org/practice/multicultural/Phono.htm)
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