

Cross-linguistic Universals in Reading Development:

*Implications for
Assessment and Intervention
with English Language Learners*

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Defining English Language Learners

- A person who is in the process of acquiring English and has a first language other than English (The Education Alliance- Brown University)
- In this population, is reading difficulty due to:
 - Limited language proficiency?
 - True reading disability?

ELLs in U.S.

(National Clearinghouse for English Language Acquisition)

- 5,074,572 ELLs enrolled in grades pre-K through 12 (Based upon 2005-2006 data)
- Constitutes approximately 10.3% of total public school student enrollment
- Top five languages in U.S.:
 - Spanish (79%)
 - Vietnamese (1.95%)
 - Hmong (1.56%)
 - Cantonese (1.02%)
 - Korean (.97%)

ELLs in Wisconsin

(March 2005 Census)

- Over 39,000 students identified as ELLs in grades Pre-K through 12
- 85 home languages other than English represented
- Approximately 58% speak Spanish as L1
- Approximately 29% speak Hmong as L1

<http://dpi.wi.gov/ell/index.html>

Basic Reading Proficiency

- 4th graders:
 - 33% of all 4th graders in U.S. are below level
 - 70% of ELLs are below level in 4th grade
- 8th graders:
 - 26% of all 8th graders in U.S. are below level
 - 71% of ELLs are below level in 8th grade
- *Why? As SLPs, what can we do?*

National Center for Education Statistics, 2007

ELLs in Special Education

- Potential underrepresentation in Special Ed. Why?
 - 13% of all K-12 public school students
 - 9% ELLs
- However, representation varies:
 - Geographically:
 - Urban: Higher % of ELLs
 - Rural: Lower % of ELLs
 - Eligibility categories:
 - Overrepresentation in SPL, CD, EBD, but underrepresented in reading disability

5 Building Blocks for Reading Acquisition in English

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

Alphabetic vs. Non-alphabetic Languages

- Alphabetic: English
- Non-alphabetic: Chinese (logographic)
- How will this affect the building blocks for reading?

Critical for Reading in Any Language

- Vocabulary
- Fluency
- Reading Comprehension

But how will differing writing systems impact the importance of phonological awareness and phonics for each language?

Phonological Awareness

- Evidence indicates that it is a critical skill for reading acquisition *across alphabetic languages*
- Sequence of development is consistent:
 - Syllable → onset-rime → phoneme
- Specific tasks and stimuli may vary across languages

Phonological Awareness

- In non-alphabetic languages, additional factors may also play a role:
 - Visual processing (Huang & Hanley, 1995)
- In Chinese reading acquisition, phonological awareness seems to play a role particularly in later grades

Phonics

- Transparent orthographies (Spanish, Italian, Greek, Finnish)
 - *Consistent* letter-sound correspondences
 - Features of language promote sound-letter correspondence and decoding ability
- Opaque orthographies (English, French, Portuguese)
- Complex syllable structures (German, English)
 - mastery rates, word attack strategies

Identifying Reading Disability: Cross-Linguistic Differences

- English
 - Reading accuracy
- Spanish
 - Reading speed
 - Accuracy of nonword reading
- This difference may explain why ELLs with reading difficulties are often identified later than their English speaking peers

Predictions for Linguistic Interaction

- Transfer: Strong language and literacy skills in L1 → L2
(Cummins' Linguistic Interdependence Hypothesis)
- Neural pathways for reading are language-specific
(Script-Dependent Hypothesis)
 - Occurrence of transfer would depend upon similarity between languages
- Evidence for both hypotheses

Predictions for Linguistic Interaction

- Spanish and English:
 - Similar orthographies
 - Similarities in phoneme-grapheme correspondences
 - Alphabet knowledge in Spanish → English
 - Learning to read: Difficulty in Spanish → English
- Chinese and English:
 - Different systems
 - Difficulty may be present in one language but not the other

Assessment

- Challenges with discrepancy model
- Alternative methods include
 - Identifying impairment of **specific underlying processes**
 - Identifying **poor academic achievement**
 - Inadequate **response to intervention**

Impairment of Specific Underlying Processes

- Native English speakers:
 - Curriculum-based measures
 - Alphabet knowledge
 - Word reading
 - Spelling
 - Vocabulary
 - Syntactic awareness
 - Reading comprehension
 - Tasks
 - Phonological processing
 - Working memory
 - Rapid naming

Impairment of Specific Underlying Processes

- In native English speakers, **phonological processing deficits** appear to be the most robust diagnostic indicator across grade levels

Impairment of Specific Underlying Processes

- K-1st grade ELLs
 - Phonological processing measures differentiate normal from at-risk ELL readers (Chiappe & Siegel, 1999; Lesaux & Siegel, 2003; Lindsey, Manis, & Bailey, 2003)
 - Letter identification may also predict difficulty (U.S. Department of Education, 2004)

Impairment of Specific Underlying Processes

- **Indicators of reading disability in native English speakers are also effective for ELLs** (Siegel and colleagues)
- Deficits in **phonological processing** is the most consistent indicator across grade levels and languages:
 - Most measures predictive of word reading and reading comprehension in monolinguals were also predictive for ELLs (Lesaux, Rupp, & Siegel, 2007)
 - Poor readers had similar difficulties in both languages in 4th-6th grade Portuguese-English ELLs (Da Fontoura & Siegel, 1996)

Impairment of Specific Underlying Processes

- Overall, current research suggests that the following measures can be used to diagnose reading disability in both native English speakers and ELLs:
 - Phonological awareness
 - Working memory
 - Syntactic awareness
- Further investigation is still needed

Impairment of Specific Underlying Processes: Predicting Later Reading Achievement

- The single best predictor of ELLs' word reading and reading comprehension skills in 2nd grade was their **phonological processing skills as measured in kindergarten** (Lesaux & Siegel, 2003)
- Second most predictive measure was **letter identification**
- Kindergarten performance on the following measures best predicted word reading skills in 4th grade: (Lesaux, Rupp, & Siegel, 2007)
 - Letter identification
 - Rhyme detection
 - Phoneme deletion
 - Working memory

Poor Academic Achievement

- True learning disability?
- Limited English proficiency?
- Being compared to native English speakers?

Poor Academic Achievement

- With effective instruction, ELLs have been found to achieve similar or even higher performance than their monolingual peers on several tasks such as:
 - Phonological awareness
 - Word reading
 - Pseudoword reading
 - Rapid naming
 - Spelling
- Positive transfer of more transparent language to English
- Exposure to multiple phonological systems
- Enhanced metalinguistic skills

Poor Academic Achievement

- Mixed findings in reading comprehension in bilinguals:
 - Some studies indicate lower reading comprehension in ELLs than monolingual peers (Aarts & Verhoeven, 1999; Verhoeven, 2000)
 - Other studies show that high-quality balanced reading instruction allows ELLs to catch up to monolingual peers by 4th grade (Lesaux, Rupp, & Siegel, 2007)
- Consider differences in SES, quality of schools, quality of literacy instruction

Poor Academic Achievement

- Solid evidence that ELLs' reading achievement is not predetermined by level of English proficiency upon entering kindergarten
- Phonological processing in early elementary grades appears to be a better predictor of word reading than language proficiency in either L1 or L2 (Limbos & Geva, 2001; Durgunoglu, Nagy, & Hancin-Bhatt, 1993)
- Alternatives to wait-and-see approach

Poor Academic Achievement: Early Warning Signs

- Reading disability may be an impairment "waiting to happen" for many young children with speech and language deficits
- Increased risk for reading disability ≠ meeting particular school district's SPL criteria
- Wait for failure in order to intervene?

Poor Academic Achievement: Early Warning Signs

- SLPs may recommend and/or provide:
 - Non-special education school support
 - Connecting child with after-school support
 - Providing tiered intervention during literacy block
 - Pulling child into groups addressing phonological processing skills
 - Participating in grade-level planning sessions and staff meetings to educate staff and share ideas
 - Collaborate with teachers regarding how to support at-risk students

Poor Academic Achievement: Early Warning Signs

- SLPs may recommend and/or provide:
 - Non-special education home support
 - Utilize student pick-up and drop-off times for parent consult, training
 - Create phonological awareness practice books for students to utilize in the classroom and at home
 - Train older siblings, cousins on skills to assist child in the home
 - Utilize school's literacy night or conferences to coach parents on how to support student's skills

Poor Academic Achievement: General Assessment Recommendations

- **R.I.O.T.** team approach (Cheng):
 - 1) Collection and **review** of all relevant documents and student background information
 - 2) Conduct **interviews** with teachers, peers, and family members to determine how the child is functioning in school and home environments
 - 3) **Observe** student in multiple contexts using performance checklists, work samples, language samples, and criterion-referenced measures
 - 4) **Testing**: May include standardized tests
 - Consider reliability and validity
 - Modify as necessary

Poor Academic Achievement: General Assessment Recommendations

- Conduct assessment in native language and the language of instruction
- Several formal assessments of language and literacy are available in Spanish
- Given wide array of languages spoken by ELLs, formal tools may not be available
 - Use observation and alternative assessments
- **Using a variety of assessment measures rather than one single source will yield more accurate information**

Response to Intervention

- Benefits include:
 - Rules out poor instruction
 - Helps educators identify and support at-risk children before they fail
 - May provide a less culturally and linguistically biased means of identifying children in need
 - May expedite provision of intervention
 - Can be used to strategize effective instruction

Response to Intervention: Two versions of RTI

- “Problem-solving” approach
 - Steps:
 - Identify student’s problem and analyze it
 - Devise and implement intervention plan
 - Evaluate student response
 - Modify intervention as necessary
 - Advantage: Individualization
 - Disadvantages:
 - Potential subjectivity (over-reliance on English language proficiency)
 - Solutions often based on trial and error; Interventions may not be evidence-based

Response to Intervention: Two versions of RTI

- “Standard protocol” approach
 - Same evidence-based intervention to all children displaying similar struggles
 - Advantages:
 - Ease of training interventionists
 - Greater quality control of intervention
 - Greater evidence-base for approach’s effectiveness
 - Disadvantages:
 - Scant information available for evidence-based instruction past grade 3

Intervention

- Evidence-based guidelines for successful intervention:
 - Systematic, balanced approach
 - Combines both explicit teaching and contextualized practice
 - Intense interventions (e.g., 30 minutes or more per day)
 - Delivered individually or in small groups

Intervention

- By 1st grade, interventions should integrate:
 - Phonemic awareness
 - Phonics
 - Word decoding
 - Fluency
 - Reading comprehension
 - Writing

Intervention: Phonological Awareness

- Initiate during preschool years to prevent later reading difficulties
- May also be necessary component of remediation for older ELLs
- Target one or two phonological awareness skills instead of targeting more at a time
- Incorporate written letters
- Reinforce application to reading & writing

Intervention: Phonics

- Systematic and explicit instruction of letter-sound correspondence rules and patterns
- Target consonants, long & short vowels
- May include discrimination of phonemes that are not in student's repertoire
- Address how English letters can represent more than one sound; single letters vs. groups
 - Target patterns which are difficult for struggling readers:
 - Consonant digraphs (ch, sh, th, gh)
 - Vowel digraphs (ea, ei, oi, ou)
 - Common initial word blends (br, sm)
 - Stems (-ake, -ell, -ing)
- Adapt approach based on unique phonological & orthographic characteristics of languages (ie, syllabic nature of Spanish)

Intervention: Vocabulary

- ELLs may have additional challenges related to learning English vocabulary, making vocabulary instruction a high priority
- Useful strategies (August, Carlo, Dressler, & Snow, 2005):
 - Monitoring knowledge of Tier 1 words in English
 - Promoting cognate awareness
 - Reviewing & reinforcing new vocabulary
 - Expand breadth and depth of vocabulary knowledge

Vocabulary Intervention:

Monitor Knowledge of Tier 1 Words in English

- Tier 1 words = Simple, concrete vocabulary words
- Tier 2 words = High frequency words used by more mature language users
- Tier 3 words = Very specific, low frequency words
- Teaching of Tier 1 words to elementary children is usually not considered necessary, however, ELLs may require explicit instruction if they are not likely to learn them incidentally

Vocabulary Intervention:

Promote Cognate Awareness

- Supports ELLs' vocabulary and reading comprehension in English
- Searching for "Spanish-English cognates" will provide numerous sources
- Identify and teach phonologically transparent cognates initially (words that share similar sound and stress pattern)
- May teach cognates to younger students since reading is not a precursor of perceiving cognates
- Draws attention to phonological and semantic similarities between words in child's two languages

Vocabulary Intervention:

Promote Cognate Awareness: Spanish-English

- Tier 1 words may already be familiar to child and may be used to teach child to recognize cognates
 - Family – Familia
 - Animal – Animal
 - Dentist - Dentista
- Tier 2 words:
 - Famous – Famoso
 - Community – Comunidad
 - Democracy – Democracia
 - Director – Director
 - Many contain identical or similar derivational morphemes
pre/pre-, bi/bi-, ex/ex-, age/aje-, -ble/ble, -tion/ción, -cracy/cracia

Vocabulary Intervention:

Review and Reinforce

- Provide multiple opportunities for practice through read-alouds: (Appel & Vermeer, 1998; Calderon, August, Slavin, Duran, Madden, & Cheung, 2005)
 - Pre-teach Tier 2 words that are neither cognates nor easily demonstrated
 - During text discussion, use picture cues or simple demonstration to illustrate Tier 1 words
 - For more difficult words, provide definition in L1 if possible.
 - Following read-aloud, present various language activities (story retells, word books, story maps, dramatization)

Vocabulary Intervention:

Increase Depth as well as Breadth

- Extend word practice to meaningful contexts:
 - Create cohesive plan to promote elaboration on word meaning and usage during narrative tasks (Vaughn-Shavuo, 1990)
 - Promote active processing through analysis of word relationships (i.e., multiple meanings, compound words, synonyms, antonyms) in meaningful contexts (Perez, 1981)
 - Select vocabulary from short, interesting reading passages and teach students to use contextual cues and word analysis strategies to infer meaning (Carlo, August, & McLaughlin, 2004)

Intervention:

Fluency

- Guided oral reading procedures may include:
 - Repeated reading of connected text containing previously learned letter-sound combinations
 - Gradual increase in complexity
 - Reading in unison with adults, peers, tapes
 - Echo reading
 - Reading in imitation of clinician
 - Readers' theater (rehearse & recite scripts with peers)

Intervention:

Comprehension

- Affected by:
 - Oral language proficiency
 - Decoding
 - Vocabulary
 - Fluency
 - Limited working memory skills
- Support both literal and inferential comprehension

Intervention:

Comprehension

- Active prior knowledge by browsing text
- Predict what story may be about
- Preliminary discussion of topic
- Review of text structure
- Set a purpose for reading (seek answer to specific question; determine if predictions are correct)
- Identify cognates while reading

Intervention:

Comprehension

- Engage in comprehension monitoring
- Practice making inferences
- Following reading, retell narrative, paraphrase parts of text, or summarize
- Confirm or disconfirm predictions
- Present mnemonics, i.e. KWL:
 - What do I **KNOW**?
 - What do I **WANT** to know?
 - What did I **LEARN**?
- Discuss and write about main ideas
- Use content webs to summarize text verbally and in writing