It is well documented that pre-adolescent and adolescent English learners (ELs) are at-risk for reading difficulties.

Kohler and Lazarin (2007) stated, nationally only 29% of English Learners (EL) 8th grade students scored at or above the basic reading achievement levels. In comparison, nationally the non-EL 8th grade students scored at 75% at or above the basic reading achievement levels (46% difference).
• In addition, the achievement gap among English learning (EL) students has existed and continues to exist. Unfortunately, this gap widens each year (Alexander, Entwisle, & Olson, 2007).

• EL students are capable of closing the academic achievement gap during the school year with concerted school efforts (e.g., involving speech-language pathologists, ESOL/ESL teachers, special education teachers, and/or general education classroom teachers, and school principals), but ultimately regress and fall behind (Garcia & Ortiz, 2006).

• Assessment and intervention of reading and literacy for bilingual students is often a challenge for speech-language pathologists. This presentation will help clarify some of the ambiguities of assessment and intervention regarding bilingual literacy for pre-adolescent and adolescent students.

Presentation Objectives
• To identify typical and atypical language and learning characteristics of bilingual students
• To identify major components of reading and literacy
• To identify major English components of reading and literacy
• To identify major Spanish components of reading and literacy
• To identify evidence based strategies to promote speech, language, and literacy development with bilingual students
Five Components of Reading
(National Reading Panel Report, 1997)
Preview

• Phonological/phonemic awareness;
• Phonics;
• Vocabulary;
• Fluency;
• Comprehension

Typical and atypical language and learning characteristics of bilingual students
Spanish vs. English Phonetics

English vs. Spanish phoneme place and manner productions (English-in red, Spanish-in blue)
<table>
<thead>
<tr>
<th>Place</th>
<th>Bilabial</th>
<th>Labio-dental</th>
<th>Inter-dental</th>
<th>Alveolar</th>
<th>Alveo-palatal</th>
<th>Palatal</th>
<th>Velar</th>
</tr>
</thead>
</table>

**Manner**

**Nasal**

| m | man | n | nadar | ñ |

**TapTap**

| r | dog | sobeg |

**Affricate voiceless**

| ʧ | choke |

**Affricate voiced**

| ʤ | joke |
When are English speech sounds learned? (Sander, 1972)

- When are Spanish speech sounds learned?

<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Jimenez (1987) 90% accuracy</th>
<th>Acevedo (1989; 1993) 90% accuracy</th>
<th>Average (Jimenez &amp; Acevedo) (rounding up)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>3:3</td>
<td>3:0</td>
<td>3:2</td>
</tr>
<tr>
<td>/b/</td>
<td>3:3</td>
<td>3:0</td>
<td>3:2</td>
</tr>
<tr>
<td>/t/</td>
<td>3:3</td>
<td>3:0</td>
<td>3:2</td>
</tr>
<tr>
<td>/k/</td>
<td>3:7</td>
<td>3:0</td>
<td>3:4</td>
</tr>
<tr>
<td>/f/</td>
<td>3:3</td>
<td>3:0</td>
<td>3:2</td>
</tr>
<tr>
<td>/j/</td>
<td>4:3</td>
<td>3:0</td>
<td>3:7</td>
</tr>
<tr>
<td>/w/</td>
<td>3:7</td>
<td>3:0</td>
<td>3:7</td>
</tr>
<tr>
<td>/tʃ/</td>
<td>3:3</td>
<td>4:0</td>
<td>3:8</td>
</tr>
<tr>
<td>/m/</td>
<td>3:7</td>
<td>3:0</td>
<td>3:7</td>
</tr>
<tr>
<td>/n/</td>
<td>3:11</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>/d/</td>
<td>3:11</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>/g/</td>
<td>4:7</td>
<td>4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>/s/</td>
<td>4:11</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>/x/</td>
<td>4.7</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>/l/</td>
<td>4.7</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>/r/ (tap)</td>
<td>5:7</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>/ɾ/</td>
<td>3:11</td>
<td>5.0</td>
<td>4.6</td>
</tr>
<tr>
<td>/r/ (trill)</td>
<td>4.7</td>
<td>5.6</td>
<td>5.1</td>
</tr>
</tbody>
</table>
### English vs. Spanish Acquisition

<table>
<thead>
<tr>
<th>Phoneme (Eng. 'Spn')</th>
<th>English (Sanders, 1972)</th>
<th>Spanish (Acevedo, 1989; 1993 &amp; Jimenez, 1987 average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>3.0</td>
<td>3.7</td>
</tr>
<tr>
<td>/m/</td>
<td>3.0</td>
<td>3.7</td>
</tr>
<tr>
<td>/h/; /x/ *</td>
<td>3.0</td>
<td>3.9</td>
</tr>
<tr>
<td>/n/</td>
<td>3.0</td>
<td>3.7</td>
</tr>
<tr>
<td>/w/</td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td>/b/</td>
<td>4.0</td>
<td>3.4</td>
</tr>
<tr>
<td>/k/</td>
<td>4.0</td>
<td>3.4</td>
</tr>
<tr>
<td>/g/</td>
<td>4.0</td>
<td>4.7</td>
</tr>
</tbody>
</table>

### Phonetics Conclusions

- Spanish vs. English voicing, manner, and place differ and can affect productions in either language.
- Bilingual (Spanish-English speakers) display different types of articulation and phonological errors than do monolingual (Spanish only vs. English only speakers).
- Not all sounds transfer between languages, accuracy wise and at the same rate.
- The frequency of occurrence of a sound in a language can affect production for that language.
Bilingual Definitions

- **Transference**: language skills move from the first language (L1) to the second language (L2) and from L2 to L1.

- **Interference**: language skills that do not transfer and can cause a disturbance in learning.

So when you have issues of transference and interference… what can happen…

Developmental Errors vs. Interference Errors

(Dulay & Dulay, 1972)

Developmental error example- “She took her teeth off.” Irregular plural treated as regular form.

Interference error example- “Now she’s putting her clothes on.” Possessive pronoun + agreement not allowed in English, obligatory in Spanish.
Language Interference, aka Bad Translations

• A sign in a Budapest zoo, “Please do not feed the animals. If you have any suitable food, give it to the guard on duty”.

• A hotel sign in Hungary that had elevator problems, “The lift is being fixed for the next day. During that time we regret that you will be unbearable”.

• An airline pledge for a Copenhagen airline, to “take your bags and send them in all directions”.

Sign in Venice, Italy

A New Movie by Jorge Lucas
Language Interference with Ricky Ricardo and Lucy

Phonemic Awareness Exercise

- Pick a partner. You are going to use a sheet of paper numbered from 1-18.

- Listen to the words being said. The words may be in either English or Spanish.

- Please note the initial sound of each word (9 examples) and the final sound of each word (9 examples).

- Remember 9 words with initial sounds to be noted will be followed by 9 words with final sounds to be noted.
1. Initial Sound.

2. Initial Sound.

3. Initial Sound.
4. Initial Sound.

5. Initial Sound.

6. Initial Sound.
7. Initial Sound.

8. Initial Sound.

9. Initial Sound.
10. Final Sound.

11. Final Sound.

12. Final Sound.
Analogy Phonics: Teaching students words by analogy to known words (e.g., recognizing that the rime segment [consonants or syllable that follows the initial CC or CV of a word] of an unfamiliar word is identical to a known or familiar word. For example, recognizing in the word *brick* that the “ick” is the same as in the word *sick*.

Sounds to letters: Digraphs & Trigraphs in English and Spanish
- Beginning blends common to English and Spanish include: bl, cl, fl, gl, pl, br, cr, dr, fr, gr, pr, tr.
- Blends only in English: sc, sk, sm, sn, sp, st, sw.
- 3 letter blends (trigraphs) only in English: scr, spl, spr, squ, str.
Interference Errors with Analogy Phonics
(End blends only in English, none exist in Spanish)

<table>
<thead>
<tr>
<th>Blend</th>
<th>Blends</th>
<th>0 Blends</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>call</td>
<td>good</td>
<td>-ant</td>
<td>-emp</td>
</tr>
<tr>
<td>call</td>
<td>speak</td>
<td>-ing</td>
<td>-any</td>
</tr>
<tr>
<td>cold</td>
<td>sing</td>
<td>-all</td>
<td>-ness</td>
</tr>
<tr>
<td>call</td>
<td>sink</td>
<td>-all</td>
<td>-emp</td>
</tr>
<tr>
<td>cell</td>
<td>-int</td>
<td>-ant</td>
<td>-emp</td>
</tr>
<tr>
<td>ship</td>
<td>small</td>
<td>-ant</td>
<td>-emp</td>
</tr>
<tr>
<td>call</td>
<td>- sing</td>
<td>-out</td>
<td></td>
</tr>
<tr>
<td>goal</td>
<td>-ing</td>
<td>-out</td>
<td></td>
</tr>
<tr>
<td>sunk</td>
<td>-all</td>
<td>-emp</td>
<td></td>
</tr>
</tbody>
</table>

Probable language interference errors for Spanish speakers from the Primary Spelling Inventory

- Sled
- Stick
- Ship
- Clapping
- Shine
- Crawl

Probable language interference errors for Spanish speakers from the Elementary Spelling Inventory

- Ship
- Long
- Shopping
- Spoil

- Shower
- Bottle
- Pleasure
- Opposition
- Serving
Probable language interference errors for Spanish speakers from the Harris Word List

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Help</td>
<td>Feather</td>
<td>Gulf</td>
</tr>
<tr>
<td>Jump</td>
<td>Wind</td>
<td>Coward</td>
</tr>
<tr>
<td>Box</td>
<td>Speak</td>
<td>Snare</td>
</tr>
<tr>
<td>Another</td>
<td>Trunk</td>
<td>Launch</td>
</tr>
<tr>
<td>Should</td>
<td>Trug</td>
<td>Whirlwind</td>
</tr>
<tr>
<td>Zoom</td>
<td>Split</td>
<td>Admirer</td>
</tr>
</tbody>
</table>

Phonics Conclusions

- Phonics interference can occur because of sound differences between Spanish and English, particularly with consonant blends/sequences and final sounds in words.
- Differences in sounds between languages can also cause difficulties with spelling.

Definitions

Bilingualism is defined here as the ability to speak, read, write in two languages with varying degrees of proficiency.

Balanced bilingual- the person shows equal proficiency in both languages. A balanced bilingual usually refers to a person with high proficiency in both languages.
Non-balanced bilinguals may consist of the following:
• High or moderate proficiency in the base language or low proficiency in both languages.
• Low proficiency in both languages may appear to be a language disorder to the SLP.

Second language acquisition may occur in two fashions (Simultaneous vs. Sequential Acquisition). The key to development, regardless of which theory is thought to be true, is the consistent use of the two languages within their primary use environments.
• Simultaneous acquisition: First language- home language (L1) is acquired about the same time as L2, both prior to age 3.
• Successive language acquisition: L1 then L2 is acquired.
Common to both approaches

- One language becomes dominant especially when one is favored outside the home. The child/adult avoids difficult words and constructions in the weaker language.
- Dominance may shift with changes to the environment, e.g., moving back to the L1 country.
- Dominance does not necessarily equate with proficiency or fluency.

Levels of Language Proficiency

International Language Roundtable scale (U.S. Foreign Service Institute)

ILR Level 1. Elementary Proficiency
- Can fulfill travelling needs and conduct themselves in a polite manner
- Able to use questions and answers for simple topics within a limited level of experience
- Able to understand basic questions and speech, which allows for guides, such as slower speech or repetition, to aid understanding
- Has only a vocabulary large enough to communicate the most basic of needs; also makes frequent punctuation and grammatical mistakes in writing of the language
- The majority of individuals are able to perform most basic functions using the language. This includes buying goods, reading the time, ordering simple meals and asking for minimal directions.
ILR Level 2. Limited Proficiency

• Able to satisfy routine social demands and limited work requirements
• Can handle with confidence most basic social situations including Introductions and casual conversations about current events, work, family, and autobiographical information

ILR Level 3. Professional Working Proficiency

• Can handle limited work requirements, needing help in handling any complications or difficulties; can get the gist of most conversations on non-technical subjects (i.e. topics which require no specialized knowledge), and has a speaking vocabulary sufficient to respond simply with some circumlocutions
• Has an accent which, though often quite faulty, is intelligible
• Can usually handle elementary constructions quite accurately but does not have thorough or confident control of the grammar.

ILR Level 2. Limited Proficiency

• Able to satisfy routine social demands and limited work requirements
• Can handle with confidence most basic social situations including Introductions and casual conversations about current events, work, family, and autobiographical information

ILR Level 3. Professional Working Proficiency

• Able to speak the language with sufficient structural accuracy and vocabulary to participate effectively in most conversations on practical, social, and professional topics
• Can discuss particular interests and special fields of competence with reasonable ease
• Has comprehension which is quite complete for a normal rate of speech
• Has a general vocabulary which is broad enough that he or she rarely has to grope for a word
• Has an accent which may be obviously foreign; has a good control of grammar; and whose errors virtually never interfere with understanding and rarely disturb the native speaker.

ILR Level 4. Full Working Proficiency
• Able to use the language fluently and accurately on all levels and as normally pertinent to professional needs.
• Can understand and participate in any conversations within the range of own personal and professional experience with a high degree of fluency and precision of vocabulary

• Would rarely be taken for a native speaker, but can respond appropriately even in unfamiliar grounds or situations
• Makes only quite rare and minute errors of pronunciation and grammar
• Can handle informal interpreting of the language.
**ILR Level 5, Native or Bilingual Proficiency**

- Has a speaking proficiency equivalent to that of an educated native speaker
- Has complete fluency in the language, such that speech on all levels is fully accepted by educated native speakers in all of its features, including breadth of vocabulary and idiom, colloquialisms, and pertinent cultural references.

**How Long Does it Take? (Krashen & Terrell, 1983)**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Duration</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pre-Production</td>
<td>(0-6 months English instruction)</td>
<td>Has minimal receptive vocabulary. Comprehends key words only. Produces words in isolation. Verbalizes key words. Responds with one/two words answer or short phrases. Points, draws, or gesture responses.</td>
</tr>
</tbody>
</table>
Bilingualism Conclusions

• Bilinguals can vary in degrees of dominance, proficiency across languages.
• Dominance does not equate with proficiency.
• Language proficiency takes many years to acquire native live abilities.
• Research states that to acquire academic skills it may take approximately 5-7 years (if the student has a good base in L1). More on this later as it may take longer.

Code Switching and Code Mixing

• Intersentential code switching occurs when the alternation occurs across sentence boundaries.
• “Ya, se acabó. Siéntate. The time is up.” ("It’s finished. Sit down. The time is up").

Code-switching, code-mixing and borrowing are all aspects of bilingualism (Kamwangmalu, 1992). Continuum of Code Switching and Code Mixing

<table>
<thead>
<tr>
<th>Low CS/CM Abilities</th>
<th>High CS/CM Abilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixes because of lack of vocabulary in L1 and L2</td>
<td>Is able to switch and mix with ease between L1 and L2</td>
</tr>
<tr>
<td>Difficulty switching between L1 and L2</td>
<td>Uses L1 and L2 as an unique 3rd language form (L3)</td>
</tr>
</tbody>
</table>
Language alternation that occurs within a sentence (intrasentential alternation) is often referred to as code mixing (Grosjean, 1982; Torres, 1989). “Sabes qué quieres hacer este weekend?” (Do you know what you want to do this weekend).

A Very Spanglish Christmas
‘Twas the night before Christmas and all por la casa
Not a creature was stirring, Mira pa'ya! Que pasa?
Los niños were tucked away in their camas,
Some in long underwear, some in pijamas,
While hanging the stockings with mucho cuidado,
In hopes that old Santa would feel obligado,
To bring all the children , los buenos y malos,
A nice batch of dulces y otros regalos,

Outside in the yard there was un gran grito,
That I jumped to my bed like a frightened cabrito,
I ran to the window and looked pa' fuera,
And who in the world would you think quién era?
Saint Nick in a sleigh and a big red sombrero,
Came dashing along como un loco bombero,
And pulling his sleigh instead of venados,
Were eight little burros approaching volados,
**A Very Spanglish Christmas**

I watched as they came and this quaint little hombre,
Was shouting and whistling by nombre:
“`Ay Pancha, ay Pepe, ay Cuca, ay Beto,
ay Chata, ay Chopo, Maruca, y Nieto!’”

Then standing erect with his hands to his pecho,
He flew to the top of our very own techo,
With his round little belly like a bowl of jalea,
He struggled to squeeze down our old chiminea.

Then huffing and puffing at last in our sala,
With soot smeared all over his red suit de gala,
He filled all the stockings with lively regalos,
Less for the niños que habian sido muy malos,
Then chuckling aloud, seeming muy contento,
He turned like a flash and was gone como el viento,
And I heard him exclaim, y esto es verdad!
Merry Christmas y Feliz Navidad a todos!

---

**Indicators of possible deficiencies in code-switching/mixing** (adapted from Poplack, 1980):

1. Long pauses indicating word searching and retrieval difficulties, false starts.
2. Inability to switch and mix between the two languages with ease,
3. An over preponderance to use one language, difficulty switching between the two languages.
4. Conscious awareness of which language is being spoken.
Code Switching & Code Mixing is Typical Behavior

Conclusions from a study by Brice (2000)
CS and CM occurs with high frequency even in environments where English is preferred. Thus, CS and CM appear to be normal and expected behaviors as seen in ESL/ESOL classrooms.
CS is more evident than CM. Most likely due to the fact that switching languages is linguistically simpler than embedding aspects of two languages.
CM to English is most likely to occur as the students are Spanish proficient and embedding English word elements into their Spanish is one stage in English acquisition.
Code switching and code mixing are normal occurrences as exhibited by the teacher, teacher aide and students.

Definitions Continued
- **Language Deceleration**- deceleration or lag in language growth (Fabiano-Smith & Barlow, 2009; Paradis & Genessee, 1996) as a result of limitation on cognitive resources or an extra demand placed upon a child’s learning.
- **Language Fossilization**- stopping language growth, e.g., foreign accents in English.
- **Language loss or attrition**- L1 or L2 can diminish or be lost over time.
Major components of reading and literacy

The National Reading Panel Report (1997)
• The National Institute of Child Health and Human Development (NICHD) as part of the National Institute of Health (NIH) in consultation and collaboration with the U.S. Secretary of Education convened a panel to determine effectiveness of different reading programs, i.e., how to teach children to read.
• The NRP reviewed studies (meta-analysis) for a period of two years. The NRP Report was published in 2000.

Findings from the National Literacy Panel on Language Minority Children and Implications for Classroom Practice (August, 2006)
• Relationship between L1 literacy and L2 literacy;
• Word literacy skills of minority children likely to be equal to monolingual English speakers;
• Text level skills (reading comprehension, writing) do not reach monolingual English speaker levels;
• Phonological awareness skills more robust predictors of word reading skills;
• L1 word reading skills, vocabulary, reading comprehension skills are related to L2 skills.

• Unknown phonemes & graphemes make reading and spelling difficult;
• English graphemes (letters) have different sounds in the student’s L1;
• English phonemic awareness and phonics instruction does not have to wait until students reach an English proficiency threshold/ Children who have phonological/phonemic awareness in Spanish do not need PA training in English.
• Major Spanish Components of Reading and Literacy
  (Phonological Skills; Speech Perception Skills; Phonemic Awareness Skills; Phonics; Vocabulary Skills)

• Since, implementation of “No Child Left Behind” (2002) the identification of children in need of reading remediation has significantly increased.

• Many students in schools come from diverse backgrounds, particularly Spanish-speaking homes.

• 38% of all 4th graders performed below the expected grade level according to the U.S. Department of Education (2003).

• Only 13% of Hispanic students performed at the Expected 4th grade level.

• These results indicate that Hispanic students are at-risk for reading failure and as a group they will need to close the gap with the other students.

• This places Hispanic students at-risk for over-identification to special education programs and possible school drop-out as strong reading skills are a pre-requisite for school success (Simmons, 1999).

### Spanish Phonology

<table>
<thead>
<tr>
<th>Phonological Process</th>
<th>Studies</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sound</th>
<th>Spanish Accuracy</th>
<th>English Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>/b/</td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>/k/</td>
<td>88%</td>
<td>94%</td>
</tr>
<tr>
<td>/l/</td>
<td>94%</td>
<td>63%</td>
</tr>
<tr>
<td>/w/</td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>/d/</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>/d/</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>/θ/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ð/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/v/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ʃ/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please note that /θ, ð, v, ʃ/ do not occur in Spanish.


<table>
<thead>
<tr>
<th>Sound</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>/b, k/</td>
<td>&gt; 75%</td>
</tr>
<tr>
<td>/h, v, j/</td>
<td>&lt; 75%</td>
</tr>
</tbody>
</table>

Phonology Conclusions

- Bilingual (Spanish-English speakers) display different types of articulation and phonological errors than do monolingual (Spanish only vs. English only speakers).
- Not all sounds transfer between languages, accuracy wise and at the same rate.
  - The frequency of occurrence of a sound in a language can affect production for that language.
  - The developmental age at which English is acquired can affect English productions (as compared to Spanish productions).
  - Spanish vs. English voicing, manner, and place differ and can affect productions in either language.
  - Dialectal variations of Spanish can affect productions in Spanish and English.
• Brice and Brice (2008) found significant differences according to different Phonotactic constructions (CC+ voicing, CC-voicing, CV tense, CV lax). The Spanish-English bilingual listeners were able to differentiate words when the initial consonant cluster was voiced.

• It appeared that the participants were better able to distinguish strong contrasts with regards to voice onset time (VOT) (i.e., prevoicing vs. short lags or across the plosive release time boundary- 1. vs. 2.) versus weaker VOT contrasts (i.e., short vs. long lags or within the release time boundary- 2. vs. 3).

• Voiced consonants are produced with prevoicing in Spanish and a short lag in English, whereas, voiceless consonants are produced with a short lag in Spanish and a longer lag in English (Brice, Castellon-Perez, & Ryalls, 2004; Flege & Efting, 1987; Lisker & Abramson, 1964; Zampini, 1998).
• CV-tense words were identified quicker in Spanish than in English. Spanish vowels are more distinct than English due to a more restricted set of vowels than English (Brice, Goldstein, Anderson, & So, 1996; Goldstein, 2001).
• Spanish vowels are more consistent in length and are typically shorter in duration.
• In addition, Spanish vowels are always tense. Therefore, these contrasts between Spanish and English vowels may have aided quicker identification in Spanish.

• Certain Phonotactic features are independent to perception in each language. Other features may be interdependent. Balanced bilinguals in this study did not appear to have difficulty in identifying words in each language when simultaneously exposed to both languages.

Speech Perception Conclusions
• Voiced consonants and tense vowels are easier to identify.
• Prevoiced vs short lag VOTs are easier to identify than short lags vs. long lags.
• Balanced bilinguals had no difficulty in identifying all words. Bilingualism is not a disadvantage.
Rhyming among Spanish speakers seems to develop prior to literacy acquisition (Adrian, Alegria & Morais, 1995). However, conscious manipulation of syllables appears to be difficult for non-readers.

Spanish speaking students develop sensitivity to (a) syllables, (b) then onset, (c) rimes, and (d) finally to individual phonemes (Denton, Hashbrouck, Weaver, & Riccio, 2000).

Spanish speaking children from Argentina who were either pre-readers or beginning readers could identify the number of syllables in words about 50% of the time, but could only identify sounds (phonemes) from 5% (preschoolers) to 35% (1st graders) (Manrique & Gramigna, 1984).

Spanish speaking pre-readers show sensitivity to rhyme (words ending the same way) and alliteration (words beginning the same way) (Carillo, 1994).

Hence, syllable identification is easier for some Spanish speaking children.
• A student’s ability to segment Spanish words into syllables may be more important than his/her ability to segment words into phonemes.

• In Spanish there is a continued emphasis on the syllable and letter-sound correspondence, up to 3rd grade, more so than in English (Signorini, 1997).

• Spanish is more phonetically based than English, thus, the letter-sound correspondence plays a significant role in decoding words.

• Children who receive instruction in Spanish letter-sound correspondence were able to isolate onset from rime in simple words (Carillo, 1994).

• Tasks that separated pre-readers from early readers included:
  • Phoneme segmentation (pronouncing separate sounds in words)

• Segmenting tasks also separated average from poor 1st grade readers.

• Rhyme detection is no longer a skill that needs instruction by 1st grade.

• Some of the more difficult phonemic awareness tasks include phoneme deletion (repeating the word without a sound), syllable deletion (repeating the word without a syllable), word reversal, and phoneme reversal (Adrian, Alegria, & Morais, 1995).
• For Spanish-speaking children on phoneme isolation tasks, continuants (e.g., /m/ or /s/) were easier to identify than stops (e.g., /p/ or /t/). Initial consonants in a blend (CC) were more difficult to identify than initial single consonants (CV) (González & Garcia, 1995).

• English/Spanish speaking students who were able to isolate initial sounds in words in Spanish (tested in December) were able to do well on a similar task in English (in May) even though they had little familiarity with English at the time (Cisero & Royer, 1995). Evidence of phonemic awareness transfer to English.

• Spanish speaking students who performed well on Spanish phonological awareness tasks were more successful in learning to read English words and English-like words (Durgunoglu, Nagy, & Hancin-Bhatt, 1993).

• Identifying initial sounds, final sounds and rime seem to relate to reading fluency in Spanish and transfer to reading fluency in English (Riccio, Amado, Jiménez, Hasbrouck, Imhoff, & Denton, 2001).
• Brice and Brice (2009) investigated English phonemic awareness and phonic skills in four groups of students with and without disabilities.

• The groups consisted of 20 high reading English monolinguals, 20 low reading English monolinguals, 20 high reading level English-Spanish speaking bilinguals, and 20 low reading level English-Spanish speaking bilinguals.

• Brice and Brice (2009) found an existing achievement gap between monolingual and bilingual students with and without disabilities even on a phoneme and letter identification task.

• All students (high monolingual readers, high bilingual readers, low monolingual readers, and low bilingual readers) in this study consistently identified words with voiced phonemes more often than in words with voiceless phonemes.

• Therefore, the issue of voicing seems to have an important role in helping young emerging readers differentiate among the different phonemes.
Phonemic Awareness Conclusions
These results support the earlier findings Ricio, Amado, Jiménez, Hashbrouck, Imhoff & Denton (2001) where they found that identifying initial sounds, final sounds and rime seem to relate to reading fluency in Spanish and transfer to reading fluency in English.

- Hence, some phonemic awareness tasks can transfer between Spanish and English. This indicates that use of Spanish is useful in acquiring English reading skills.

Speaking, Listening, Reading, Writing Among 6th, 7th, and 8th Grade Latino Students (Brice & Rivero, 1996)
- This study was conducted in three middle schools located at a large urban school district in southeast Florida of the United States. The schools selected have programs which are designed to draw students from the surrounding area which require special instruction in English as a second language (ESL).
• A total of 89 ESL students in middle grades 6, 7, and 8 were tested with the Spanish and English versions of the Language Assessment Battery (LAB) test, Level III (6-8).

• Thirty-three students had been receiving ESL instruction for one year, 25 students had been in the program for two years, and the remaining 31 students had been ESL students for three or more years.

• Both English and Spanish versions of the Language Assessment Battery (LAB) Level III 6-8 were administered to measure differences in the level of first and second language achievement of the sample population.
  • The subtests of Listening, Reading, Writing were administered.
  • Time of test administration between the Spanish and English versions ranged from one to two weeks.

• Results indicated only a slight increase toward English proficiency observed for all three groups (years in ESOL 1, 2, 3+).
  • Spanish language maintenance.
  • 8th graders performed better in Spanish than 6th graders (maturation effect)
  • Different achievement levels in English were noted for 6th, 7th, 8th graders. 8th graders appeared more stable in English performance (maturation effect).
Spanish
Dominant (LAB Score of 40% or greater)

Ready to Exit
(English LAB Score of 40% or greater)

At Risk for Failure
(English LAB Score less than 40%)

Year One 48% 27% 21%
Year Two 56% 32% 8%
Year Three Plus 42% 3% 42%
Listening, Reading, Writing Conclusions

• Year 1, 2, and 3 students were Spanish dominant.
• Three years in the ESOL program did not significantly improve English abilities.
• Some year three students were at-risk for school and academic failure due to low LAB scores on Listening, Reading, and Writing. Hence, three years of ESOL instruction may not have been sufficient for some students.

Spanish-English Vocabulary Acquisition with Pre-adolescent students (3rd, 4th, 5th graders)

• Dixon (2011) stated that, "Research in monolingual populations indicate that vocabulary knowledge is essential to reading achievement, but how vocabulary develops in bilingual children has been understudied [emphasis added]" (p. 141).

August (2006) stated that:

– Language-minority students arrive at school with a much more limited English vocabulary than English-speaking students.
– A total of about 5,000-7,000 words that monolinguals know when they arrive in school and an intuitive sense of the grammar
– Words that English-speaking students know that language-minority students do not (adjectives such as hardly, several; adverbs such as nearly, sometimes, often, always; cohesion markers such as but, thus, however; idioms such as near and far, just the one)
– Words with multiple meanings can be a source of confusion. These tend to be high frequency words in English (e.g., bug).
Vocabulary Transference/Interference
• 17 years later from previous study
• Brice, Gorman, and Leung (in preparation) investigated the vocabulary skills of bilingual, Spanish-English speaking students enrolled in 3rd, 4th, and 5th grades. The students were administered English and Spanish receptive vocabulary measures and English and Spanish expressive vocabulary measures.

Tests and Assessments Administered
• Peabody Picture Vocabulary Test-4 (PPVT-4) (Dunn & Dunn, 2007)
• Test de Vocabulario en Imagenes Peabody (TVIP) (Dunn, Padilla, Lugo, & Dunn, 1986)
• Peabody Total Conceptual Vocabulary (PTCV)
• Expressive Vocabulary Test (EVT) (Williams, 1997)
• Expressive Vocabulary Test (Spanish adaptation) (EVT S)
• Expressive Vocabulary Test Total Conceptual Vocabulary (EVTTCV)

• It was found that the between group differences occurred with the Spanish Expressive Vocabulary Test (EVT) and the EVT Total Conceptual Vocabulary measures.
• The results indicated that the 3rd and 5th grade groups differed with the 3rd grade group scoring higher on both of these measures.
• Hence, language loss appears to be occurring in Spanish.
These results did not appear to be outlier data as the 4th grade group scored lower than the 5th grade group. It appears that chronological age and developmental growth did not improve Spanish vocabulary skills for the 5th graders. It is possible that the complexity of school vocabulary, lack of ultimate vocabulary attainment, and/or possible vocabulary deceleration may have contributed to the decreased Spanish vocabulary skills of the 5th graders.

The bilingual students, although the majority had been mainstreamed and exited from ESOL classes and services, appeared to be still acquiring English vocabulary skills and may have not attained complete English cognitive academic language proficiencies (CALP; Cummins, 1984) while losing their Spanish skills.

Proctor, August, Carlo, and Snow (2006) found that Spanish vocabulary knowledge and reading fluency were significantly related to Spanish reading comprehension. Vocabulary was found to be a stronger predictor of reading comprehension among L2 learners than for L1 learners (Lervag & Aukrust, 2010).

Consequently, these students may be at-risk for reading and academic difficulties in upper elementary and middle school grades.

Teaching and maintenance of Spanish vocabulary is suggested as a means of facilitating reading comprehension.
Vocabulary Conclusions

• The 3rd grade group scored higher on both expressive measures than 4th and 5th graders.
• Hence, language loss appears to be occurring in Spanish.
• Some students appear to be still acquiring English vocabulary skills.
• Chronological age and developmental growth did not improve Spanish vocabulary skills for the 5th graders.

Differences vs. Disabilities

• Differences which are typically quasi-temporary indicate a language lag; disabilities indicate chronic, entrenched difficulties in learning that may affect attention, memory, processing, comprehension, expressive language, and other aspects.

Learning Problems of ELLs that Resemble Language Learning Disabilities

• Verbal and nonverbal learning discrepancies--cultural differences
• Perceptual disorders--non-alphabetic languages
• Language disorders--understanding complex language
• Metacognitive deficits--ELLs without CALP process more slowly
• Memory difficulties--lack of transfer between L1 & L2
• Motor disorders--lack of previous education
• Social-emotional functioning--low self esteem from lack of understanding English
• Difficulty focusing--cognitive overload from immersion
• Culture/language shock--lack of motivation, hostility
ELL Reading Difficulties that Resemble Language Learning Disabilities

- Slow rate
- Short perceptual span (reading word by word)
- Reading without expression & intonation
- Mispronunciation of words
- Lack of comprehension
- Inability to state the main idea

ELL Writing Difficulties that Resemble Language Learning Disabilities

- Lack of variety in sentence patterns and vocabulary
- Lack of coherent structure
- Lack of ability to detect and correct own errors

Language Patterns in ELLs and Students with Language Learning Disabilities (LLD)

- Prosody--L1 influences intonation in ELLs & students w/LLD can have ambiguous intonation
- Phonology--ELLs have difficulty with phonemes not in L1 & students w/LLD have trouble with some sounds
- Semantics--ELLs have trouble with connotation and denotation of words & students w/LLD misunderstand figurative language
- Syntax--ELLs have trouble with articles, word order, noun-verb agreement, negation, and verb tenses & students w/LLD have trouble with sentence level comprehension
- Pragmatics--ELLs use L1 nonverbal language & students w/LLD have difficulties with social rules.
Evidence Based Strategies to Promote Speech, Language, and Literacy Development with Bilingual Students

- Provide therapy in both languages. At minimum, support the native language in the home.
- Help students hear, say, and see sounds not salient in their L1.
- Practice minimal pair contrasts (August, 2006).

Practice phonemic awareness in both languages.
Use the curriculum to emphasize non-existent L1 sounds.

References Available in Handout