

# Building Biliteracy

Implications and Applications of the Science  
of Reading for Biliteracy Instruction

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**T**ransfer is important in all learning, but it is especially important in language learning contexts. When learning a new language, cross-linguistic transfer is most evident and critical, as those seeking to learn a new language apply what they already know in their first language to support their pursuit of developing high levels of oral language and literacy in the new language.

The purpose of this paper is to present practical research-based strategies that address universal literacy skills common to both the English and Spanish languages as well as language-specific skills unique to each language. Contrastive analysis of skills will also be addressed and include caveats for less effective practices.

### Background

The National Literacy Panel Report (2000) provided literacy educators and researchers a synthesis of research studies to guide educational practice and inform educational policy. The panel, sponsored by the National Institute of Health and Human Development, identified five research-based elements necessary for providing successful literacy instruction: phonics, phonemic awareness, reading fluency, vocabulary, and reading comprehension. Then the National Literacy Panel on Language-Minority Children and Youth report (August & Shanahan, 2006) compiled the research on the differences and similarities between language-minority and native speakers in the development of various literacy skills in societal languages in addition to English. A major conclusion of the panel's meta-analysis of a database of 293 studies revealed that although the process of learning to read and write is essentially the same in alphabetic languages such as English and Spanish, effective instruction for multilingual learners must address the specific linguistic characteristics of the languages. This research points to the cross-linguistic pathways for developing biliteracy in English and Spanish. When learning a new language, cross-linguistic transfer is most evident and critical, as those seeking to learn a new language apply what they already know in their first language to support their pursuit of developing high levels of oral language and literacy in the new language.

## Reading Comprehension

Providing a solid foundation for literacy is critical for students who are already bilingual or are learning a second language. Strong oral language skills support early literacy development in both a child's native language and in a new language (Fillmore, 2002). Learning to read and write in a language that is not fully understood represents a double challenge for multilingual learners. Research speaks directly to the need for a better understanding of the skills that influence second language reading comprehension in Spanish/English bilinguals. However, there is a unique contribution to reading comprehension from metacognitive skills such as making inferences and comprehension monitoring. Comprehension monitoring is the reader's mental act of knowing when they are or are not comprehending the meaning of a text (Moats, 2001).

The ability to engage in comprehension monitoring does not differ by language, but it depends on language competence. Metacognitive skills, or "thinking about thinking," are transferable because multilingual learners avail themselves of thinking skills and processes that they acquire in their first language and apply them to reading comprehension in their new language. Therefore, biliteracy instruction builds on concepts learned across languages and promotes metalinguistic awareness and metacognitive skills.

Foundational literacy is part of language development for multilingual students, particularly in the early grades, and cannot be taught in isolation; meaning-making must be an integral element of literacy instruction (Language and Reading Research Consortium, 2021).

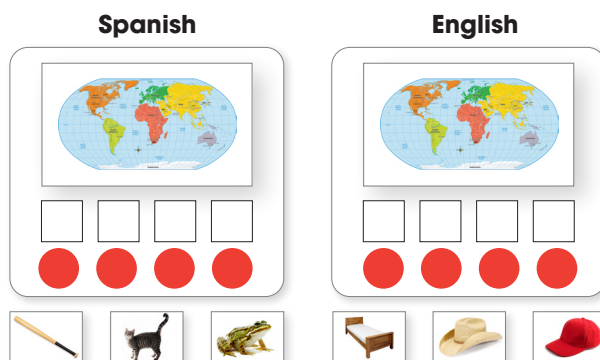
## Word Recognition

### Phonological and Phonemic Awareness

In both the English and the Spanish languages, phonemic awareness is taught directly, explicitly, systematically, and prior to sound-spelling correlations. Instruction includes larger units of phonological awareness at word, syllable, and phoneme levels. Phonological awareness tasks include isolation, segmentation, blending, deletion, substitution, and reversal.

In fact, research has demonstrated that the ability to blend and segment individual phonemes is a strong predictor of overall reading achievement in English and Spanish, and for Spanish/English bilingual children. Pollard-Durodola and Simmons (2009:147) state, "If phoneme blending and segmentation have been taught and mastered in Spanish, then it is conceivable that the linguistic readiness primed by instruction and practice in Spanish will facilitate transfer to English, therefore allowing English phonemic awareness instruction on high-priority skills to be abbreviated."

The use of Elkonin Boxes is a fun and engaging way to build phonological awareness in English and Spanish. Teachers pronounce a word slowly, stretching it out by sounds. Students repeat and pronounce the word while moving a token into a box to represent the sound. This encourages students to listen for each individual sound in a word.



“Comprehension monitoring is the reader's mental act of knowing when they are or are not comprehending the meaning of a text.”

—Moats 2001

## Spanish Specific Instruction

In Spanish, phonological awareness extends to accentuation where phonological awareness includes awareness of the stressed syllable in a word.

Instruction related to accentuation is presented beginning with syllabication and the identification of syllabic stress in Kindergarten. Concepts continue building systematically and sequentially as the language conventions that govern accentuation in Spanish are taught at each subsequent grade level.

The written Spanish accent mark (tilde) indicates the pronunciation of words in decoding and frequently distinguishes the meaning of the word.

### Reglas para la acentuación

antepenúltima   penúltima   última   llana

termina con **n o s**   termina con vocal

no termina en **n o s**   esdrújula



palabras



sílabas



reglas

### lápiz

La sílaba tónica es **lá**.

Es la **penúltima** sílaba.

Entonces es una palabra **llana**.

Lleva acento porque **no termina en n o s**.

No lleva acento porque \_\_\_\_\_.

## Caveat

A key contrast between Spanish and English literacy instruction is the use of onset-rime structures. Identifying onset and rime is a way to segment words. Onset is defined as the initial part of the word that precedes the vowel. Rime is the vowel and consonants that follow in the word. In English, rimes are an effective practice because they form the basis for recognizing sound chunks and patterns, primarily in single syllable words, facilitating word recognition and patterns in word families. On the other hand, in Spanish, it is the phonological awareness of the syllable and syllabic structure that facilitates orthographic patterns and word recognition. Spanish is a syllabic language with a regular and well-defined syllabic structure, which is the most important unit of phonological awareness in the Spanish language (Araya Ramírez, 2019).

### Onset and Rime

c	at
b	at
m	at
r	at

Onset and rime is a great practice for English because of the large number of one-syllable words with short vowel phonemes and predictable spelling patterns.

### Syllabic Decoding

c	asa	ca	sa
m	asa	ma	sa
p	asa	pa	sa

Onset and rime as a segmentation practice is not recommended for Spanish because it disrupts the syllabic patterns that are prominent feature of Spanish phonology.

## Phonics Instruction

In both English and Spanish, letter-sound correspondences are taught in an explicit systematic instructional sequence using manipulatives and high levels of student engagement and interaction. Segmenting and blending are explicitly practiced each day with meaningful practice and spiral review. Phonic skills taught are applied in matched decodable text, securing and affirming students' decoding skills.

While understanding the close relationship between phonological awareness, phonics, and word recognition, instruction for biliteracy considers the transferability of sound-spelling relations across languages. Sound-spelling relationships in English and Spanish can be fully transferable, partially transferable, or nontransferable (Language and Reading Research Consortium, 2021). Fully transferable sound-spellings are equivalent in Spanish and English, such as the /m/ spelled m. Partially transferable sound-spellings correspondences may represent the same sound in English and Spanish; however, the spelling may differ, for example, /k/ spelled *que* and *qui* in Spanish. Nontransferable sound-spellings have the same spelling but not the same sound, for example, letter the letter **h** is silent in Spanish, but in English the letter **h** is pronounced /h/.

There are many sound-spelling correspondences in Spanish that are directly transferable to English. This means that students who can recognize these sound-spelling in Spanish have a strong foundation for learning English phonics. As teachers introduce Spanish readers to English phonics, they can draw on a large number of phonics elements that are common to both languages.

Sound-Spelling Correspondences in Spanish That Are Directly Transferable to English			
/b/ spelled b	/n/ spelled n	/g/ spelled g in ga, go, gu	l-blends (bl, cl, fl, gl, pl)
/d/ spelled d	/p/ spelled p	/g/ spelled gu in gue, gui	r-blends (br, cr, dr, fr, gr, pr, tr)
/f/ spelled f	/t/ spelled t	/k/ spelled c in ca, co, cu	diphthong /oi/ spelled oi, oy
/l/ spelled l	/y/ spelled y	/s/ spelled s and c in ce, ci	
/m/ spelled m	/ch/ spelled ch		

“Sound-spelling relationships in English and Spanish can be fully transferable, partially transferable, or nontransferable.”

—Language and Reading Research Consortium, 2021



## Caveat

When teachers understand the similarities and differences between the two languages, they are able to plan and deliver instruction that facilitates and supports cross-linguistic transfer.

Some students may recognize similarities and differences between languages on their own, making an intuitive leap in applying what they know about their known language to the new language. However, rather than leaving this linguistic transfer up to chance, cross-linguistic transfer must be intentionally and strategically taught. Explicit teaching for linguistic transfer builds a deeper knowledge about the shared elements as well as the unique features of each language and how each language works.

By intentionally providing a comprehensible connection between languages, teachers guide students to become more strategic thinkers. As students think about the languages they are using and learning, they develop the metacognitive skills and metalinguistic knowledge needed for proficient biliteracy.

## High-Frequency Words

Learning high-frequency words enables children to devote their energy to decoding words that are unfamiliar. In Spanish, all high-frequency words are decodable; therefore, a more functional and grammatical instructional approach is recommended. High-frequency word analysis from a syntactical perspective considers the function and use of words for oral and written production, not just for reading (Real Academia Española, 2010).

Students will be able to recognize these words when reading and also use them when speaking and writing simple sentences. Articles such as *un, una, el, la*, and their corresponding plurals are presented as they appear in context. Forms of the verb *ser* and *estar* are also considered high-frequency words (*soy, eres, es, somos, estoy, estas, estamos*). Pronouns (*yo, tú, el, ella, nosotros, ustedes, ellos*) are all high-frequency words taught for automaticity. High-frequency words are always taught in context and practiced for fluency and in writing through *dictados* (traditional Spanish approach to spelling).

“Some students may recognize similarities and differences between languages on their own, making an intuitive leap in applying what they know about their known language to the new language. However, rather than leaving this linguistic transfer up to chance, cross-linguistic transfer must be intentionally and strategically taught.”

—Real Academia Española, 2010

	Spanish	English
	Palabras de uso frecuente	High-frequency Words
<b>Articles</b>	el, la, un, una	a, the, an
<b>Nouns</b>	niño, niña	boy, girl
<b>Pronouns</b>	yo, tu, el, ella, ellas, ellos, nosotros, ustedes	I, you, he, she, it, we, they
<b>Prepositions</b>	a, al, en, por, para	to, in, on, at, by, to, for
<b>Conjunctions</b>	y, con, que	and, with, that
<b>Verbs</b>	Formas del verbo “ser”: soy, eres, es, somos, son	Verb “to be” forms: am, are, is, was, were
	Formas del verbo “estar”: estoy, estas, está, estamos	
	Verbos comunes: veo, voy, puedo, quiero, me gusta	Common verbs: see, go, can, do, want, like

## Dictado

Dictado is an integrated approach to spelling (spelling, punctuation, syntax, grammar) used predominantly in Spanish literacy instruction (Escamilla et. al., 2013).

Instead of a one-word-at-a-time spelling assessment, in Kindergarten and Grade 1, the dictado comprises the dictation of a whole sentence. At the upper primary grades, dictado is connected text. Words in the dictado sentence include high-frequency words and words containing the specific phonetical element that are explicitly studied. All words come from the texts studied during the week. Teachers may choose from both options: the dictado or the single-word spelling approach associated with English spelling.

Mora (2016) examined cross-linguistic spelling approximations and identified categories that are very useful in evaluating students' generalizations across languages as they apply their emerging knowledge of sound-spelling relationships in each language. The miscues or approximations represent students' efforts as they draw upon what they know to transcribe phonemes to the target language.

Miscue	Student's Emerging Approximation	Spanish to English	English to Spanish
L1 Spelling Applied to L2	Students apply what they know from L1 sound-spelling system when writing in L2.	meik for make	teene for tiene
Absent Phonemes	Students apply L1 to L2; however, the required phonemes in L2 do not exist in L1.	cach for catch	stan for están
Phoneme Collapse	A collapse of vowels, diphthongs, or consonant blends. More than one phoneme in one language is omitted or collapsed into a single phoneme from the other language.	ting for thing	escula for escuela
Unfamiliar Spelling Patterns	Students use inventive spelling based on lack of knowledge; sound-spelling relationship not yet taught or learned.	dos for does	parke for parque
Word Boundaries	Students do not yet discern word boundaries or junctures.	haftugo for have to go	earala for ir a la
L1 Substitutions	Students write in L1 or modify the L1 word in an attempt to write it in L2.	the mesa	la house

## Fluency and Comprehension

Oral language development is an essential component of foundational skills instruction for multilingual learners. Both decoding and meaning-making is fundamental to oral and reading comprehension. Fluency is an indicator of comprehension because the readers' ability to decode with automaticity and prosody depends on their ability to make the written language sound like internalized oral language (Calet et al. 2015).

English-proficient students acquire oral language skills that are foundational to learning how the sounds of English are mapped onto print to develop literacy in English (Moats, 2001). Likewise, multilingual learners also need to develop and internalize English oral language skills for meaning-making and reading comprehension.

In both English and Spanish there are similar methodologies and learning tasks associated with fluency: reading aloud, demonstrating prosody, incorporating repeated readings, echo reading, chiming, and paired reading. Teachers explain to students that reading fluency means reading with purpose at the right pace. The use of voice to express meaning is emphasized while paying careful attention to pausing and phrasing punctuation.

## Caveat

In Spanish, fluency is practiced by reading words, phrases, and sentences. Because Spanish has such a transparent orthography, oftentimes children can decode far beyond the level at which they comprehend. This approach not only helps develop automaticity with multisyllabic words, but it also promotes comprehension while reading (López-Escribano et al., 2013).

Fluency rates for English are not applicable to Spanish oral reading. English fluency rates average 27 more words per minute than Spanish rates. A "total words per minute" scoring guide normed with English readers reading English passages is not a valid measure for Spanish reading fluency (Ramírez & Larrea-García, 2015).

Fluency Measured in Average Words Per Minutes (AWP)					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Hispanic Countries WPM Average	47	73	93	112	129
USA WPM Average	66	104	124	140	155
Difference (in words)	19	31	31	28	26

## Conclusion

Building metacognitive and metalinguistic knowledge informed by contrastive linguistics is essential for literacy and biliteracy. Instruction is enhanced when teachers understand and articulate how languages work. Teachers can explicitly teach students to develop and apply cross-linguistic understandings with increasing skill and complexity.

Foundational skills development should explicitly call attention to the similarities and differences between specific features of English and students' home languages to advance the transfer of metacognition and metalinguistic knowledge, resulting in biliteracy.

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