

# Developing Cognate Awareness to Enhance Literacy: Importante y Necesario

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Public schools throughout California are serving more Spanish-speaking students than ever before. Elementary classrooms regularly include English learners, 85 percent of whom speak Spanish (California Department of Education, 2007, pp. 23, 87). Following the passage of Proposition 227, which restricted bilingual instruction and limited the duration of specialized English-language assistance to one year for many English learners, regular classroom teachers have had greater responsibility for helping their students develop proficiency in English, as well as mastery of reading and writing. Vocabulary development plays a key role in teachers' efforts to meet this responsibility.

Vocabulary knowledge is a major component of a language development program for students who are learning English (Nation, 2001) with direct effects for attaining competence with academic language (Cummins, 2000; Scarcella, 2002). English learners often struggle with academic vocabulary that hinders their reading comprehension (Campbell, Hombo, & Mazzeo, 2000; Carlo et al., 2004; National Institute of Child Health and Human Development, 2000; RAND Reading Study Group, 2002), influences the development of their writing skills in English (Samway, 2006), and constrains their access to the rest of the curriculum. Around fourth grade, the materials that students read in schools increase significantly in the type of language structure and vocabulary used to convey ideas. Students are expected to read to learn, instead of learning to read, and the vocabulary gap that has been growing since preschool takes on greater significance for the educational success of English learners (Chall, Jacobs, & Baldwin, 1990).

Recent studies of the receptive and productive vocabularies of preschool and elementary Latino students identify apparently enduring gaps between native English speakers and Spanish-speaking English learners (August, Carlo, Dressler, & Snow, 2005; August, Carlo, Lively, McLaughlin, & Snow, 2006; Proctor, Carlo, August, & Snow, 2005). Average and above-

average native English speakers leave high school having acquired approximately 40,000 receptive words, which works out to more than 3,000 new words for each year that they were in school (Nagy & Herman, 1987). To catch up, English learners must master more than 3000 English words per school year. Yet as Snow and Kim state:

[English learners from Spanish-speaking families] learn English vocabulary at a steady pace that approximately matches that of their EO [English Only] classmates, with the result that they remain on average about one standard deviation below EO children on vocabulary assessments (2007, pp. 126-127).

So schools are not equipping Spanish-speaking English learners with the knowledge and skills needed to close this vocabulary gap.

Cognate recognition may be a helpful shortcut through the massive amounts of words that English learners must acquire to read and write well in English. Spanish and English share 10,000 to 15,000 cognates (Nash, 1997). Spanish-English cognates, or word pairs with the same meaning and similar spelling and pronunciation, help students see connections between the two languages through related roots and morphological parallels, aspects of words derived from a common Latin heritage. An analysis of Spanish-English cognate patterns, frequency, and transparency by Lubliner and Hiebert (2008) indicates that cognates offer bilingual students a productive source for English vocabulary growth.

The work of Garcia, Nagy, and their colleagues clarified that cognate recognition is not automatic, however. Hancin-Bhatt and Nagy (1994) uncovered a developmental trend in cognate awareness, with older bilingual students recognizing and understanding cognates more readily than younger students. Moreover, few Spanish-speaking students see the words of their native language as vehicles for learning English words without being taught to do so. Once taught,

though, they score higher on vocabulary assessments that include cognates (Garcia, 1991; Garcia & Nagy, 1993; Nagy, Garcia, Durgunoglu, & Hancin-Bhatt, 1993).

Cognate instruction can engage and boost achievement for all children. Studies of vocabulary interventions that included, but did not center on, the teaching of English-Spanish cognates in fourth- and fifth-grade classrooms found that the interventions were effective for both vocabulary development and reading comprehension, improving the performance of Spanish-speaking English learners and English speakers to equal degrees (Carlo et al., 2004; Carlo, August, & Snow, 2005; Snow & Kim, 2007). Similarly, Lubliner and Grisham (2008) found that both English speakers and Spanish speakers learned English vocabulary during a fifth-grade, Spanish-English cognate intervention in social studies. Successful as these interventions have been, they have not yet helped Spanish speakers close the vocabulary gap with English speakers.

This paper is about the unmet promise of cognates for Spanish-speaking English learners. Using first-year findings from a vocabulary study in fourth-grade classrooms in California, it documents that English learners from Spanish-speaking households rarely use cognate knowledge to learn English vocabulary, and it lays out some reasons why they do not. The findings underscore the need for educators to pay greater attention to the vocabulary development of Spanish-speaking English learners, to create instruction that accelerates their vocabulary growth through word consciousness, and to teach Spanish-English cognates in ways that empower these students as “experts” on cognate lessons.

### Cognate Recognition in Fourth Grade

*The VINE Project*

The findings presented here are from the first year of a three-year study designed to enhance vocabulary development, reading, and writing in fourth-grade classrooms in one region of California. In 2006-2007, VINE (Vocabulary Innovations in Education) collected data from teachers and students in 13 classrooms in seven neighboring school districts. Two classrooms were split grades, with both fourth and fifth graders. The classrooms were located in rural, town, and metropolitan schools enrolling from 13 percent to 60 percent English learners. The teachers had experience with writing workshop, were given some flexibility in their teaching, and committed to VINE for at least one year.

Forty-six percent of the 380 VINE students spoke a language other than English at home, and 32 percent were English learners. In the town and rural schools, English learners usually lived in Spanish-speaking households. The language situation was more complicated in the metropolitan schools, however, with students from households representing 26 home languages. Spanish was the home language for 78 percent of all VINE English learners. After English, Spanish was the most common home language overall, spoken by slightly more than 31 percent of VINE students.

The analyses informing this paper come from three sources: teacher interviews, VINE vocabulary tests, and interviews with small groups of English learners and former English learners who had been reclassified as English proficient. Following a day of classroom observation at the end of the school year, VINE researchers interviewed the teachers about their teaching beliefs and practices. The responses to a teacher interview question about cognate instruction are discussed here.

VINE vocabulary tests are two 15-minute timed tests, each with items assessing different levels of student knowledge about 36 words. The two tests include words from fiction sources or

from non-fiction sources used by fourth-grade teachers in this region. VINE teachers were not involved in test development, and they were not informed about the words tested. Students took both tests in the fall and again in the spring. 339 of the 380 VINE students took both of the VINE vocabulary tests in the fall, and 329 took both tests in the spring. Test items were scaled, and the results reported here include student performance on the words comprising both tests (72 words total) and on the 21 Spanish-English cognates.

After students had taken the VINE vocabulary tests, the research team decided to interview small groups of students (most responses given one student at a time, with two or three questions open for group discussion) about their strategies for answering the vocabulary test questions. Interviews took place with students from three classrooms; two classrooms were selected because they had English learners and reclassified English learners representing numerous home languages and the third classroom was chosen because the majority of students spoke Spanish at home. A researcher asked most of the English learners and reclassified English learners in these classrooms about their proficiency and literacy in their home language and about both their strategies and their answers to specific words on the VINE vocabulary tests. She also asked students from Spanish-speaking homes about their cognate knowledge. In total, 31 students were interviewed. Student responses about their home language and cognates are included here.

#### *Spanish-English Cognate Recognition Tested*

Figures 1 and 2 summarize the performance of students by English proficiency on all words on the VINE vocabulary tests. The 110 designated English learners who took both VINE tests in the fall scored significantly lower than the other 229 students (including 20 students whose language proficiency was not known) on the complete set of VINE words, and they also

scored significantly lower than the other students on the spring tests. The scaled score group difference in the fall was 7.880 ( $t_{337} = 7.88, p < .0001$ ), and it was 7.804 ( $t_{327} = 7.12, p < .0001$ ) in the spring. English learners, like all students, improved on the VINE tests (see Figure 2). The difference in the mean performance of English learners from fall to spring was 4.879 ( $t_{99} = 7.41, p < .0001$ ), showing highly significant growth over the school year.

Designated English learners from Spanish-speaking homes scored significantly lower than other English learners on the VINE tests. Figure 3 shows a difference of almost 5 and one-half points ( $t_{108} = 3.38, p = .0010$ ) between the mean performance of the speakers of Spanish (N=87) and the mean performance of speakers of other languages (N=23) in the fall, and a difference of about 6 and a quarter points ( $t_{107} = 3.55, p = .0006$ ) in the spring. These differences among English learners demonstrate the need for instruction, such as teaching Spanish-English cognate knowledge, that can help English-learning Spanish speakers accelerate their vocabulary development.

Following Bravo, Hiebert, and Pearson (2007), the words on the VINE vocabulary tests were determined to have a Spanish cognate through a three-step process described at length in the Appendix. Initially a native Spanish speaker on the VINE research team developed a list of the test words that have a cognate in Spanish. Then the list of test words was reviewed against definitions provided by two online dictionaries—*Diccionario de la lengua española* (Real Academia Española, 2001) and *Collins Online Spanish-English-Spanish dictionary* (2005). When either dictionary left doubts about the meaning transparency of the cognate pairing, the test word was taken off the list. The third step checked on the word frequency of the Spanish cognates; researchers did not expect a low-frequency Spanish word to help fourth graders recognize an English cognate on the tests. Using the online *Corpus del Español* (Davies, 2007),

researchers dropped test words from the list when their Spanish cognates occurred fewer than five times in a million words. Twenty-one test words with Spanish cognates survived the three-step process and remained on the final list. The research team believed that bilingual students with an awareness of Spanish-English cognates might have an advantage on these 21 words (see the Appendix).

Figure 4 illustrates student growth over the school year on the 21 VINE test words with common Spanish cognates. All students improved significantly on the cognate words, with a difference in means of 5.941 ( $t_{298} = 14.76, p < .0001$ ). Similarly, all designated English learners ( $t_{99} = 9.01, p < .0001$ ) and the subset of English learners from Spanish-speaking households ( $t_{78} = 7.26, p < .0001$ ) also made significant gains on the words with Spanish cognates.

Despite their overall improvement on the cognate words from fall to spring, the designated English learners from Spanish-speaking households scored consistently lower on these words than other English learners. Figure 5 shows a mean difference of just under 5 points between the two groups for the fall ( $t_{108} = 2.73, p = .0075$ ) and just under 6 points in the spring ( $t_{107} = 3.17, p = .0020$ ). Apparently cognate knowledge did not help the English-learning Spanish speakers on the VINE vocabulary tests. This finding provides additional evidence for work done by Garcia, Nagy, and their colleagues that showed bilingual elementary students tend not to recognize Spanish-English cognates without instruction (Garcia, 1991; Garcia & Nagy, 1993; Nagy, Garcia, Durgunoglu, & Hancin-Bhatt, 1993).

#### *Factors Limiting Cognate Recognition*

The reasons why Spanish-speaking English learners in elementary school do not readily identify Spanish-English cognates have not been well documented. A study by Hancin-Bhatt and Nagy (1994) suggests a developmental component, as they found that bilingual “students’

ability to translate cognates increased with age above and beyond any increase in their vocabulary knowledge in Spanish and English” (p. 289). The interviews with VINE research participants shed light on a few additional factors.

First, English learners’ proficiency in Spanish and their Spanish literacy skills vary considerably. The “English learner” label includes students who may not be fluent in their “home language.” When asked if she spoke Spanish easily and well, Lucía, who is classified as an English learner from a Spanish-speaking home, admitted that she did not. She went on to add that she spoke mostly English at home and that whereas she didn’t speak Spanish with her mother and grandmother, sometimes they conversed in Portuguese. On a classroom visit in the fall, a VINE researcher noted that the teacher (who spoke no Spanish) had designated Lucía as the translator for a Spanish-speaking newcomer; throughout the day, Lucía asked her Spanish-speaking classmates, and even the VINE researcher, for Spanish words to help her translate for the new girl. Lucía was not receiving any supplemental English services at the time, and she rarely spoke Spanish at school. Less fluent Spanish speakers like Lucía are likely to have a smaller Spanish vocabulary, which reduces a student’s access to Spanish-English cognate knowledge.

Similarly, many Spanish-speaking English learners have undeveloped literacy skills in Spanish. Fourteen English learners from Spanish-speaking household were interviewed; thirteen said they preferred to read in English, and just one said she reads regularly in Spanish. During the course of the interview, students were given a list of Spanish words written on a sheet of paper and asked to indicate the ones they knew. Maribel marked some of the words, asked about the pronunciation of others, and then added some of those words to her marked list. Cristina did the same. The words were Spanish cognates for English words on the VINE vocabulary tests.

Students like these girls who struggle to decode and read words in Spanish are ill equipped to draw on Spanish as a resource when they encounter possible cognate words in written English.

The student interviews uncovered another factor that is likely to influence cognate awareness in bilingual elementary students: student identification of a particular language with a particular domain. Andrés is a reclassified English learner who speaks Spanish with his grandparents. When introduced to Spanish-English cognates as a form of linguistic transfer, Andrés said he keeps the two languages separate. He does not identify classroom activities with Spanish. Rosie, an English learner, said that she “throws out [her] Spanish” when speaking English at school. Another reclassified English learner, Alicia, made a similar claim, but she suggested her English-only domain was schoolwork specifically. Students associate English with the classroom and its work. By fourth grade, some are no longer comfortable drawing on their identities as Spanish speakers when they assume a student role. For such students, learning a cognate strategy is more than acquiring new knowledge—it would require them to alter the identities they enact and the norms they follow at school.

One last factor influencing students’ recognition of cognates emerged from the teacher interviews—Spanish-English cognates are not part of the regular curriculum, and instruction about cognates is spotty. Most of the 13 VINE teachers acknowledge cognates in some way when they come up in class, and they usually come up when noticed by students. A few of the teachers encourage students to use their Spanish knowledge to help with English vocabulary in general ways. For example, one teacher tells students to “trust your own language” if they are studying spelling or vocabulary in class. When teaching a new English word, another references the Spanish cognate if she knows it, but she “doesn’t make a whole lesson of it.” In his instruction about the *Island of the Blue Dolphins*, a third teacher introduces the word “cognate,”

asks students to identify Spanish-English cognates from a list, and invites students to include Spanish words in a related activity. Just one of the 13 teachers said he helps students develop a thorough understanding of what cognates are and how to identify them. He introduces cognates from Spanish, French, German, and Italian and asks students to look up their origin in Latin or Greek. He urges students to look for words that “look alike” when reading. Even this teacher, though, does not provide systematic instruction about recognizing Spanish-English cognates to his class, 25 percent of whom come from Spanish-speaking homes. Possibly the most important factor affecting bilingual elementary students’ recognition of Spanish-English cognates is their teachers’ unfamiliarity with the promise of teaching cognates.

#### Discussion and Implications

Several aspects of these findings warrant greater attention from educators. First, on the VINE vocabulary tests, young English learners from Spanish-speaking households fell behind other English learners in vocabulary development. The students from Spanish-speaking homes also scored lower on the Spanish-English cognates, which suggests that they stand to benefit from cognate instruction that builds systematically on their knowledge of Spanish. It is important to realize, though, that these English learners are not uniformly proficient or literate in Spanish. At best, teaching these students to recognize Spanish-English cognates and transfer linguistic information from one language to the other may improve their abilities in both languages.

Second, as reported from the student interviews, some students separate their Spanish-speaking and English-speaking selves. They associate the classroom, or at least its work, with English, and being an English speaker is key to their student identity. Multicultural and transformational approaches can help students reconsider and reposition their cultural and

linguistic heritage (Banks, 2001; Ladson-Billings, 1995; Sleeter & Grant, 2003); they provide guidelines that, when applied to cognate instruction, could help students like Andrés, Rosie, and Alicia reconsider their language use for schoolwork. Accordingly, good cognate instruction for such students includes creating a classroom that welcomes the expertise of Spanish speakers. Placing Spanish vocabulary at the center of cognate instruction invites Spanish-speaking students to use their knowledge to teach others, including possibly the teacher. Lubliner and Grisham found high levels of engagement and enthusiasm among Spanish-speaking fifth graders when they took on “the role of the expert in the classroom” (2008, p. 20) during explicit Spanish-English cognate lessons.

Bravo, Hiebert, and Pearson suggest that Spanish-English cognates constitute a linguistic funds of knowledge for learning English vocabulary (2007, p.147). Like the household and community funds of knowledge that Moll and his colleagues describe (Moll, Amanti, Neff, & Gonzalez, 1992; Gonzalez, Moll, & Amanti, 2005), Spanish-English cognates represent a body of specialized knowledge available to teachers through members of the students’ communities. Especially for teachers who know little Spanish, drawing on bilingual community members as classroom resources for cognate instruction offers clear benefits. When teachers tap a source of funds of knowledge from the students’ community, they erase some of the barriers between home and school and reinforce the status of the students’ culture in the classroom.

Third, in elementary classrooms like the VINE classrooms, Spanish-English cognates either are not being taught at all or are not being taught in a way that is likely to accelerate the vocabulary growth of Spanish-speaking English learners. Teachers need education about the promises of Spanish-English cognates for Spanish-speaking English learners. They also need better ways to teach cognates.

The VINE Project studies word consciousness, which may inform new strategies for cognate instruction. Word consciousness is a generative approach to word learning; instead of teaching selected words or word lists, teachers help students develop the capacity and desire to examine new words in ways that draw on their existing word knowledge and transfer their learning to other new words as well (Scott & Nagy, 2004). Word consciousness involves being reflective about the meanings and usages of words and phrases, using metalinguistic knowledge, being metacognitively aware of one's own processes for learning words, and enjoying word learning.

Learning to recognize cognates can be one sort of word consciousness. It is a reflective skill that requires students to weigh a new English word against a set of rule- or pattern-governed permutations (meta-linguistic knowledge) that might render it intelligible as a Spanish word they know. Students who become proficient at cognate recognition are metacognitively aware that they can use cognate strategies to figure out new vocabulary, and they derive a sense of accomplishment from correctly recognizing cognate words. Given that cognate recognition through word consciousness would tend to increase students' attention to all words, English learners who are word conscious about Spanish-English cognates may become very skilled word learners and narrow the vocabulary gap with English speakers.

The promise of cognate recognition for building the vocabularies of Spanish-speaking English learners is not yet met, but it remains a tangible goal. In the words of Ariana, an English learner:

Sometimes, like, you separate them [the languages]...like when you're doing English, just focus on English. Then when you're doing Spanish, just focus on Spanish. And if you need help, just think of both.

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FIGURE 1  
Mean Performance on All Words on VINE Vocabulary Tests by  
English Proficiency, 2006-2007

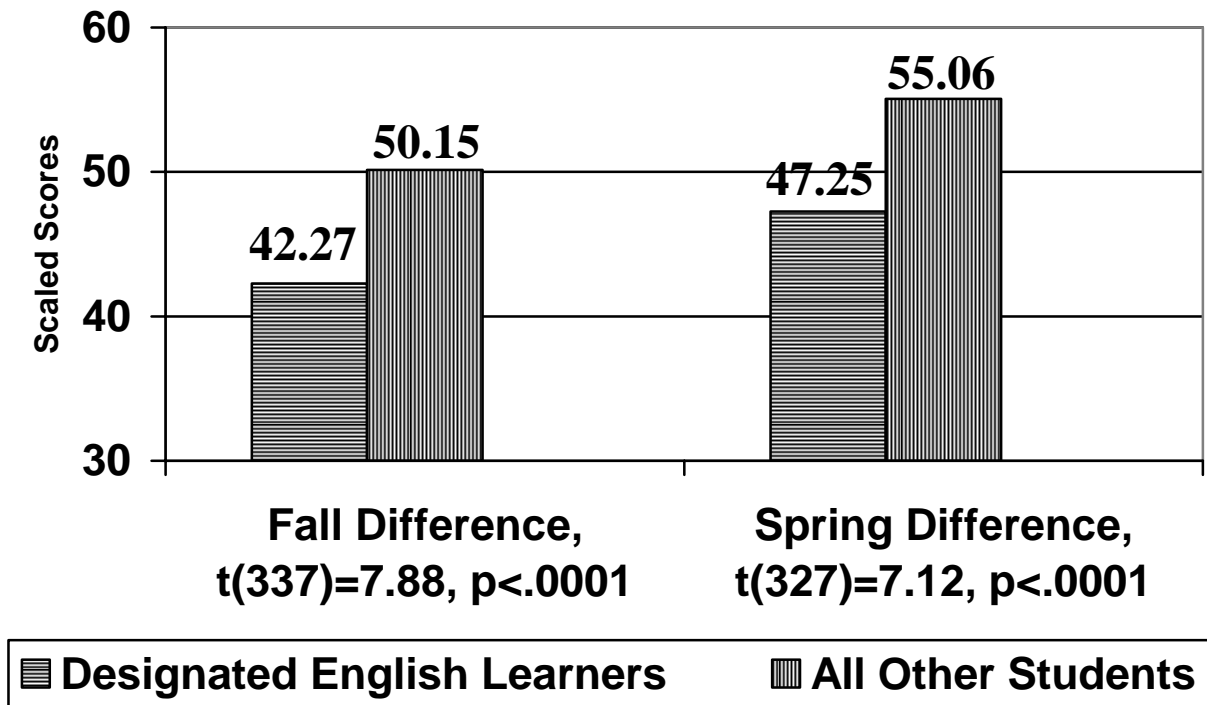
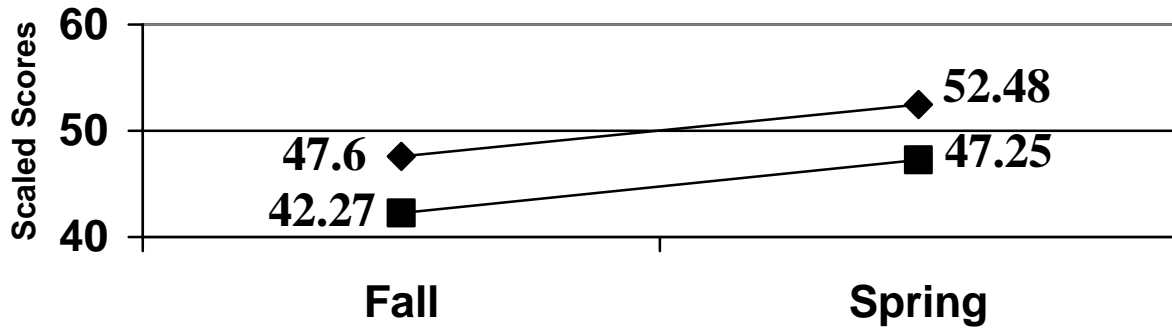


FIGURE 2

Growth on All Words on VINE Vocabulary Tests by All Students and by Designated English Learners, 2006-2007



◆ All Students' Growth,  $t(298)=13.46$ ,  $p<.0001$   
■ Designated English Learners' Growth,  $t(99)=7.41$ ,  $p<.0001$

FIGURE 3

Designated English Learners' Mean Performance on All Words on VINE Vocabulary Tests, 2006-2007

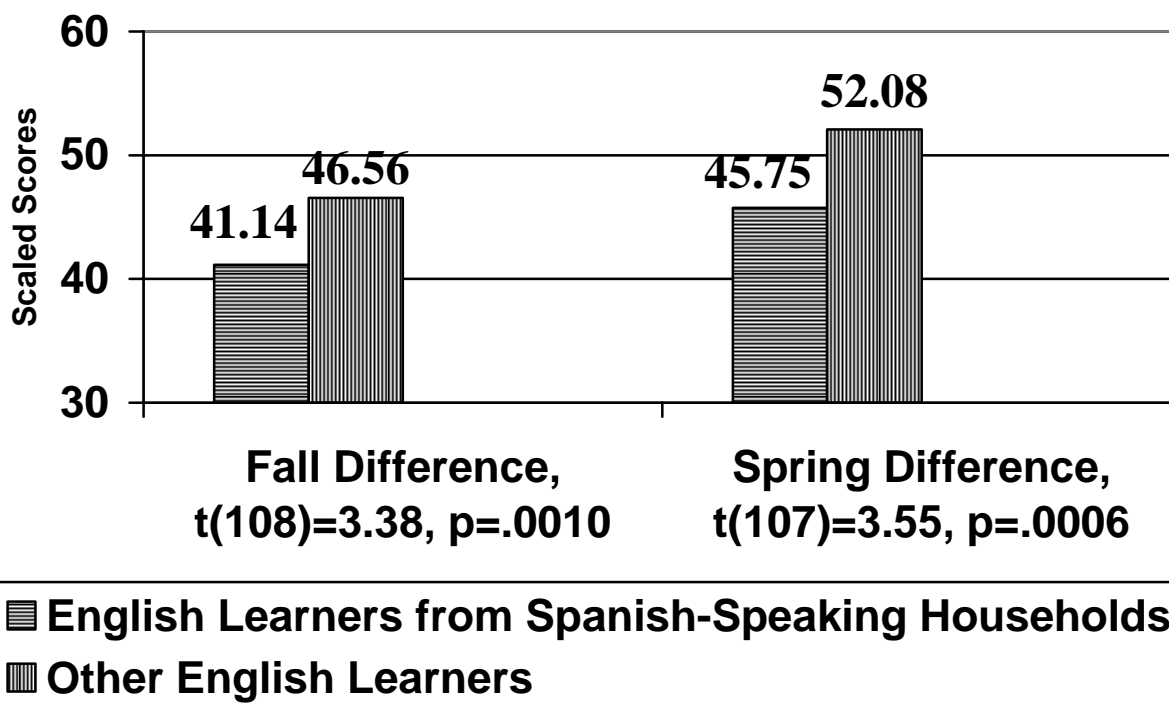


FIGURE 4

Growth by English-Proficiency Groups on the Spanish-English Cognate Words on VINE Vocabulary Tests, 2006-2007

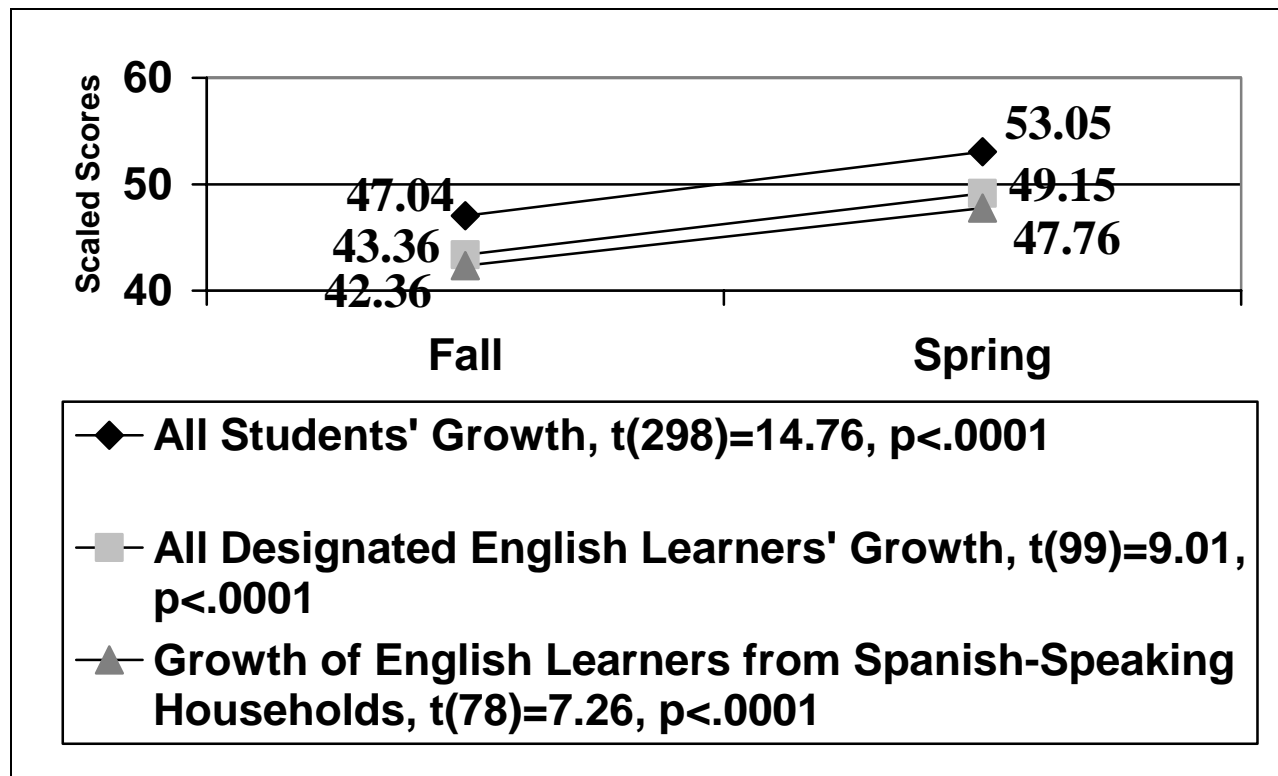
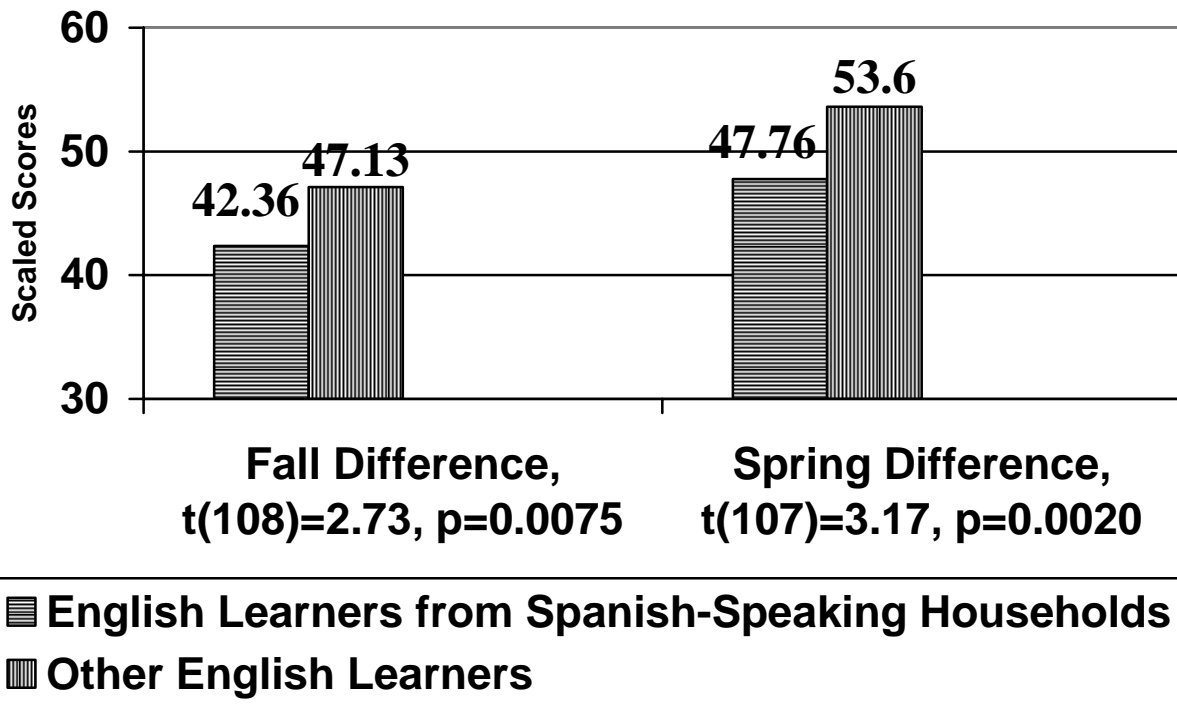


FIGURE 5

Designated English Learners' Mean Performance on the Spanish-English Cognate Words on VINE Vocabulary Tests, 2006-2007



## APPENDIX

Cognate identification on the VINE vocabulary tests was a three-step process based on cognate recognition in Bravo, Hiebert, and Pearson (2007). This appendix documents the process and identifies the words and cognates considered in each step.

### Step 1: Bilingual Speaker Identification

A VINE team member who is bilingual and a native speaker of Spanish identified the following words from the VINE vocabulary tests as Spanish-English cognates: admirable/admirable; ancient/anciano; announcement/anuncio; despair/desesperación; heroine/heroína; mission/misión; musician/músico; perch/percha; pilot/piloto; absorb/absorber; analyze/analizar; bison/bisonte; century/centuria; circular/circular; classify/clasificar; conserve/conservar; decorative/decorativo; equivalent/equivalente; express/expresar; inference/inferencia; location/localidad or local; lunar/lunar; migrate/emigrar; observe/observar; petroleum/petróleo; producer/productor; pyramid/pirámide; rarely/raramente; and solution/solución. In addition, he identified “northward” as “hacia el norte” and noted that “hesitación” was a cognate for “hesitancy,” although the actual VINE word was “hesitate.” We did not include either “northward” or “hesitate” on our list of cognates because they lacked a single, direct cognate pairing.

### Step 2: Check on Meaning Transparency

Bravo, Hiebert, and Pearson (2007) also used two dictionary sources to narrow their list of cognates. Like them, we used the online database of the Real Academia Española (2001), the official agency of the Spanish government that regulates the Spanish language. We looked up the Spanish cognates to be certain that their meanings matched the meaning of the cognate English word.

We had trouble accessing the second online source used by Bravo, Hiebert, and Pearson, so we substituted the *Collins Online Spanish-English-Spanish Dictionary* (2005), based on the *Collins Spanish Dictionary* (8<sup>th</sup> ed.). This dictionary is more representative of the varieties of Spanish spoken in Latin America than in Spain and so complemented the use of the dictionary of the Real Academia Española. We looked up the English words to see whether or not the Spanish cognate appeared in the definitional material provided.

The online dictionaries introduced doubts about the meaning transparency of three of the cognate pairs identified by our bilingual native speaker, and so these three pairs were deleted from the list of cognates we analyzed. The first pair was “ancient/anciano.” The online dictionary of the Real Academia Española indicated that the use of “anciano” in the sense of “ancient” was rare, and the Collins source said that the term referred to older or ancient people only. The second pair was “century/centuria.” Both sources indicated that “siglo” was a closer translation for century, and the Collins online source did not mention “centuria.” The third cognate pairing was “location/localidad or local.” Again, neither of these Spanish words was included as a translation of “location” in the Collins source, although they were linked in the Real Academia Española source.

### Step 3: Check on Spanish Word Frequency

Bilingual fourth graders are unlikely to know infrequent words in Spanish. Thus, Spanish word frequency is a crucial element in assessing whether cognate recognition can help bilingual elementary students learn new words in English. Again following Bravo, Hiebert, and Pearson (2007), we examined word frequency in Spanish through the online *Corpus del Español* (Davies, 2007), although we relied on different corpora and a more lenient cut-off point for infrequent words. Using overall word frequency in three corpora combined (oral sources,

common texts, and literature dating from 1900 on), we eliminated words from our list when their Spanish cognates occurred fewer than five times in a million words. This decision narrowed our list of cognate pairs by five; we dropped “perch/percha,” “bison/bisonte,” “inference/inferencia,” “migrate/emigrar,” and “rarely/raramente.”

This three-step process cut a total of eight cognate pairs from our original list, leaving us with 21 Spanish-English cognates on the VINE vocabulary tests. Consequently, we analyzed the performance of English learners from Spanish-speaking households on the following to see if their knowledge of Spanish-English cognates helped them on the VINE tests:

admirable/admirable  
announcement/anuncio  
despair/desesperación  
heroine/heroína  
mission/misión  
musician/músico  
pilot/piloto  
absorb/absorber  
analyze/analizar  
circular/circular  
classify/clasificar  
conserve/conservar  
decorative/decorativo  
equivalent/equivalente  
express/expresar  
lunar/lunar  
observe/observar  
petroleum/petróleo  
producer/productor  
pyramid/pirámide  
solution/solución