Too often, across too many settings in the United States, Latino/a students, particularly those from Spanish-speaking and immigrant households, lack the same access to curriculum and literacy development as their monolingual standard English–speaking peers. Recent statistics reveal that Latinos account for approximately three fourths of all students matriculated in U.S. schools today who speak home languages other than English (Kominski, Shin, & Marotz, 2008). What is disturbing is that Latinos also have the highest high school dropout rate in the United States (22.5%) relative to their African American (10.8%), white (6.0%), and Asian American (2.8%) counterparts (Child Trends DataBank, 2005). In an age when states are increasingly adopting laws that preclude native-language instruction and hasten mainstreaming of students acquiring English as a second language, many teachers struggle to teach to the broadening range of linguistic backgrounds of their students. This issue is further exacerbated by mainstream curricula that are not typically designed from the outset with a broad range of students in mind (Rose & Meyer, 2002). Indeed, the language and content of published curricula tend to be fixed, with appended suggestions for modifying or supplanting assignments and activities for English learners (ELs).

In contrast, my colleagues and I believe that focusing on depth of vocabulary instruction that meets the expectations of state-level curricular frameworks while providing flexibility of content and language (Dalton & Proctor, 2008; Rose & Meyer, 2002) has a strong potential for improving language and literacy outcomes for bilingual students. Quality depth of vocabulary instruction does more than simply teach students more words. It is content-specific, language-based teaching in which students are engaged in relevant, appealing topics that allow them to make connections between words and concepts as well as between languages (in the case...
of the research reported within this chapter, Spanish and English). Alternative means of engaging with language, learning, and assessment are key to quality depth instruction.

The following section details three important and interrelated domains of vocabulary depth and the crucial role of the linguistic context of linguistically diverse classrooms. Subsequent sections provide descriptions of these instructional and assessment approaches in the form of overviews of two recently completed projects: Improving Comprehension Online (ICON) and a biliteracy pilot intervention. I conclude with some parting thoughts about depth of vocabulary instruction.

Depth of Vocabulary

In close collaboration with my colleague Silverman (see Proctor & Silverman, 2011), we have identified three domains of vocabulary knowledge that are instructionally robust and applicable in cross-linguistic settings: semantics, morphology, and syntax. Figure 3.1 displays these domains of depth of vocabulary knowledge that have guided the development of the instructional materials and curricula described later in this chapter. Double arrows are placed between each construct to show that aptitude in one domain is often required with another. The linguistic contexts for the work to be described were semiurban classrooms with large percentages of Latino/a students who spoke Spanish in the home and sometimes alongside their monolingual English-speaking peers. Thus, the units and activities that comprised the curricula frequently focused on the similarities and differences between Spanish and English within a depth of vocabulary approach. The three domains and the linguistic context of instruction are discussed in this section.

Semantics

Semantics refers to the conceptual relationships that exist between words. A student with good semantic depth of word knowledge for table, for example, understands that this word means something completely different when sitting down for dinner as compared with studying the atomic numbers of the elements in science class. Semantic awareness is characterized by the ability to identify how words are conceptually linked to one another. Developing semantic awareness in students allows for conceptual connections across related words, and for understanding the nuanced ways in which words convey meaning in language and texts. Teachers who adhere to semantically based instruction typically work
with their students to “identify the relationship between words, respond to words affectively as well as cognitively, and apply words to various contexts” (McKeown, Beck, Omanson, & Pople, 1985, p. 526). Stahl and Nagy (2006) further argue that allowing students to create scenarios from the discussion of single words is a powerful means by which to stimulate deep processing of word meanings, particularly with respect to the multiple contexts in which words occur.

Semantic understandings appear to have a developmental component such that younger students are less likely to have developed strong conceptual associations among more abstract words and ideas, and accordingly, general vocabulary size is sufficient to understand semantic range (Tannenbaum, Torgesen, & Wagner, 2006; Vermeer, 2001). However, research with older elementary school students in grades 3–6 has shown that students’ abilities to make conceptual connections among words is associated with reading comprehension above and beyond the role of
general vocabulary size (Nation & Snowling, 2004; Oullette, 2006; Proctor, Uccelli, Dalton, & Snow, 2009). Deliberate semantic relations instruction with ELs, then, may serve to provide important conceptual links between different words that students may not have made on their own through reading.

**Morphology**

Knowledge of the morphology of words enables students to generalize the meaning of root words to their morphological derivations (Kieffer & Lesaux, 2007). Thus, the semantically and morphologically aware student who encounters the word *table* is able to understand its relationship with *tabulate* in a science context. Further, a student who is aware of the meanings of the suffixes –*ness* and –*less*, as well as the prefix *em–*, is able to create and understand a series of new derivations, for example, from the root word *power*, such as *powerless* (an adjective), *powerlessness* (a noun), and *empower* (a verb). Indeed, research that has compared students with strong versus weak morphological awareness has revealed stronger reading profiles for morphologically aware students even when both groups were comparable on general vocabulary knowledge (Carlisle, 2000, 2007; Kieffer & Lesaux, 2008; Nagy, Berninger, & Abbott, 2006). This phenomenon has been observed most keenly among upper elementary–age students, because older students are more likely to have developed stronger language proficiency and thus can make deeper linguistic insights than their younger peers.

Kuo and Anderson (2006) trace this morphological trajectory as moving from inflectional in very young students (e.g., *dog + s = dogs*), to *compound* (e.g., *tooth + brush = toothbrush*), and finally to *derivational* (e.g., *electric + ity = electricity*), with the importance of morphological awareness in relation to reading increasing over time. Oral development of morphological awareness proceeds in advance of morphological awareness in print. Children as young as 3 and 4 experiment with derivational morphology in speech, but it is not until students can fluently access the language of written text (i.e., once decoding skills become automatic) that the full potential of morphological awareness on literacy outcomes can be assessed. Upper elementary–age students are thus at a ripe age for introducing morphological awareness into literacy instruction. Morphological awareness instruction may be particularly important with some ELs, because expecting morphological analysis to be discovered by students on their own means that those who are in some way challenged by language learning are
likely to be left behind their peers in the development of vocabulary, word reading, and reading comprehension. (Carlisle, 2007, p. 90)

**Syntax**

The hypothetical student with a deep understanding of the word *table* would be able to parlay his or her semantic and morphological understandings in a syntactic context. Specifically, understanding that *table* is a noun at which one sits during dinner differs from how the word would be used as a scientific noun or verb. At dinner, the student is aware that we sit at the table, but in reading a science text or conducting an experiment, he or she also understands that a table is something to be read or created. Morphologically, the student further comprehends that while *table* is a noun, its derivation, *tabulate*, is a verb. Thus, to create a table, one must tabulate relevant data, perhaps while seated at the dinner table.

Such knowledge of the structure of language is essential for students to appropriately develop and apply their expanding semantic and morphological word knowledge. As students broaden their understandings of particular words, they learn the syntactic constructions in which these words typically and appropriately appear, as well as the words from which other semantic classes commonly co-occur. Syntactic knowledge can be particularly challenging for ELs. Students who are developing syntactic awareness in English may experience interference from syntactic knowledge of their first language (Nation, Clarke, Marshall, & Durand, 2004; Wolter, 2006). For example, a Spanish-speaking student might say “The boy intelligent” in English, which emanates from the correct Spanish syntactic construction “El niño inteligente.” While the benefit of direct grammar and syntax instruction is a subject of ongoing debate, direct instruction of semantics and morphology in the context of content learning allows teachers to present syntax and grammar to advance text comprehension, rather than for the sole purpose of improving decontextualized grammatical or syntactic knowledge.

**Linguistic Context**

The fact that ELs at the very least speak or understand (or both—and, in many cases, read and write) a language in addition to English is important in designing instruction. Recent models of English reading tested with Spanish–English bilingual students suggest that although the reading process can be substantively explained with English reading variables, including Spanish literacy skills tends to improve the fit of these models
This cross-linguistic perspective has been most thoroughly researched with respect to the importance of cognate awareness among Spanish–English bilingual learners. A cognate is a word that looks similar and shares meaning across two languages. For example, *tranquil* and *tranquilo* are English–Spanish cognates. Cognate recognition may be especially useful for Spanish–English bilinguals, because conversational words in Spanish (e.g., *tranquilo*) are often less common academic terms in English (e.g., *tranquil*).

One means of recognizing cognates is by simply noting an identical spelling relationship between the two words in question (e.g., *honor* in Spanish and English). However, cognates are also semantically and morphologically bound, and with instruction, bilingual and biliterate students can link affixes and root words across languages. For example, the suffix **mente** in Spanish always translates to the English suffix **–ly**. Thus, a Spanish–English bilingual who is aware of the cognate relationship between *rapid* and *rápido* and also aware of those consistent cross-linguistic suffix relations would be able to encounter the word *rapidly* and make a link to *rápidamente*. Some research has shown that Spanish–English bilinguals may draw on cognate awareness to make sense of vocabulary and texts, particularly when instruction is targeted toward cognate recognition (Nagy, García, Durgunoğlu, & Hancin-Bhatt, 1993; Proctor & Mo, 2009). Vocabulary instruction that privileges nondominant languages as a means for creating instruction results in bilingual learners receiving linguistically relevant information that is useful for leveraging understanding in English. Their English monolingual counterparts receive exposure to foreign-language learning, which is often a requirement for high school graduation.

Of course, it is not reasonable to expect that all teachers possess adequate proficiency in the native languages of their students. Amazingly, in some U.S. states (specifically, Arizona and Massachusetts, and to a less severe degree, California), it is even illegal to provide literacy instruction in a non-English language! However, depth of vocabulary instruction in linguistically diverse classrooms only requires that teachers know something about the languages their students speak, which can be facilitative when it comes to instruction (and perfectly legal in Arizona, California, and Massachusetts). Swan and Smith (2001) provide detailed descriptions of how English and a variety of languages interact with one another, from orthographic comparisons to rhetorical traditions, providing educators with the means by which to learn about multiple languages.
while not having to actually acquire them. This type of knowledge is invaluable for classroom teachers of linguistically diverse students.

Having established the instructional components for depth of vocabulary teaching, the subsequent sections are devoted to describing in detail how these were applied in two instructional interventions in linguistically diverse classrooms.

**Instructional Approaches and Artifacts: ICON**

The first intervention, ICON, was funded by the Institute of Education Sciences. The ICON intervention consisted of an Internet-based series of eight fiction and nonfiction short texts (averaging 1,350 words per text; see Proctor, Dalton, & Grisham, 2007, for details) that were embedded with a number of vocabulary supports designed to leverage comprehension of challenging text. Using the tenets of Universal Design for Learning (see Rose & Meyer, 2002) and in collaboration with Dalton, Uccelli, Snow, and pioneering colleagues at the Center for Applied Special Technology (www.cast.org), we developed the ICON prototype, which can be freely accessed online (psi.cast.org/icon3/demo). The prototype is cross-platform but may perform differentially given ever-changing browser configurations. To access, simply type the URL into a browser, choose a class (Teacher 1, 2, or 3 or Test), and select a username (student1, student2, etc.). The password will be the same as the username. Finally, select a level and a text to begin.

Over the course of three years, we iteratively developed, tested, and finalized these supports in response to student learning outcomes and feedback from teachers and students (Dalton, Proctor, Uccelli, Mo, & Snow, 2011), and culminated with a 16-week quasi-experimental intervention with 240 fifth-grade students in 12 classrooms across four schools (Proctor et al., 2011). Students worked two times per week for 50-minute periods individually at computers for the duration of the intervention. The goal was to provide deep vocabulary instruction that formed the foundation of a larger literacy intervention, with comprehension as the ultimate outcome. We infused depth approaches into prereading and within-reading activities, which are described in the next sections.

**Prereading Activities**

Vocabulary instruction for each text was systematic and occurred both prior to reading and during reading activities. For each text, five “power”
words were chosen for a total of 40 words across all eight texts. Selection of the power words was based on four categories:

1. Tier 2 academic register (Beck, McKeown, & Kucan, 2002)
2. Degrees of morphological or semantic richness or both
3. Relatedness with the Spanish translation of the word (i.e., cognates such as anxiously/ansiosamente)
4. Centrality of the word’s meaning to comprehension of the target text

More than half of the 40 words chosen were Spanish–English cognates and represented a variety of parts of speech, with the additional goal of attending to the role of syntax and grammar. Semantically, a central premise of all activities was not just to teach a word’s meaning but also to broaden the students’ lexical range. So, when students worked with the word anxiously, semantically related terms such as nervous, agitated, calm, and peaceful were part of the instructional language, as were morphologically related terms such as anxious and anxiety.

Table 3.1 provides an overview of the instructional activities for the prereading vocabulary work that students completed for each word in the

<table>
<thead>
<tr>
<th>Activity Group</th>
<th>Activity Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wade in</td>
<td>Hear It!</td>
<td>Students click to hear the power word pronounced by a native English speaker.</td>
</tr>
<tr>
<td></td>
<td>Say It!</td>
<td>Students record their own pronunciation of the word.</td>
</tr>
<tr>
<td></td>
<td>Connect It!</td>
<td>Students write or record a personal connection to the power word that uses lived experiences, knowledge, and feelings.</td>
</tr>
<tr>
<td></td>
<td>Language Alert</td>
<td>Students hear a brief message that calls their attention to semantic, morphological, and cross-linguistic relations for the power words.</td>
</tr>
<tr>
<td>Dive in</td>
<td>Web It!</td>
<td>Students fill in a word web with the target word at the center. Each target word is surrounded by three related words that represent example/nonexample, synonym/antonym, or situational/nonsituational.</td>
</tr>
<tr>
<td></td>
<td>Caption It!</td>
<td>Students are given an image that relates to the target word and are prompted to write or record a caption for the image that both uses the word and demonstrates understanding of it. Students are encouraged to experiment with statements, dialogues, and questions.</td>
</tr>
</tbody>
</table>
prototype. For every 50-minute intervention session, the students worked for approximately 20 minutes on the prereading activities, after which they spent the remainder of the time reading and responding to the text. During prereading activities, students had consistent access to each word’s definition, its Spanish translation, an example sentence, and a relevant image. The digital architecture of ICON aligned with a Universal Design for Learning instructional philosophy (see Dalton & Proctor, 2008; Rose & Meyer, 2002) that embraces technology as a vehicle capable of providing students with multiple means by which to access text. For example, ICON provided students with (a) Spanish and English versions of each text, (b) read-alouds of each text in both languages, and (c) the option of written (typed) and oral (audiotaped) response modalities. Using a Universal Design for Learning approach, we were able to include a much broader array of learners in our study, including students who spoke very little English and native English-speaking students who possessed more limited decoding and fluency skills.

Prereading vocabulary was divided into two groups of activities: Wade In and Dive In. Wade In activities were designed to establish initial familiarity with the words, share existing knowledge that students already possessed about each word, and provide an informational sound bite about each word. Dive In activities were designed for students to work more intensively with the power words in a variety of reading and writing contexts that privileged the semantic, morphological, syntactic, and cross-linguistic characteristics of the words.

In Wade In, students first listened to a recording of a native English speaker pronouncing the power word (the Hear It! activity), after which they recorded themselves pronouncing the word (Say It!). These two activities were designed to provide a phonological anchor for each word (Silverman, 2007), which is good for many monolinguals but essential for English-learning bilinguals. Next, students were prompted by the system to either write or record a personal connection to a given word (Connect It!). This approach of simply asking students, “What do you think about when you hear this word?” resulted in a wealth of information that gave participating teachers input as to where word knowledge was breaking down for students and how their understandings of words and concepts could open up offline instructional avenues. Consider, for example, a student’s response to hospitality: “I showed hospitality when my great grandfather was in the hospital and he had kidney problems now he died now i’m really sad and my life has changed without him.” Her teacher gained two important insights: First, the student’s use of the word showed a misapplication of morphological awareness, as the student extracted
the base hospital; second, and more important, this particular student’s distracted demeanor over the previous two weeks was likely associated with the loss of her grandfather.

In the final segment of Wade In, students listened to a Language Alert that highlighted novel cross-linguistic, morphological, or semantic information about the power word. For example, the alert for the word anxiously was, “Think about a Spanish word that looks or sounds like the English word. If they have similar meanings, they are cognates. Anxiously and ansiosamente are cognates. Is all this talk of cognates making you anxious?”

Dive In activities required students to apply their growing word knowledge more directly in multiple-choice and writing environments that were designed to simultaneously teach and assess students’ word knowledge. The first Dive In activity (Web It!) required students to work with a programmed word web (see Figure 3.2 for an example) in which

Figure 3.2. Screenshot of a Web It! Activity for Fifth Graders
the power word was situated at the center of an illustrated web. Students chose items from a drop-down menu that included examples/nonexamples, synonyms/antonyms, or situations/nonsituations. The point of this activity, however, was not to assess the students’ word knowledge directly but to promote it. Thus, when students selected an incorrect response, they were notified by a digital “coach” who appeared on the screen and provided a hint meant to steer the student toward the correct response. Thus, the goal of the activity was 100% correctness, although the system kept track of how many attempts were necessary to arrive at that level of performance. Also important to lexical development, students filled in their own bubble to show a relationship with the power word, which provided another window into their developing word knowledge.

Finally, in the culminating Dive In activity (Caption It!), students viewed a representative image (photograph or clip art) of a target word and were prompted, “Make this image come alive by adding an interesting caption that includes the power word and shows your understanding of the word. Try using statements, dialogues and questions.” This final activity was designed to provide a window into the degree of depth of word knowledge that students had developed over the course of the vocabulary activities (see Proctor et al., 2009, for details). We were particularly interested in degrees of semantic depth for this activity and thus developed a semantic scoring inventory that we used to determine degrees of depth of word knowledge. The inventory items and scoring ranges are presented in Table 3.2.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntactic accuracy</td>
<td>0 = Syntactically inaccurate</td>
</tr>
<tr>
<td></td>
<td>1 = Syntactically accurate</td>
</tr>
<tr>
<td>Use of target word</td>
<td>0 = Absence of target word</td>
</tr>
<tr>
<td></td>
<td>1 = Presence of target word</td>
</tr>
<tr>
<td>Semantic depth</td>
<td>1 = Response displays no semantic relation to either the picture or the target word.</td>
</tr>
<tr>
<td></td>
<td>2 = Response relates to the picture but is semantically unrelated to the target word.</td>
</tr>
<tr>
<td></td>
<td>3 = Response conveys the meaning of the target word in an appropriate but isolated or minimal context.</td>
</tr>
<tr>
<td></td>
<td>4 = Response conveys the meaning of the target word in an appropriate and elaborate context, including coherently connected details that serve as evidence of deep understanding of the target meaning.</td>
</tr>
</tbody>
</table>

Note. Scores range from 1 to 6.
**Within-Reading Word Work**

While the students were reading the texts in the ICON intervention, they were able to access the meanings of many of the texts’ words via hyperlink. If a student encountered a word that he or she did not know while reading, a single mouse click would provide the student with a student-friendly definition, the part of speech, an example sentence, the Spanish translation, and a representative image (if appropriate). Further, students were required to maintain a personalized digital word wall (called My Glossary) for each text. To completely finish a given text, a student had to add at least three words to My Glossary and provide an explanation as to why the particular word was chosen. Of course, one reason that students provided for choosing words was the fact that it was required. However, previous work with this prototype indicated that students were posting, on average, 4.3 words per text and that the majority of posts were accompanied by thoughtful reasons, including recalling word meanings and personal connections to words (Proctor et al., 2007).

Results from the final study showed that students who completed the ICON program in its entirety significantly outperformed their control group counterparts on standardized and researcher-developed measures of vocabulary. Further, the Latino/a students in the ICON condition significantly outperformed their monolingual English-speaking counterparts in the control condition on semantic scoring inventory performance, which we assessed using a definition and captioning measure (see Proctor et al., 2011).

**Instructional Approaches and Artifacts: Biliteracy Pilot**

In the second study, my colleague Vargas and I worked with eight Spanish-speaking EL fourth graders who were enrolled in one school’s structured English immersion program, in which they received substantially separate, sheltered instruction in English only, per Massachusetts state law. Vargas and I worked with the students once per week for 90 minutes with most of our instruction conducted in Spanish, applying the tenets of depth of vocabulary instruction derived from the primarily English-language research base described previously. These sessions were held each Monday for 12 weeks during the students’ literacy instructional block, taking the place of English literacy instruction for that day. Each weekly session varied in its content, depending on where in a given text the class had left off. However, like the ICON intervention, each class was anchored
by vocabulary instruction that set the stage for subsequent activities. The
general format for each session was:

- Vocabulary instruction (20 minutes)
- Spanish phonics/phonemic awareness (15 minutes)
- Read aloud with discussion (30 minutes)
- Group project work (25 minutes)

Before beginning the intervention, we conducted an individual
structured interview with each of the students, in the student’s language
of choice, to gain a sense of immigration context, time in the United
States, and literacy experiences and attitudes as they related to Spanish
and English, the school, and the home. We used an interview protocol that
drew on the work of Brisk and Harrington (2007), the components of which
are displayed in Table 3.3. Although we directly interviewed the students

Table 3.3. Topics for Fifth-Grade Students’ Interviews Before the
Biliteracy Pilot Intervention

<table>
<thead>
<tr>
<th>Family and Immigration</th>
<th>Language and Literacy</th>
<th>Attitudes Toward Language, Literacy, and Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Parents’ language and literacy skills (in Spanish and English)</td>
<td>Family attitudes toward language and literacy (Spanish and English)</td>
</tr>
<tr>
<td>Country of origin</td>
<td>Language(s) used at home</td>
<td>Conceptions of literacy</td>
</tr>
<tr>
<td>Date of arrival</td>
<td>Language(s) used for reading and writing in the home</td>
<td>Motivation to read and write in school and at home</td>
</tr>
<tr>
<td>Previous school</td>
<td>Home literacy exposure (in Spanish and English)</td>
<td>Preferred topics for reading and writing</td>
</tr>
<tr>
<td>experiences</td>
<td>First language of literacy development</td>
<td></td>
</tr>
<tr>
<td>Reasons for coming to</td>
<td>English literacy level</td>
<td></td>
</tr>
<tr>
<td>the United States</td>
<td>Spanish literacy level</td>
<td></td>
</tr>
<tr>
<td>Intended length of stay in the United States</td>
<td>Strategies used for reading and writing</td>
<td></td>
</tr>
<tr>
<td>Parents’ occupations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents’ education levels</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Interviews were conducted in the student’s choice of either English or Spanish.
for the purposes of this particular project, other teachers have adapted this protocol by having students interview each other at the beginning of the school year as a means of gleaning important information and allowing students to get to know one another.

We selected texts that were directly related to the backgrounds and histories of the students. We chose the first text, “Quetzal No Muere Nunca” (“Quetzal Never Dies”; Barlow, 1995), because it relates directly to Mayan culture and was thus familiar to the Central American and Mexican students who comprised more than half the class. The second text was a descriptive poem of Cuban origin, entitled “Sensemayá” (Guillén, 1937), that very simply describes a snake and relays its treacherous and deadly nature. The poem was also set to music (Guillén & Salinas, 1990) and thus provided another means by which students could access the poem beyond its text base. This poem also served as the impetus for a class project in which all eight students collaborated to create a bilingual poster presentation about “Sensemayá,” snakes, and poetry. Finally, Papelucho is one of a series of 12 books by a Chilean author (Paz, 1947/1997) about a young boy who makes daily, humorous, and descriptive journal entries that describe the events of his life. This book was particularly robust as a read-aloud, as the colloquial language employed was highly accessible to the students, engaging them in the ruminations of a young child’s life experiences. By contrast, when texts were read aloud in English in the structured English immersion classroom, this depth of engagement was noticeably absent, as the students’ levels of English proficiency impeded their comprehension of idioms and nuances that make many texts come alive. Because of its length, this text received the bulk of the instructional time, and the majority of the instructed words were selected from this text.

**Vocabulary Instruction**

All vocabulary instruction was contextual. Words pulled from the three texts were introduced and discussed at the beginning of each weekly session. As with ICON, selecting words for instruction was a complicated endeavor. Recent admonitions among vocabulary researchers indicate that most words selected for instruction “should be very high utility in nature; specifically, the words taught should be general-purpose academic words” (Lesaux, Kieffer, Faller, & Kelley, 2010, p. 198). Hiebert (2005) also cautions against selecting interesting words that have little utility across a variety of academic domains. However, we targeted both high- and low-frequency words with the goal of deriving a semantically rich array of
related words and ideas that would bolster comprehension of the text and the target word, as well as promote acquisition of a broader conceptual array. The words, their translations, their cognate status, and the area of instructional focus (semantics, morphology, or both) are displayed in Table 3.4.

The centerpiece of direct vocabulary instruction was the coconstruction of vocabulary maps, in which students generated a student-friendly definition of a word; discussed related words, concepts, and background knowledge; made connections across languages; and considered differing morphological forms of the words. Discussions revolved around personal connections to the words, their English translations, and whether they looked similar or different in their written format (i.e., whether the words were cognates).

One such map targeted the Spanish words veranear, viaje, and costa. Vargas, a native Spanish speaker, led the group discussion while I took notes on chart paper for the class to reference. All students reported having experienced summer trips, yet they had not encountered the term veranear (to go on summer vacation), which provided an opportunity to link with its very familiar derivation verano (summer). A definition was determined (Cuando uno va de vacaciones a otros sitios durante el verano/When you go on vacation to other places during the summer), and students offered examples from their personal experiences. The term viaje (trip), a word with which the students were quite familiar, provided a stable context within which to make a morphological link to its derivation (the verb viajar/to travel). A definition for viaje was created by the class (Cuando una persona va a otros sitios/When a person goes to other places), and the different means by which one might take a trip were discussed. Finally, the word costa was discussed, and while the term was quite familiar to the students in Spanish, none knew its English translation (coast), which provided the opportunity to present the English word, discuss the cognate relationship, and generate a variety of semantically related terms along with a third, rather poetic, student-generated definition (Un lugar que queda al lado del mar/A place found at the edge of the sea). Table 3.5 displays the nature of the discussion for these three target words and the array of responses generated by area of instructional focus.

**Phonics/Phonemic Awareness**

Given the wide variability in the students’ Spanish literacy skills, it was determined that some attention to sound–symbol relationships and word
<table>
<thead>
<tr>
<th>Text</th>
<th>Targeted Spanish Word</th>
<th>English Translation</th>
<th>Cognate Status</th>
<th>Depth Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Quetzal No Muere Nunca” (^a)</td>
<td>Quetzal</td>
<td>Quetzal</td>
<td>Not applicable (name)</td>
<td>Semantic</td>
</tr>
<tr>
<td>Destino</td>
<td>Destiny</td>
<td>Cognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Predestinación</td>
<td>Predestination</td>
<td>Cognate</td>
<td>Morphological</td>
<td></td>
</tr>
<tr>
<td>Amuleto</td>
<td>Amulet</td>
<td>Cognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>“Sensemayá” (^b)</td>
<td>Patas</td>
<td>Paws</td>
<td>Noncognate</td>
<td>Semantic</td>
</tr>
<tr>
<td>Pies</td>
<td>Human feet</td>
<td>Noncognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Culebra</td>
<td>Snake</td>
<td>Noncognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Serpiente</td>
<td>Serpent</td>
<td>Cognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Papelucho</td>
<td>Diario</td>
<td>Diary</td>
<td>Cognate</td>
<td>Morphological</td>
</tr>
<tr>
<td>Invento</td>
<td>I invent</td>
<td>Cognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Inventor</td>
<td>Inventor</td>
<td>Cognate</td>
<td>Morphological</td>
<td></td>
</tr>
<tr>
<td>Promesa</td>
<td>Promise</td>
<td>Cognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Prometer</td>
<td>To promise</td>
<td>Cognate</td>
<td>Semantic</td>
<td></td>
</tr>
<tr>
<td>Veranear</td>
<td>To go on summer vacation</td>
<td>Noncognate</td>
<td>Semantic and morphological</td>
<td></td>
</tr>
<tr>
<td>Viaje</td>
<td>Trip</td>
<td>Noncognate</td>
<td>Semantic and morphological</td>
<td></td>
</tr>
<tr>
<td>Costa</td>
<td>Coast (noun)</td>
<td>Cognate</td>
<td>Semantic awareness</td>
<td></td>
</tr>
<tr>
<td>Mecánico</td>
<td>Mechanic</td>
<td>Cognate</td>
<td>Semantic awareness</td>
<td></td>
</tr>
<tr>
<td>Naufragar</td>
<td>To sink (boat), to shipwreck (person)</td>
<td>Noncognate</td>
<td>Semantic and morphological</td>
<td></td>
</tr>
<tr>
<td>Castigar</td>
<td>To punish or ground, to castigate</td>
<td>Cognate</td>
<td>Semantic awareness</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Quetzal No Muere Nunca [Quetzal Never Dies], in G. Barlow (Ed.), Stories From Latin America/Historias de Latinoamérica (pp. 16–24), Lincolnwood, IL: Passport.

\(^b\) Sensemayá [poem], by N. Guillén, 1937, retrieved February 16, 2011, from home.wlu.edu/~barnettj/lit295/guillen.htm.

\(^c\) Papelucho, by M. Paz, 1997, Santiago, Chile: Editorial Universitaria, original work published 1947.
recognition was necessary. However, as there was limited instructional time in any given week, we wanted to steer clear of typical seatwork practices in the decoding arena that many students find tedious and uninteresting. We also sought to take advantage of the facilitative links that have been found between spelling and phonemic awareness (Byrne & Fielding-Barnsley, 1991). In response, we developed a game we called

<table>
<thead>
<tr>
<th>Discussion Category</th>
<th>Veranear</th>
<th>Viaje</th>
<th>Costa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-derived definition</td>
<td>Cuando uno va de vacaciones a otros sitios durante el verano/When you go on vacation to other places during the summer</td>
<td>Cuando una persona va a otros sitios/When a person goes to other places</td>
<td>Un lugar que queda al lado del mar/A place found at the edge of the sea</td>
</tr>
<tr>
<td>Morphological derivations</td>
<td>Verano/summer, Viajar/to travel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-linguistic connections</td>
<td>A single word in Spanish has no direct translation in English (i.e., to go on summer vacation).</td>
<td>Not applicable</td>
<td>Cognate relationship: costa and coast</td>
</tr>
</tbody>
</table>

Table 3.5. Breakdown of Vocabulary Map for Veranear, Viaje, and Costa
Creapalabras (a loose translation is Word Creation), in which students formed heterogeneous groups with high and low levels of Spanish reading and writing proficiency. Each group was then provided a single worksheet that allowed students to work with two or more consonants and all five vowels. Using only the allowed consonants and any vowel, the groups created and wrote down as many words as possible in a 10-minute session. If two or more groups came up with the same word, that word was eliminated. Invented words were disqualified if the students could not define it and use it appropriately in a sentence. Students found this to be an engaging activity that served to promote spelling, phonemic, and phonological awareness, but the most striking aspect of this activity was the students’ discussion about the words they created and whether they were genuine or invented. Ultimately, Creapalabras merged vocabulary learning with text-level skills development.

**Read-Alouds**

Drawing on the work of Santoro, Chard, Howard, and Baker (2008), we took advantage of the oral language context of read-alouds to create rich dialogic spaces in which the focus of instruction was on text comprehension, vocabulary development, and language structure. Having introduced the relevant vocabulary words earlier in the class, we began with the read-aloud, stopping repeatedly for students to share insights about their countries (e.g., “Quetzal No Muere Nunca” takes place in Guatemala), provide knowledge they possessed about the biology or nature of snakes (Sensemayá is a frightening snake described in great detail in the poem), or relate to Papelucho’s inability to understand how adults speak to one another.

As the read-alouds progressed and target vocabulary was encountered, time was taken to recognize the word and also discuss the syntactic structure in which the word occurred. For instance, the word naufragar generated a discussion focused on the syntactic uses of the term. In Spanish, naufragar has two meanings depending on the context in which the word occurs. The word can be used to give action to a sinking boat (i.e., to sink) but can also be used to give action to the person on the boat who survives on a desert island (i.e., to be shipwrecked). Discussions often centered around the ways in which language was used to convey meaning, particularly with respect to the vocabulary words targeted by a given read-aloud.
Group Project Work

In the interest of promoting student–student dialogic interactions, we devoted considerable instructional time for the students to work in small groups to create a poster that was presented to their class as well as in the weekly whole-school assembly. The students were quite interested in the poem and song “Sensemayá” and elected to expand on this text for their group presentation. As a whole group, we discussed the students’ interests in snakes and poetry, and students were placed together in their interest groups. Nicolas, Ingrid, and Antonio (all student names are pseudonyms) focused on poetry and Spanish–English translation. Nicolas translated the original poem from Spanish into English, Ingrid decided to write a poem in Spanish that expressed her abiding revulsion toward snakes, and Antonio translated Ingrid’s poem into English.

Veronica and Karen, who showed relatively strong Spanish literacy profiles, were interested in learning more about snakes and asked research questions about the nature of snakes and reproduction, which they independently researched. Fernando and Carlos, both of whom possessed more limited literacy skills in Spanish, discussed what they knew about snakes and decided to follow up with more detailed, supported research that allowed them to elaborate on their knowledge. Finally, Leandro and Antonio worked together to create illustrations of Veronica and Karen’s investigations. The students paid particular attention to the cognates serpent and serpiente in their framing of the poster, while also making sure that their organization was clear to an uninformed audience. An image of the final poster is presented in Figure 3.3.

The biliteracy pilot was nonexperimental. However, students showed statistically significant growth in three areas: Spanish decoding skill, English vocabulary, and English reading comprehension. Students also took a researcher-developed English vocabulary posttest that included equal numbers of cognate and noncognate items (August et al., 2001); 5% of the students’ correct responses on this test were the Spanish–English cognate items (e.g., rapid, tranquil).

Equally important to the research was the students’ voices as an evaluation measure. Students were interviewed postintervention to gain an understanding of response to intervention that privileged their opinions alongside the standardized and researcher-developed assessment measures. In responding to questions targeting the pilot and their attitudes toward language, students focused more intently on how Spanish remains a part of their everyday lives and how its maintenance provides a structure for community and identity. Students also discussed cross-linguistic awareness, providing instructional direction when considering
native language use in linguistically diverse classrooms. These findings are summed up nicely in this exchange between a teacher and her students following a presentation of the group poster:

Teacher: What was the fun part of learning in Spanish and English?
Antonio: It’s because we got to learn more English words, and in Spanish if you knew a word, you could get starting in English.
Nicolas: And too also, that, like, the Spanish class helps you to learn not to forget your language.
Karen: And the fun, I think, it was to work together hard and make the project. And for learning more new words.
In response to the teacher’s very simple question, Karen offered the notion of a classroom community where the goal “was to work together hard and make the project.” Nicolas provided insight into identity, suggesting that Spanish maintenance “helps you to learn not to forget your language.” Finally, Antonio made the cross-linguistic connection, noting that “in Spanish if you knew a word, you could get starting in English.”

Conclusion

In this chapter, I describe a linguistically driven approach to deep vocabulary instruction that can be designed to meet the needs of monolingual and bilingual learners in mainstream or substantially separate settings. Although the linguistic contexts of classrooms vary tremendously, there is increasing evidence that depth of vocabulary instruction can help bridge linguistic differences between students in linguistically diverse classrooms. Linguistic diversity and awareness among teachers is of importance in a 21st-century educational landscape where instructional differentiation is key to ensuring that all students have comparable curricular access.

TRY IT!

1. Recall the Wade In and Dive In activities described in this chapter. Choose a few words related to a text that students are about to read and consider how you would apply the recommended guidelines for engaging students in word study. In particular, consider which words you will showcase as power words. What tasks will you use to help students think about semantic, morphological, syntactic, and cross-linguistic characteristics of the words? Ask your students to make the power words come alive by adding interesting captions that include the power words and shows understanding of the words by using statements, dialogues, and questions.

2. Based on the description in this chapter, what types of activities would you use to prompt productive group work? Which of the instructional activities and tasks in this chapter would you use to prepare your students for successful work within their small groups? What type of task will you use to have students display the work they accomplished together? What framework or task will you use to draw students together and share the work they completed in small groups?
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REFERENCES


**LITERATURE CITED**

