Linking to

Several easy-to-implement strategies can help teachers support language learners in all content areas.



Yu Ren Dong

ulieta, an English language learner from Argentina who came to the United States at the beginning of the year, sat in her 9th grade world history class, reading the following passage:

Rome Begins: While Athens and Sparta were at the height of power, another great early civilization was starting. In another part of the Mediterranean Sea area, Rome was born. About 1500 BC, a tribe called the Latinos crossed the Alp Mountains into what we now call Italy. They settled along the Tiber River. The land was good. It was easy for the people to raise their cattle and crops. These people were the first Romans.

From the outset, Julieta had difficulty with the phrase height of power in the handout. She quickly punched the words into her electronic translator. It didn't help. She soldiered on, bogged down by more unknown words: civilization, Mediterranean, tribe, settled. The teacher initiated questions to check for students' understanding of the passage, but Julieta was so busy searching for word meanings that she heard little of what the teacher said and how her classmates responded.

After class, Julieta explained, sighing, "Sometimes even the words that the teachers say in class are new and hard for me to understand. I get confused. I don't have time to look up everything in my electronic translator." Julieta felt that it wasn't typical of her to get so lost; she

Prior Learning



had been a straight-A student in her school in Argentina.

Language Overload

Like Julieta, many English language learners find themselves sitting in mainstream subject-matter classes confronted with an overwhelming vocabulary load

in both the assigned reading and class discussions. The language overload is compounded by the need to learn challenging disciplinary-specific knowledge and skills, meet rigorous graduation requirements, and pass standardized

To reduce the vocabulary overload

that English language learners experience, some mainstream subject-matter teachers use such strategies as referring the students to the textbook glossary and encouraging them to use a dictionary or an electronic translator. But as Julieta pointed out, it's often difficult for students to consult the

dictionary while engaging in class discussion, reading the textbook, and copying notes from the board. In addition, textbook glossaries and dictionaries are not always helpful because the definitions themselves may contain unfamiliar words.

One support strategy that mainstream subject-matter teachers *can* use is activating English language learners' native languages and prior knowledge (Cummins et al., 2005). Some teachers have concerns in this area.

however. Students' prior knowledge is encoded in their native languages and acquired through schooling in their native countries and sometimes may not be the appropriate prior knowledge that the teacher anticipates. For example, some English language learners may have different prior knowledge concerning the word propaganda. The word for propaganda in Chinese means passing on information in a good sense. This is not congruent with the prior knowledge that the teacher has in mind when she

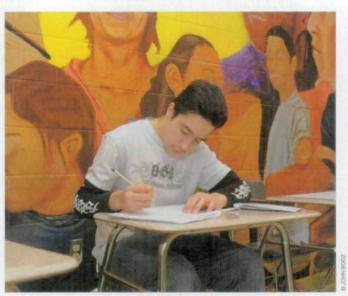
Also, some subject-matter teachers may not be convinced about the merits of introducing students' home languages in the classroom. Some teachers may fear that students will use their native languages as a crutch that will ultimately impede their learning of English. Other teachers may fear that their own lack of understanding of the students' native languages may impede their ability to support student learning of the subject matter in English.

discusses the propaganda that the Nazis

used in World War II.

Second-language research has repeatedly shown, however, that English language learners' native languages and prior knowledge play important roles in learning subject-matter knowledge in

English (August, Carol, Dressler, & Snow, 2005; Meyer, 2000; Rubinstein-Avila, 2006). According to Cummins (1979), the linguistic and cognitive interdependence between the first and second languages facilitates rather than impedes students' learning of English in general and of academic English in particular. This interdependence becomes even stronger as the student moves into higher grade levels (August et al., 2005).



What Teachers Need to Know

Over the years, in a teacher education class I've taught for secondary preservice teachers, I've worked with my students to develop effective language support for English language learners in subject-matter classes. As part of the course, the teachers must observe an English as a second language class to develop sensitivity to and awareness of learners' needs and to learn effective teaching strategies. Students also keep a journal to document their growing knowledge.

Working in their subject-matter groups, the preservice teachers examine the teaching materials used in main-stream secondary subject-matter classes, ranging from textbooks to extracted passages, from novels to laboratory

manuals. The teachers learn to think from the perspective of English language learners, identify prior knowledge that students might bring to the lesson, and highlight difficult words and cultural concepts. In their observations, they also have identified helpful teaching strategies, two of which have proven most effective: using cognates to help students understand challenging English academic vocabulary and activating prior knowledge.

Cracking the Code with Cognates

Those of us who have learned a second language can remember when we first encountered an unknown word in the new language. Our brain automatically searched for patterns or similarities between the new language and our native language to help us understand the new concept or word (Cummins, 1979; Dong, 2004; Short & Echevarria, 2004/2005). This mapping of a new word in the second language to a cognate or translational

equivalent in our native languages has been proven to be a successful strategy (Freeman & Freeman, 2009; Kieffer & Lesaux, 2007; Rubinstein-Avila, 2006).

Despite the occasional mismatches, such as false cognates, the benefits of using cognates to learn far outweigh the drawbacks. Researchers have noted a tremendous possibility for crosslanguage transfer through cognates, especially for native Romance language speakers learning academic English vocabulary (August et al., 2005; Freeman & Freeman, 2009; Kieffer & Lesaux, 2007; Rodriguez, 2001). A large number of academic English words are similar in both spelling and meaning to Spanish words, and Spanish-speaking English language learners can use these

FIGURE 1. Multilingual Geometry Picture Glossary

Angle Bisector Theorem: If two sides of a triangle are congruent, then the angles opposite these sides are congruent.

English	Spanish	French	Portuguese	Chinese	Korean
Triangle	triángulo	triangle	triângulo	三角形	삼각형
Angle bisector A Angle Bisector C	Bisector de anglo	Ligne de bissection de montage	Bissetor de ângulo	角平分线	각도를 이등분
Congruent angles	ángulos congruentes	angles congruents	ângulos congruentes	等角	합동 각도

For a complete picture glossary, see www.ascd.org/ASCD/pdf/journals/ed_lead /el200904_dong_glossary.pdf.

words as a rich resource in their acquisition of English vocabulary.

Many of my preservice teachers who are French and Spanish native speakers have mentioned that this is how they learned academic English. To illustrate how students' native languages can help them learn English, John, a native-Spanish-speaking preservice teacher, modified a reading passage on hibernation from a science textbook (Brockway, 1985, p. 128) by highlighting Spanish-English cognates:

Hibernation (Hibernación)

In the fall, mammals (mamiferos), such as mice and squirrels, gather and store food. Woodchucks and skunks develop thick layers of fat. These adaptations (adaptacions), and others (otros), help many animals (animales) survive the cold winter

months when food is scarce. Some birds and insects (insectos) migrate (emigran) from the forest to warmer climates (climas) where food is abundant (abundante). Small animals, such as snakes and chipmunks, spend the winter in burrows in a sleeplike state called hibernation (hibernación). During hibernation an animal's body temperature (temperatura) is lower and its heartbeat and breathing rates decrease. Hibernation allows an animal (animal) to survive the winter on very little energy (energia). In the spring the animal "wakes up.

English language learners see that they have an extra tool to help them crack the code of daunting academic vocabulary words in English.

Teachers who have no knowledge of Spanish can ask their Spanish-speaking students to identify cognates and include them in the lesson for language

support. Vincent, a preservice mathematics teacher, was planning a lesson on the angle bisector theorem for a group of five 10th grade students in a beginners' class in English as a second language. With a visual glossary that he prepared beforehand, Vincent began the lesson by asking his students about the English equivalent of such words as triangle, vertex, congruent angle, and theorem. He was delighted to discover that his students recognized many of the cognates and understood their meanings because they had learned these concepts previously. All five students' knowledge in mathematics was more advanced than that of their gradeequivalent U.S. peers. Teachers can expand Vincent's glossary (see fig. 1) to include equivalents in other languages.

By shifting English words to students' native-language equivalents, teachers direct students' attention toward something they already know. Teachers can ask students to translate key words in their native languages and discuss them along with the English definitions. Comparisons between languages also lead to a discussion of academic vocabulary at a higher level.

Activating Prior Knowledge

Most secondary English language learners begin learning English with an already developed ability to think, speak, read, and write in their native languages. Although some students may have disrupted schooling or limited native-language literacy, others may have more advanced knowledge and skills in certain academic subjects than their native English-speaking peers.

Although activating prior knowledge before learning new knowledge is an important teaching practice for all students, it is especially important for language learners. Language learners often don't connect their prior knowledge to the content matter they are learning in English. They may assume that their native languages and prior

knowledge are too different to be relevant.

Writing About Their Literacy Experiences

One way to draw on English language learners' prior knowledge to is to invite these students to talk and write about their previous literacy experiences (Dong, 2004). Many of the preservice subject-matter teachers have noticed that students will respond enthusiastically when the teacher demonstrates a sincere interest in their previous learning.

To familiarize themselves with their students' literacy backgrounds, English teachers might ask the students to write answers to some of the following questions:

- What is your native language?
- When and how did you learn to read and write in your native language?
- Which book or writing assignment do you remember in your native language and why?
- How did your teacher back home teach you to read and write in your native language?
- Do you read or write in your native language now? If so, what do you read or write about?
- What are the similarities and differences between schools in the United States and schools in your native country?

Teachers can encourage students who have difficulty writing in English to write their answers in their native language. Either native-language peers or a bilingual teacher can translate their comments into English. Other subjectmatter teachers can use this writing exercise to learn about their students' previous learning experiences, whether they be in science, mathematics, social studies, or another content area.

For example, John, a Chinese 8th grade student, wrote about the kind of books he loved reading as a child:

The first book I ever read is a Chinese book called Funny Master. It's about an old man who is very funny, and he tells jokes in the book. I like his jokes. I love

These students' writings offer a window into their previous education.

to write stories about myself in those funny books. Now I am in the 8th grade, and I don't read those funny books any

Maria, a 10th grader, wrote about her extensive background in reading in her native China:

When I was in China, I loved reading books. I always started reading as soon as I got home and usually forgot to do my school homework. Because of this, my dad yelled at me a million times. . . . He felt that math was more important than literature. . . . I still read and write in my native language. I read a Chinese newspaper called World Journal every day, usually about half an hour to an hour. I also write my daily journal in Chinese, not so often though, maybe I should call it a weekly journal, and sometimes even a monthly journal.

Kim, a 9th grader from Korea, described how she became more confident in her writing:

The most influential book I read was a book about a Korean emperor. I got it for Christmas. In Korea, teachers check your journal entries every day. I wrote about my trip to a mountain, and I received a certificate for it. That was the first piece of writing that I received a certificate for, and I was proud of it. In the 3rd grade, my teacher congratulated me on my writing because I copied down the whole book. That made me more confident as a

Some students, such as an 11th grader named Sam from Colombia, explain the differences in schooling between their native countries and the United States:

In Colombia . . . we have the same teacher for all classes or sometimes we have a different teacher, but we stay in the same room. But here [in the United

States] we have different rooms and different teachers. Another difference is that the teacher in my country speaks Spanish and teaches in Spanish. But here many teachers can speak Spanish, but they don't teach in Spanish. The textbooks we use here for social studies talk about America and Colombia, not like the books we had back in Colombia, it was all about Colombia. But in math they teach the same as it is here.

These students' writings offer a window into their previous education and can help teachers modify instruction according to students' strengths, weaknesses, and interests. For example, after reading about John's interest in Chinese funny books, his English teacher might want to include comic book reading and writing to sustain John's interest and facilitate his language learning.

Connecting with Students' Historical Knowledge

Many English language learners have already studied history in their native countries. Numerous topics in the world geography and history curriculum provide social studies teachers with opportunities to connect to their students' prior historical knowledge (Salinas, Franquiz, & Guberman, 2006; Salinas, Franquiz, & Reidel, 2008; Short & Echevarria, 2004/2005). Teachers can invite students to share their perspectives on historical events or important figures in world history with the rest of the class.

For example, in teaching the Korean War, the social studies teacher can engage the class in reading not only U.S. texts but also a Korean companion text (see Lindaman & Ward, 2004) for a side-by-side comparison. See an example at www.ascd.org/ASCD/pdf/ journals/ed_lead/el200904_dong _comparison.pdf.). Students from Korea can play a cultural insider's role by sharing their views and understandings of the war in either their native language or English. The teacher might ask such questions as, How are the two accounts

of the Korean War similar and different? and Which account do you think is more accurate and why? In so doing, the teacher not only creates a comprehensible and meaningful learning environment in which to teach the new concepts, but also encourages a more indepth discussion of the Korean War and related concepts. This will also lead to an exploration of the perspectives and possible biases of history textbooks, thus facilitating students' development of critical-thinking skills. Students come to view the writing of history as a dynamic process, which often reveals multiple views of the past (DeRose, 2007).

Making the Connection

English language learners' previous cultural, language, and literacy experiences influence their ways of learning both English and subject-matter knowledge. Their native languages and prior knowledge are rich resources to tap into. When teachers invite English language learners to link new knowledge to what they have already learned, learning becomes more comprehensible, meaningful, and exciting. EL

Author's note: All names used in this article are pseudonyms.

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