

# Rethinking English Language Instruction: An Architectural Approach

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In this chapter we will present an approach for rethinking English language instruction using an architectural metaphor. We will lay out a blueprint for infusing English language development (ELD) throughout the instructional program, and describe the design features and general instructional principles that underpin high-quality, rigorous second-language teaching. In other words, we will outline how to conceptualize an ELD program, how to design instruction, and how to teach English for academic purposes.

We join Fillmore and Snow (2000) in their call for including linguistic knowledge in the wide range of competencies required of teachers. We further suggest that all teachers need not only linguistic knowledge, but also knowledge of how to design a comprehensive approach to ELD. We will present an approach for academic language instruction that helps resolve the acquisition versus direct teaching tension in the second-language literature and provides a workable model for incorporating language teaching throughout the instructional day.

Given the increasingly multilingual populations in our schools, to effectively prepare students for success in academic subjects teachers need a focused approach to teaching language in every classroom, in every subject area, every day. It is clear that the need for second-language instruction is growing steadily. In 1980 over half the teachers in the United States either had English language learners or had taught them previously, whereas only one in seventeen had had any coursework in teaching English as a second language (Hamayan & Damico, 1990). The number of English language learners in the United States has increased dramatically in the past decade. The most recent

statistics indicate that there were nearly 3.5 million limited-English-proficient students in K–12 schools across the country in 1997–1998 (National Clearinghouse for Bilingual Education, 2000). These estimates are considered conservative. Clearly, the demand for teacher expertise in English language development is immediate and widespread. It is time for us to embrace this need and define the skill base needed by teachers if they are to successfully develop academic-language competence in all students.

The theoretical basis for our approach stems from the major issues in the second-language literature (Beebe, 1988; Bourhis, 1990). The research reveals a number of controversies related to language instruction (Hakuta & McLaughlin, 1996); the most influential of these lies in the debate regarding language acquisition versus language learning. (See also Freeman & Freeman, chapter 2, and Crawford, chapter 7, in this volume.)

The two theories—that second language is acquired in the same way as first language (Krashen & Terrel, 1983) or that it ought to be taught systematically and explicitly (McLaughlin, 1985)—have been discussed at length in the literature. Krashen’s views on second-language acquisition in the classroom have greatly influenced practices in California over the past 20 years. Under the guise of “natural language acquisition,” many teachers resisted direct teaching of language and instead provided cooperative learning environments in which students would learn from one another. There is significant evidence that, though more interaction occurred as a result, learning language in this way did not develop sufficient language skills for academic success (Schmida, 1996). We also have evidence that aspects of language can be developed in different sequences and can be learned more quickly through explicit formal teaching (McLaughlin, 1985). A comprehensive theory of classroom instruction should incorporate both informal and formal-language learning opportunities.

Another issue in language instruction is whether students should study language processes by looking at language as an object of study and analyzing the patterns and rules of the language, or *intuit* patterns and rules by engaging in purposeful language activity.

The blueprint we propose embraces these tensions and focuses on the development of academic language—the language of school, literacy, content, and higher learning. We advocate a rethinking of some common practices in ELD instruction and take the position that language instruction requires teaching English, not just teaching *in* English or simply providing opportunities for students to interact with each other in English. We believe ELD requires purposeful daily instruction both in a developmental program and as explicit preparation for content courses, with ample opportunities for both formal and

informal learning across the curriculum and throughout the instructional day. This includes everything from interactive practice—building scaffolds from contextualized experiences wherein meaning is carried through visual cues, props, and gestures—to decontextualized input, which requires students to function with minimal supports. In the application or practice of skills to develop fluency, this instruction also consciously provides for output of language as an important part of the language-learning process, not just as an outcome of language development or a means of assessment (Swain, 1986).

The blueprint includes three components of ELD taught throughout the day (see Figure 10.1). The first component is a vertical slice of the curriculum. This is systematic ELD: English instruction as its own discipline, which follows a developmental scope and sequence of language skills that builds from simple to complex structures within the context of a range of everyday and academic-language functions (see García & Beltrán, chapter 9 in this volume).

**FIGURE 10.1 Blueprint for teaching English throughout the day**

<b>Systematic ELD</b>	Reading/ Language Arts	Mathematics	History/ Social Studies	Science/ Health	Physical Education	Art
<p><i>Purpose</i> Develop a solid language foundation</p> <p><i>Content</i> Follows scope and sequence of language skills in diverse functional contexts</p> <p>Organized by level of English proficiency</p>	<p><b>Front-loading language teaching</b></p> <p><i>Purpose:</i> Ensure access to content instruction taught in English by preteaching for upcoming language demands.</p> <p><i>Content:</i> Determined by demands of upcoming subject matter. Teaches sentence structures and vocabulary needed to engage with content skills or concepts.</p>					
	<p><b>Maximizing the teachable moment</b></p> <p><i>Purpose:</i> (1) Help ensure access to English language expression throughout the day and (2) Utilize odd moments for expanding and deepening language.</p> <p><i>Content:</i> (1) Unanticipated language needs as they arise and (2) Developing language skills as appropriate.</p>					

We term the second component of ELD “front-loading language.” This instruction occurs throughout the day as a horizontal slice of the curriculum, across all content areas. The term *front-loading* comes from the investment world: Front-loading of ELD refers to focusing on language prior to a content lesson. The linguistic demands of a content task are analyzed and taught in an up-front investment of time devoted to rendering the content understandable to the student—which takes in not only vocabulary, but also the forms or structures of language needed to discuss the content. The content instruction itself switches back and forth from a focus on language to a focus on content and back to language.

The third component of English-language instruction maximizes the “teachable moment” by utilizing opportunities as they present themselves to use precise language to fill a specific, unanticipated need for a word or a way to express a thought or idea. Fully utilizing the teachable moment means providing the next language skill needed to carry out a task or respond to an impromptu stimulus—like using a thunderstorm to stimulate a discussion about weather. Maximizing the teachable moment means exploiting unique situational contexts for spontaneous learning and taking advantage of odd moments throughout the day to expand and deepen language skills.

This blueprint helps resolve the tensions in the literature by promoting an approach that provides opportunities for gaining competence in academic language in both formal and informal settings.

We suggest that each of these three components of ELD is essential to student success. (These three components are discussed in greater detail later in the chapter.) Such a comprehensive approach is not required to develop everyday language—but it *is* necessary if students are to acquire academic-language proficiency at the level required for college admissions or job interviews. To continue the architectural metaphor, we must first have a clear vision of what we are building—in this case academic language competence—before we elaborate the design features and instructional principles necessary to support our blueprint.

## **Academic Language Versus Everyday Speech**

Academic language is different from everyday speech and conversation: It is the language of texts, of academic discussion, and of formal writing. Academic-language proficiency requires students to use linguistic skills to interpret and infer meaning from oral and written language, discern precise

meaning and information from text, relate ideas and information, recognize the conventions of various genres, and enlist a variety of linguistic strategies on behalf of a wide range of communicative purposes. For both native English speakers and second-language learners, learning academic uses of language is a lifelong endeavor (see Cummins, chapter 1 in this volume).

Though much vocabulary and syntax may be acquired through informal interaction, the range of academic-language skills—which includes the linguistic structures used to summarize, analyze, evaluate, and combine sentences; compose and write text; interpret graphs, charts, and word problems; and extract information from texts (Fillmore & Snow, 2000; Scarcella, 1996)—must not be left to chance encounters; it must be developed continuously and taught explicitly across all subject areas. Achieving full proficiency in English includes far more than merely exhibiting fluency in conversation; it means English learners know English well enough to be academically competitive with their native English-speaking peers (Hakuta, Butler, & Witt, 2000).

Academic-language proficiency helps students achieve long-term success in school. Yet many students at intermediate and advanced levels of English proficiency receive no formal language instruction (California Department of Education, 2000), leaving them fluent in everyday language (or in what Cummins [1989] refers to as Basic Interpersonal Communication Skills or BICS), but with critical gaps in academic-language knowledge and vocabulary. Although immigrant students often gain oral fluency in English in about two years (Collier, 1987; Cummins, 1984), it takes them far longer to achieve the academic-language proficiency required for success in school. Furthermore, length of time in second-language environments does not by itself guarantee the development of academic competence: Despite years of meaningful input and opportunities for interaction in English, serious gaps in linguistic competence can remain (Scarcella, 1996). Even though there are many opportunities for language learning during the course of a day in a language-rich classroom environment, merely being exposed to, and even being engaged in, activity in English is not sufficient to assure the development of full academic proficiency (Doughty & Williams, 1998).

## **Developing Academic English: Functions, Forms, and Fluency**

Teachers, like architects, must understand the design features necessary to construct successful blueprints—including the blueprint that we envision for

English language instruction throughout the day. Our formula for designing such instruction is “Functions, Forms, and Fluency.” It consists of analyzing the concept and skill requirements of lessons in

- the language task (function);
- the necessary tools (forms of language) for carrying out that task; and
- ways of providing opportunities for practice and application (developing fluency).

This approach builds on Halliday’s perspective, which treats meaning and use as the central features of language and approaches grammar from that stance (Bloor & Bloor, 1995; Halliday, 1973).

Here we attempt to draw parallels with Cummins’s (1989) approach to academic language and the three design features essential to our approach. Figure 10.2 is helpful in operationalizing Cummins’s definition of Cognitive Academic Language Proficiency (CALP) in a planning design of functions, forms, and fluency (see Cummins, chapter 1, and Crawford, chapter 7, in this volume).

Communicative competence depends on the integration of acquired language knowledge with proficient use of *forms* appropriate to *functions*:

The acquisition of vocabulary, grammar rules, discourse rules, and other organizational competencies results in nothing if the learner cannot use those forms for the functional purpose of transmitting and receiving thoughts, ideas, and feelings between speaker and hearer or reader and writer. While forms are the outward manifestation of language, functions are the realization of those forms. (Brown, 1994, p. 231)

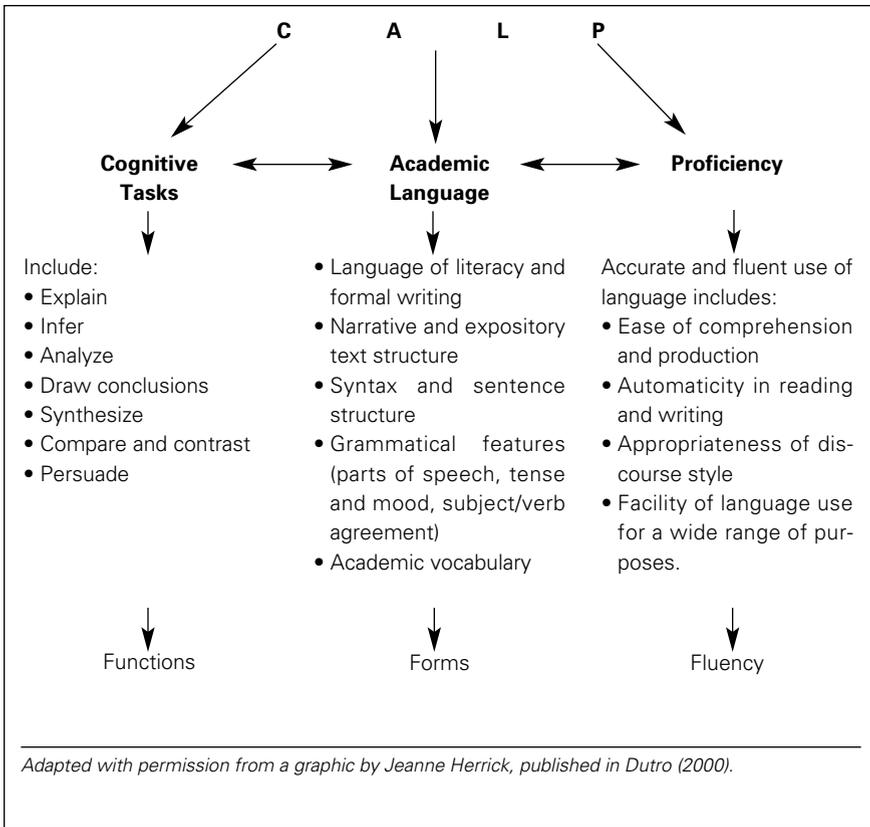
If teachers are to design effective ELD instruction in their classrooms, they must learn to analyze academic language in terms of its functions, forms, and fluency features and address these in their planning process. Like a master carpenter guiding an apprentice, teachers must anticipate the task to be learned, determine which tools are needed for the task, and provide opportunities for practice. Practice will increase students’ competence and develop their skills—skills that can then be applied to other tasks.

Let us consider each of these three design features in greater depth.

### ***Functions (Tasks)***

*Functions* are the tasks or purposes and uses of language (Brown, 1994; Halliday, 1973). That is, we use language to accomplish something in formal

**FIGURE 10.2 Conceptual model from CALP to functions, forms, and fluency**



or informal settings, for social or academic purposes. Social purposes include expressing needs and wants, making jokes, exchanging greetings, indicating agreement or disagreement, and participating in personal conversations. Academic purposes include navigating written text, asking and answering informational and clarifying questions, relating information, comparing and contrasting, explaining cause and effect, drawing conclusions, summarizing, evaluating, justifying, persuading, and conducting research. Many language functions have both everyday and academic applications; some, such as writing a lab report, are specific to academics.

Functions are the cognitive tasks that drive us to connect thought and language. Taking Halliday’s view that language is a “system of meanings” (Bloor & Bloor, 1995), we assert that teaching English language learners how to use

language for a variety of academic and nonacademic purposes is both efficient and rigorous.

We argue that well-planned instruction and early use of academic language accelerate the acquisition of academic language proficiency. Through instruction that makes explicit the tools needed for different academic language functions, students learn the vocabulary and sentence structures needed for a range of cognitive tasks and uses of language. The utterances students learn, practice, and generate move from simple to complex depending on their level of English proficiency, always building toward the goal of fully proficient use.

Below we explore several language functions with examples across five levels of proficiency, based on commonly agreed-on stages of ELD (California Department of Education, 1999). Let us first consider the specific function of *describing* people, places, or things. It requires the speaker or writer to know how to use parts of speech—particularly verbs, nouns, and adjectives. Figure 10.3 illustrates possible utterances used to describe brown bears.

At the beginning level of proficiency, students may describe by using single words and phrases and basic nouns and adjectives (“brown bear”). By the early intermediate level they have progressed to basic subject-verb-object sentences using simple vocabulary: “The bear is brown. It has claws.” At the intermediate level of proficiency the sentence is expanded and adjective use is more sophisticated (“thick,” “sharp”), and at advanced levels descriptive sentences feature more complex sentence structures and ideas and more precise vocabulary. The language *function* is the same across the levels of proficiency, but the use of language is more complex and the content information is expanded.

**FIGURE 10.3** Function chart for describing people, places, and things

<b>Beginning</b>	<b>Early Intermediate</b>	<b>Intermediate</b>	<b>Early Advanced</b>	<b>Advanced</b>
Brown; <i>brown bear</i>	The bear is <i>brown</i> . It <i>has</i> <i>claws</i> .	The brown bear <i>has thick fur</i> and <i>sharp claws</i> .	The brown bear <i>isn't a predator</i> even though it <i>has sharp claws</i> and <i>teeth</i> .	During their winter <i>hiber-</i> <i>nation</i> , brown bears <i>give birth</i> to <i>cubs</i> .

*From Dutro & Prestridge (2001)*

Another specific language function that falls under the umbrella of relating information is *locating objects in space*. For examples by level of proficiency, see Figure 10.4. The function of describing location calls for different vocabulary and grammar, particularly prepositional words and phrases (*on, behind, in front of, beneath, around, above*). A third example is the function of *relating past events*—describing action—which requires verbs, adverbs, and words that sequence (see Figure 10.5).

**FIGURE 10.4** Function chart for locating objects in space

<b>Beginning</b>	<b>Early</b>			
	<b>Intermediate</b>	<b>Intermediate</b>	<b>Early Advanced</b>	<b>Advanced</b>
Respond to direction:	The corn <i>is behind</i> the beans.	<i>In</i> the garden, we planted corn <i>behind</i> the beans.	We buried a fish <i>beneath</i> the corn, squash, and beans to fertilize them.	The plants in our garden benefit from their <i>location</i> . The beans <i>grow around</i> the squash, providing nitrogen. The corn <i>grows above</i> the squash, providing shade.
Put your plants <i>on</i> the table.		We planted squash <i>in front</i> of the beans.		

*From Dutro & Prestridge (2001)*

**FIGURE 10.5** Function chart for describing action

<b>Beginning</b>	<b>Early</b>			
	<b>Intermediate</b>	<b>Intermediate</b>	<b>Early Advanced</b>	<b>Advanced</b>
Volcano, smoke, lava	The volcano <i>was smoking</i> .	<i>Last week</i> , the volcano <i>started smoking</i> . <i>This week</i> , it <i>erupted</i> .	<i>Previously</i> , the volcano <i>began to smoke</i> , and <i>this week</i> , it <i>erupted</i> violently.	It <i>has been two years since</i> the volcano <i>erupted</i> violently.

*From Dutro & Prestridge (2001)*

As illustrated in these figures, there are specific language functions (describing actions, locations, or things) embedded within larger functions (relating information) that make distinct linguistic demands on the language user. Competence in different language functions requires competence in comprehending and generating different parts of speech within different sentence structures. Increasing competence in any language function, however, impels the speaker or writer to use increasingly complex sentence structures. Consider these examples in relation to the language function of *expressing and supporting opinions*:

- It's better to be a farmer because it is safe. Hunting is dangerous.
- In my opinion, it would be better to be a farmer because farming is safer than hunting.
- I would have preferred to be a farmer, because hunters face many dangers.

Teaching English language skills from the perspective of language functions focuses attention on the language demands of a specific academic task (describing location, relating past events) in the context of specific content (strategic planting of crops, the eruption of volcanoes). But the benefits of learning to use a language function such as comparing, for example, extend beyond a given task, because once English language learners know how to compare, they can apply that skill to a range of contexts across many content areas. Consider Figure 10.6, which presents examples of comparison statements across diverse content areas.

Reading the chart from left to right demonstrates a progression of increased proficiency. Reading it vertically demonstrates a variety of comparative statements at a given level of proficiency. With this approach, then, learning interesting content—and how to talk and write about it—is not delayed until more advanced levels of proficiency are achieved. Instead, academic language is developed from the beginning stages of second-language learning. Competence in a range of language functions equips students to participate in content instruction and supports the acquisition of academic-language proficiency. Language thus becomes a vehicle, rather than a barrier, to learning.

### ***Forms (Tools)***

Once the functions of language are delineated, the second feature of our design plan for language learning is *forms*—grammatical features and word usage.

**FIGURE 10.6** Function chart for comparing/contrasting

<b>Beginning</b>	<b>Early Intermediate</b>	<b>Intermediate</b>	<b>Early Advanced</b>	<b>Advanced</b>
triangle square three four	Triangles have three sides. Squares have four sides.	A triangle has three sides, <i>but</i> a square has four sides. They <i>both</i> have straight lines.	Triangles and squares <i>are alike because</i> they both have straight lines. They <i>are different because</i> a triangle has three sides and a square has four sides.	<i>Though</i> squares and triangles are similar because <i>both have</i> straight lines, a triangle is three-sided and a square is four-sided.
big ocean small lake	An ocean is <i>big</i> A lake is <i>small</i> .	An ocean is <i>larger than</i> a lake.	An ocean is enormous <i>compared with</i> a lake.	An ocean is vast; Even the largest lake is small by <i>comparison</i> .
Eagles fly, Seagulls fly, Penguins swim.	Eagles <i>can</i> fly. Seagulls <i>can</i> fly. Penguins <i>can</i> swim.	Eagles and seagulls <i>can</i> fly, <i>however</i> penguins <i>cannot</i> .	Eagles fly <i>high</i> Seagulls tend to fly <i>lower</i> . Penguins <i>can't fly at all</i> .	<i>Both</i> eagles and seagulls <i>have</i> the ability to fly. <i>However</i> , penguins <i>do not</i> ; <i>instead</i> , they <i>are</i> able to swim.
pig spider	Wilbur <i>is a big</i> pig. Charlotte <i>is a small</i> spider.	Wilbur <i>is a young</i> pig, <i>but</i> Charlotte <i>is a grown</i> spider.	Wilbur <i>acts</i> immaturely and panics a lot, <i>but</i> Charlotte <i>remains</i> calm and reassuring.	Wilbur <i>appears</i> immature and excitable, <i>whereas</i> Charlotte <i>is always</i> a voice of reason.

*From Dutro & Prestridge (2001)*

These are the tools necessary for discourse, for reading and writing, for using complex language, and for engaging in cognitive processes. Forms include parts of speech, verb tenses and subject/verb agreement, the use of pronouns and conjunctions, and sentence structure or syntax (complex and compound sentences and word order).

As students progress through the grades the demand for complex language use in speaking, reading, and writing increases dramatically, leaving many English language learners unable to grasp more than the gist of what they read or hear. Limitations in students' knowledge of English—including lack of vocabulary and difficulty comprehending complex sentence structures—preclude their inferring subtleties, discerning irony, and comprehending relationships between and among ideas, characters, or events. A solid knowledge of language forms supports students as they deconstruct long sentences to make sense of them. The accurate and fluent use of grammatical forms helps ensure perception of the student as a proficient speaker, enabling full participation in academics and a respected voice to advocate for his or her positions and interests (Delpit, 1995).

Just as an architect understands the electrical system of a well-functioning building, so a teacher must understand the way English works. This requires more advanced linguistic knowledge than is currently possessed by most teachers. For example, teachers must recognize when and why to use perfect tenses (“He has been driving me crazy”) rather than simple ones and how phonemes (sound units), morphemes (meaning units), and basic syllable patterns (consonant-vowel-consonant) work (Fillmore & Snow, 2000; Moats, 2000). They must understand the Anglo-Saxon, Latin, and Greek roots of English and how these affect orthography, morpheme patterns, and word usage. If teachers understand language well, they can explicitly teach these forms. So knowledge of the scope of English grammar, morphology, and phonology supports the teaching of reading and academic language to all students. This is basic teacher knowledge that our current student population demands.

Teachers of English learners must also understand the general sequence of how language forms are learned in a second language. For instance, a possible continuum of verb forms, from simple to complex, follows:

- present and past progressive tense (“is walking,” “was not walking”)
- future tense (“going to walk”)
- present perfect tense (*have/has* + past participle: “She has been walking a mile each day for the past year.”)
- phrasal verbs (“Walk down the street.” “Walk up the path.”)
- past perfect tense (*had* + past participle: “We hadn’t been walking long when...”)
- conditional form (“If we walk to the store, we *will* not be able to carry many bags.”)

- future and conditional perfect tenses (“has been walking,” “will have been walking”; “*If she had walked, she would have gotten some exercise.*”)
- passive voice (“This novel *was written* by Ernest Hemingway.” “This picture *was taken* by my grandfather.”)

Clearly, this continuum is not fixed. Through innumerable interactions in classroom, playground, home, and community settings, students are exposed to a range of language forms and may recognize and use an advanced form while lacking competence in more basic ones.

**VOCABULARY.** We define *forms* to include not only grammatical forms but vocabulary. Knowledge of word usage along with a rich and varied vocabulary are critically important aspects of language proficiency and essential to academic success (Beimiller, 1999; Kame’enui & Simmons, 1998; Moats, 2000; Stahl, 1999). An intervention study showed that the vocabulary knowledge and reading comprehension gap between English language learners and native English speakers can be significantly reduced through enriched vocabulary instruction (McLaughlin et al., 2000).

One way to think of vocabulary is as comprising “general-utility” and “content-specific” words. Continuing our architectural metaphor, we refer to these, respectively, as “brick” and “mortar” words. “Brick” words are the vocabulary specific to the content and concepts being taught in a given lesson and might include words (to pick a random sample) such as *government, revolt, revolution, polarized, habitat, climate, arid, predator, adaptations, germinate, and mitosis*. Traditionally, this is the vocabulary teachers preteach at the beginning of a content area lesson or unit. In the earlier grades, many of these words are nouns—*giraffe, hoof, stem, leaf*—and can be illustrated or labeled. In later grades these words tend to be conceptual.

“Mortar” words and phrases are the general-utility vocabulary required for constructing sentences—the words that determine the relation between and among words. They are the words that hold our language together, and understanding them is essential to comprehension. Some examples of mortar words are

- connecting words required to construct complex sentences: *because, then, but, sometimes, before, therefore, however, whereas*
- prepositions and prepositional phrases: *on, in, under, behind, next to, in front of, between*
- basic regular and irregular verbs: *leave, live, eat, use, saw, go*

- pronouns and pronominal phrases: *she, his, their, it, us, each other, themselves*
- general academic vocabulary: *notice, think, analyze, direct, plan, compare, proof, survive, characteristics*

Many mortar words and phrases are basic vocabulary that may be unfamiliar to students who are learning English. Such vocabulary is best taught explicitly in the context of language use, as these words do not generally stand alone, but function within the context of a sentence or phrase along with brick, or content, words. Without deliberate instruction in the use of these words, students may not discern the time/place relationships among the rest of the words in a sentence or passage.

LINKING FUNCTIONS AND FORMS. To illustrate the importance of addressing both brick and mortar vocabulary in language teaching that links function and form, let us consider again the language function of *comparison*. Students are called on to compare across content areas. Teachers might expect students, for example, to describe the similarities and differences among geometric shapes or between the values of numbers (*larger/smaller, less/more*), the relative nutritional value of different foods, the characteristics of bats and owls, or the personality traits of two characters in a novel.

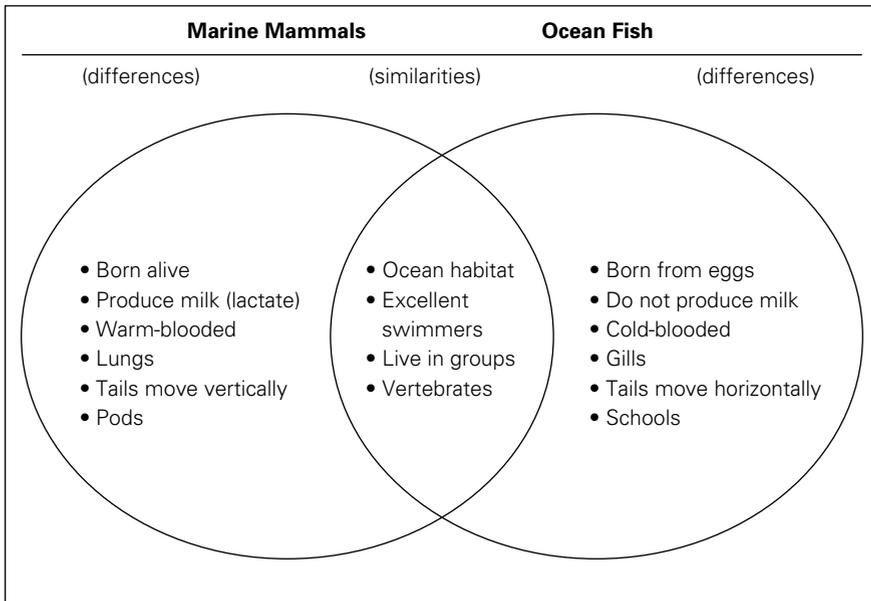
Some possible brick vocabulary useful in discussing the similarities and differences between marine mammals and ocean fish, for example, is shown on the Venn diagram in Figure 10.7. This vocabulary is essential to expressing the idea that there are physical and behavioral similarities and differences between these two types of animals. However, the brick (content-specific) words of the Venn diagram do not by themselves equip students to demonstrate their comprehension of that idea. They also need mortar words and phrases in order to generate the sentences that make it possible to make the comparison.

By removing the brick words that are specific to content, the mortar words and phrases used in sentences are revealed. For example,

Marine mammals are warm-blooded, but fish are cold-blooded.  
 \_\_\_\_\_ are \_\_\_\_\_, but \_\_\_\_\_ are \_\_\_\_\_.

The basic subject/verb/predicate adjective structure of this comparison sentence can be adapted by varying the verbs (e.g., *have, are, can, do, use*) or conjunctions (*however, whereas*). The ability to manipulate these basic sentence structures using a variety of content is necessary for demonstrating conceptual understanding in a lesson calling for comparison.

**FIGURE 10.7 Venn diagram of brick words for marine mammals and fish**



As illustrated previously (see Figure 10.6), comparative sentences range from simple to complex. Thus, the level of difficulty in a comparison task can be modulated by teaching the mortar vocabulary and sentence structure at levels of complexity appropriate to students' language skills, allowing students to engage in the work regardless of their level of English proficiency.

Another essential point is that these sentence frames can be used for comparing *any* two things. Explicitly teaching mortar vocabulary and how to construct various sentence frames helps students learn not only to compare marine mammals and ocean fish, but how to use language *to compare*, generally. Students will then be more apt to transfer those skills to making comparisons of triangles in mathematics, or of cultures in social studies. Wall charts labeled “Words and Phrases for Comparing” and “Sentence Frames for Comparing” serve as ongoing, practical references and become resources for student writing—and in conjunction with the instruction we have described, they enable students to develop metalinguistic awareness.

Functions (such as comparison) and forms (the vocabulary, grammar, and syntax necessary to express that) are two of the three design features of our instructional blueprint for teaching English. The third is *fluency*.

## **Fluency**

Accurate facility in a wide range of language functions and grammatical forms, along with a rich vocabulary, is required for academic success: Consider standardized testing, classroom participation, reading literature and informational text, writing essays, and presenting oral reports. *Fluency* refers to the ease of both oral and written comprehension and of the production of speech and writing. It is the facility with which a speaker, reader, and writer uses language. *Accuracy* is the precision and correctness with which students speak, write, and comprehend written and oral language. Students develop fluency through focused and deliberate engagement with a range of uses of language—both oral and written—together with many opportunities to practice newly learned structures in different contexts.

In cases in which students have studied a language but had few everyday interactions in it, they may not understand speech in that language as well as they can read and write it (Canale & Swain, 1980). Most English language learners, however, are exposed to English through the media and in everyday interactions; for these students, receptive language generally precedes (and often exceeds) expressive language. Teachers of such children must consciously model language forms and vocabulary above the students' current expressive level while maintaining comprehensibility.

Now that we have established our conceptual framework and presented its components and design features, the next section of this chapter will take a more practical approach.

## **General Principles for English Language Instruction**

English language instruction should provide not only ample opportunities for meaningful and engaging uses of language for a wide range of social and academic purposes, but necessary instruction in how English works. It should be deliberate, strategic, and purposeful. This section will present six guiding principles of English language instruction, drawn from the literature in cognitive psychology, language acquisition, and instructional practice. To develop high levels of language proficiency, we contend that teachers must

1. build on students' prior knowledge of both language and content;
2. create meaningful contexts for functional use of language;
3. provide comprehensible input and model forms of language in a variety of ways connected to meaning;

4. provide a range of opportunities for practice and application so as to develop fluency;
5. establish a positive and supportive environment for practice, with clear goals and immediate corrective feedback; and
6. reflect on the forms of language and the process of learning.

Let us look more carefully at each of these principles.

### ***Prior Knowledge***

Building on students' prior knowledge is essential. The value of tapping into the prior schema that we use to organize information and ideas has been apparent for a number of years, owing to the work of cognitive psychologists (Palinscar & Brown, 1984; Rumelhart & McClelland, 1986) as well as socio-culturalists (Au, 1980; Heath, 1983). This body of work recommends using such strategies as semantic mapping, graphic organizers, and story walking. It is essential that every lesson take into account what students bring to the lesson and build on that existing knowledge and on prior language skills. Native language used strategically can solve some specific problems in connecting new learning to prior concepts or language forms (Gersten & Baker, 2000).

### ***Meaningful Contexts***

We know that creating context is vital if students are to map new knowledge onto prior knowledge or new forms and labels onto existing concepts. That is why a functional approach that creates purposeful settings for language use is so important. Moving from the concrete to the abstract is another basic principle. The use of visuals, gestures, graphic organizers, and word banks to reinforce concepts and vocabulary is effective in this regard (Gersten & Baker, 2000). Using simulations, gestures, realia, and theater is valuable in the early levels of English proficiency; comparisons, metaphors, and analogies (Marzano, 1998) are more suitable at higher levels of language functioning.

### ***Comprehensible Input Connected to Meaning***

Language, whether it is one's first or second language, is learned through modeling within a communicative context (Long, 1991). This holds true with respect to tasks ranging from engaging in simple speech to writing a complex essay. Learning occurs when modeling is clear; information is presented in

small, comprehensible chunks; and frequent feedback is provided. Input, modeling, and output occur within clearly defined pedagogical tasks facing the learner, such as applying for a job, buying a house, planning a trip, or applying for college (Doughty & Williams, 1998).

### ***Practice and Application***

The goal for language learners is to move from the stage during which capacity is limited and language skills are new to automatic processing (Brown, 1994). Creating situations for focused interaction through debates, theater, interactive writing, and the like gives students opportunities to try their new language learning.

Cooperative group work around a situational task offers students the chance to use language purposefully. Cooperative learning is most beneficial when tasks are highly structured (Gersten & Baker, 2000); language output and practice are likewise maximized when tasks are structured—and when groups are small (preferably dyads or triads) and there are group incentives for appropriate language use (Moran, 1996). There is evidence that well-designed cooperative learning tasks afford students far more practice in speaking and listening than teacher-centered activities (Gersten & Baker, 2000). Though English language learners at similar levels of proficiency do not make more errors with one another than when speaking to fluent speakers, they cannot help one another discern how to correct these errors (Lightbrown & Spada, 1999) and do not provide one another the needed corrective feedback.

### ***Safe Environment, Clear Goals, Corrective Feedback***

For English learning to occur, students need a safe learning environment, clear output goals, and opportunities for practice and feedback. Krashen's (1985) "affective filter" described the importance of creating a safe, comfortable environment in which students can acquire a second language through engagement in natural situations. Scarcella (1996) concludes from her review of the literature of the 1980s that policies like those of the California Department of Education discouraged direct teaching of language and corrective feedback. She suggests a need to revisit these policies.

Scarcella found two main areas of weakness in her college students' English skills. The first is that limited knowledge of vocabulary and word usage results in misuse of words or word forms, mishandling of diction (using conversational words in academic writing), and use of acoustic approximations

(e.g., the novel *Catch Her in the Right*). The second linguistic weakness is a limited understanding of English morphology and sentence structure, resulting in misuse of articles, pronouns, and nouns, misuse of verb tenses, and the inability to handle causative and conditional structures (Scarcella, 1996).

Marzano observes that “the simple act of setting instructional goals produces significant gains in student learning”; coupled with feedback regarding progress toward these goals, this is “one of the most straightforward and powerful techniques a teacher can employ” (Marzano, 1998, p. 128).

Feedback must be perceived as such, that is, not simply conversational or even written “recasts” of student speech or writing. Reyes relates end-of-the-year interviews with sixth graders who were surprised when apprised of their continuing spelling and grammatical errors. “Why didn’t she tell me?” they wondered, expressing the expectation that the teacher’s role included providing explicit feedback (Reyes, 1992).

Particularly in settings with few native English speaking models, teachers must create many opportunities for English learners to learn, use, and receive corrective feedback on academic language for the purpose of building the linguistic competencies required to achieve grade-level content standards.

Though we agree it is important to create an environment in which mistakes are seen in a positive light, clear goals and corrective feedback must be a part of the equation to develop academic language skills to an advanced level. Teachers have the responsibility to provide feedback so students can improve their performance and internalize correct usage (Lightbrown & Spada, 1999; Marzano, 1998).

### ***Reflection on Forms and Process***

Modulating cognitive and language demands by lowering cognitive demands when the language demand is high and vice versa allow students to move back and forth from a focus on concept to a focus on language form. Sharing this process with students will help them learn how to move back and forth effectively when learning new language forms, thus avoiding cognitive overload. Preteaching critical vocabulary prior to student reading (Rousseau, Tam, & Ramnarain, 1993) allows students to focus on form before focusing on content.

Metalinguistic reflection is particularly effective with English language learners, who can reflect on their native language to give them insight into the new language forms they are learning (Moran & Calfee, 1993). Encourag-

ing students to reflect on the process by which they are learning language will help them to manage their own future learning situations.

## **Operationalizing the Blueprint: Three Components of English Language Development**

### ***Systematic English Language Development***

Systematic ELD is designed to build a solid foundation in English language using an organized method that does not leave the development of forms or fluency to random experiences or chance encounters. It is the vertical slice of the blueprint; it is its own discipline. It is distinct from other disciplines in that the focus of instruction is on explicitly teaching English—functions, forms (including brick and mortar vocabulary), and fluency—for the purpose of increasing communicative competence in listening, speaking, reading, writing, and thinking, for both social and academic purposes.

Current ELD practices vary widely, and many English language learners receive limited or inconsistent assistance in learning English. The California Department of Education identified a number of problematic themes in the 1999 Language Census: (1) English learners of varying English proficiency levels are grouped together and are receiving the same ELD instruction regardless of ability; (2) ongoing assessment of students to determine progress in English proficiency is not conducted; (3) many English learners at advanced levels or in mainstream programs are not receiving ELD; and (4) ELD instruction is not tied to specific standards or expected outcomes.

Although it is beneficial to modify speech so as to assure comprehension, it is not necessary to limit utterances or restrict exposure (Lightbrown & Spada, 1999). Explicit instruction in language structures at and just above the level of proficiency accelerates learning and ensures that students learn less common usage and specifically academic forms. It makes sense, then, to anticipate the next level of language learning by means of focused instruction. Effective ELD instruction is targeted to the limits of what students can already do with English and teaches the skills needed to move ahead.

A well-planned, systematic ELD component lays out a scope and sequence of language forms as expected outcomes. Students are grouped by level of proficiency for this part of the instructional day. Ongoing assessment with respect to mastery of forms and the ability to apply them in different contexts drives instructional planning in order to ensure that learning is on track.

The systematic ELD component, which draws from Long’s “focus on forms” (1988), does not practice isolated grammatical features, as in traditional grammar translation programs, but rather focuses on form within a meaning-based context (Doughty & Williams, 1998), and on communicative functions (e.g., using the past tense to describe what happened in a movie) relevant to the life experiences of learners.

The “focus on forms” framework operationalizes forms to include grammatical structures, syntax, and vocabulary. Instruction includes comprehensible input of forms, starting with extensive modeling; practice, with opportunities for relevant output—and with variation, so that students can define when the form is appropriate to the context; and application to develop proficiency. Lessons can be based on literature, content, or activities but must focus on the forms of the language.

TEACHING TOOLS: LEVELS OF PROFICIENCY. Training for a novice construction worker includes a careful introduction to each of the tools of the trade, starting with a simple hammer and saw and proceeding later to power tools. By the same logic, a novice learner of a second language should be introduced to the forms or structures—the tools—of the language in a developmental sequence: from simple, commonly used forms to more complex and abstract ones. As with the construction worker, this should not occur in an isolated laboratory, but rather in a functional context that enables immediate practical applications. Let us now look at how this systematic approach works at different levels of development.

At a beginning level, the focus of ELD instruction is often on understanding commands, or giving simple one-word responses in survival situations like getting what you need or following directions. As understanding develops, students learn basic common everyday vocabulary and simple grammatical present, past, and future tenses. They practice extensively, receiving instructional feedback from more experienced speakers and the teacher. Reading and writing are introduced at the beginning levels through labeling; modeling of sentence frames and practice in completing them with words from banks, webs, and other resources; and the use of predictable, patterned texts featuring basic vocabulary and sentence structures. Lesson plans may revolve around a particular grammatical form and provide for extended practice with that form, or may address a content theme that encourages opportunities for connecting new learning to prior schema and applies that learning to situations relevant to the life of the student.

Intermediate-level students are engaged in more reading and writing, and in using a variety of verb tenses and grammatical structures. There is tremendous vocabulary growth as students learn synonyms (e.g., *large/giant/huge*), antonyms (e.g., *fast/slow*, *strong/weak*, *addition/subtraction*) and basic idioms (“cut it out,” “raining cats and dogs”). Writing might focus on forms and conventions, such as pronoun usage or past-tense verb endings; oral language experiences might include reporting, dialogues, skits, or games.

Systematic ELD instruction is currently rare at advanced levels, depriving students of the opportunity to master the academic language necessary to compete in higher education academic contexts. Extending vocabulary, particularly general-utility academic words, and practicing complex verb tenses are essential for reading more complex narrative and expository text and for thinking about the abstract concepts students will encounter as they proceed through school. Advanced-level ELD should focus on addressing persistent problem areas in grammar, working to develop fluency and automaticity in reading comprehension; teaching idioms, along with metaphors and other figurative language; and deconstructing expository text (Kinsella, 1997; see also Hernández, chapter 6 in this volume).

Intense attention to vocabulary development, modeling and clear instruction in reading comprehension strategies and written composition, the use of graphic organizers, and providing many opportunities to practice new skills are essential for older learners. Emphasis on metalinguistic understanding and intentional focus on how language works also can accelerate learning.

At each level of proficiency, ELD instruction can occur in large-group instruction or in smaller groups within the class or pulled across classes into appropriate levels of proficiency. Systematic ELD that is thoughtful and thorough lays a solid foundation for English language learners as they develop proficiency at each level—but it is not sufficient. Rather, English language development instruction must be incorporated into all content areas.

### ***Front-Loading Language Teaching***

The second component of a comprehensive ELD program is the horizontal slice of the blueprint, crossing all content disciplines. Front-loading involves strategically preteaching the vocabulary and language forms needed to comprehend and generate the language appropriate to an upcoming lesson—making an investment of classroom time to help ensure that content lessons are comprehensible to English language learners. Front-loading a content

lesson anticipates the linguistic competence that the learning will require—as determined by the language requirements of the discipline in general and the lesson in particular—and intentionally teaches those skills.

A contractor needs specific tools for specific construction tasks, such as building a bookcase; if the task is to install a sink the tools are different, though they may overlap. So it is with respect to linguistic tasks. Students must have an array of linguistic skills in order to manage a range of language uses, purposes, and tasks; some of these, such as mastery of the regular and irregular forms of common verbs, overlap across disciplines and tasks, but using the conditional is particularly important to hypothesizing in science. So the teacher preparing students to hypothesize will consider how he or she wants students to make conditional statements and will teach students to use the appropriate language. Analysis of the linguistic demands of different cognitive tasks is at the heart of front-loading.

The ability to use many language tools is developed in a systematic ELD program, but this foundation alone will not provide English learners with the skills necessary to meet the range of language demands they will encounter across content areas. Front-loading in content area instruction is necessary to help students learn the specific language required to write a science lab report, frame an argument about the causes of a historical event, or summarize the plot of a novel—or to participate in a classroom discussion about current events or present an oral report on the need for recycling. Front-loading language teaches students the language of the content discipline.

**CONTENT AREA INSTRUCTION.** Content area instruction requires special attention directed at English language learners in every classroom that is not an ELD, ESL, or foreign language classroom. The primary approach to content area instruction for English language learners in U.S. schools is *sheltered instruction*. These classes are designed to simplify language demands and modify grade-level content instruction so as to make it accessible to students learning English; the adapted instruction is designed to provide an opportunity for English language learners to learn both content and academic language (Bunch, Abram, Lotan, & Váldez, 2001). Many mainstream content area teachers, however, receive little or no support regarding how to adapt their teaching methods to ensure that their English language learners have meaningful access to content.

The general principles of ELD hold true with respect to content area instruction (Moran, 1996). For one, content curriculum must be bridged to the knowledge and experience that students bring to the classroom (Díaz, Moll,

& Mehan, 1986; Heath, 1983). More generally, a positive and supportive environment for content instruction implies a sensitivity to the competing cognitive demands posed by challenging content and complex language. Organizational strategies—tools that fit a concept into a bigger picture as well as organize bits of information within a context or a topic (Calfee, 1981; Hernández, 1989)—are utilized at every level of the process. Meaningful contexts and practice through interaction with the language and concepts involved must be varied depending on the content and the function, but it is clear that interaction, whether in social studies, science, or mathematics, enhances learning (Hudelson, 1989; Reyes & Molner, 1991). Reporting or sharing is encouraged through a variety of modes of expression, both orally and in writing, and supported by the teacher's modeling and providing sentence frames and relevant vocabulary (Kinsella, 1997).

Research in the area of sheltered instruction has yielded some useful strategies. The Sheltered Instruction Observation Protocol (SIOP) model includes both content and language objectives, along with content concepts, in the preparation phase (Echevarria, Vogt, & Short, 2000). The Science-Language Integration rubric (Stoddart, Pinal, Latzke, & Canaday, 2002) defines five levels of teacher knowledge of content/language integration. The distinctions we define may help teachers progress through these levels in their understanding and in their ability to successfully integrate language and content.

**SHELTERED INSTRUCTION VERSUS FRONT-LOADING FOR LANGUAGE.** There are challenges involved in providing content instruction that is accessible and rigorous. As students progress through the grades, the linguistic and content demands made on them increase substantially, challenging even the best-intentioned and most knowledgeable teachers to bridge students' language proficiency in relation to the linguistic and content requirements of new subject matter. There is a risk of oversimplifying the content to accommodate the students' language level (Bunch et al., 2001); at the same time, because the primary goal of content instruction is to teach the knowledge and concepts of a discipline, the emphasis on content tends to dominate while language demands tend to be given short shrift. So sheltered content area instruction often leads to sacrifices in learning English, as teachers tend to emphasize content acquisition over building English language abilities and inadequate time is provided for English language learning (Gersten & Baker, 2000). Because of this lack of deliberate focus on the language required for accomplishing academic tasks, English language learners' linguistic skills cannot keep pace with the ever-

increasing demands of the curriculum, and the gap between what they know and what they need to know continues to grow (Stanovich, 1986).

We suggest that front-loading the language required for content and content-related tasks begins to address this difficulty in the sheltered instruction model. By regarding language and content demands as distinct but related and complementary, we can help ensure that students receive adequate time and attention with respect to developing the linguistic competencies needed to support complex content learning.

When familiar content is used to explicitly teach and practice the essential language skills an upcoming content lesson requires, the content demand is lowered so that students can attend to the language learning. As a master carpenter would teach a novice the skills of measuring and sawing using basic cuts first, so it is with respect to front-loading language for content instruction: The math teacher explains the language of lines and angles with familiar geometric shapes before asking students to apply those terms to complex figures. Without this instruction, the student may miss the concept being taught, because he or she is preoccupied with attempting to understand what is meant, say, by the phrase *is parallel to*. But now that some of the key language has been taught, attention is more likely to be focused on the content instruction. The purpose of front-loading, then, is to anticipate and remove linguistic barriers to subject matter comprehension.

During the content lesson, the teacher does not forget about language skills; indeed, they will be thoughtfully practiced, reinforced, and revisited throughout the content lesson, as the emphasis shifts from language to content and back, as needed. It should be noted here that the emphasis in a front-loading lesson is on the language requirements of function-related tasks, requiring what we have termed “mortar” vocabulary. The content-specific vocabulary—or “bricks”—is generally taught in the content lesson itself.

**THINKING THROUGH A FRONT-LOADING LANGUAGE LESSON.** Front-loading language instruction must be carefully thought through. A useful approach is to determine the language functions and identify the cognitive tasks that a given lesson targets. The teacher must first define those tasks by asking, What are the cognitive/linguistic demands of this assignment? Do I want the students to share information, tell a story, write an autobiographical essay, analyze a written math problem, or contrast animal behaviors? What is the linguistic load of the text? What are the demands of the readings in the discipline (textbooks, articles, websites), including chapter and section headings, charts, graphs, and maps?

Furthermore, what language forms will be needed to accomplish these tasks? What grammatical structures and vocabulary will be needed? Will the assignment require forming a question, or talking in the past tense? At this point it may be useful for the teacher to imagine the language he or she would like students to use, both orally and in writing. What kinds of sentences might students use to express the ideas being taught?

Next, what support is needed in order for students to learn to use these language structures? What are ways to engage students' interactions so as to further both the linguistic and conceptual goals of the lesson? And how can opportunities be structured for students to use these new forms appropriately and develop automaticity and comfort level (fluency)?

The purpose of both systematic ELD and front-loading is to develop competence in English. But whereas systematic ELD is organized by proficiency level based on competence with forms, front-loading language teaching is planned according to the demands of the content lesson and with a range of proficiency levels in mind.

By itself front-loading is not a comprehensive ELD program and may leave gaps in language knowledge; it is a complementary component to systematic ELD instruction. But we suggest that front-loading language enhances not only current sheltered instructional practices, but mainstream content instruction as well.

### ***Maximizing the Teachable Moment***

Finally, just as any good architect will take advantage of the natural terrain in designing a blueprint, we recognize the importance of contextual, incidental circumstances that create special learning opportunities.

Good teaching involves not only creating a language-rich classroom, but taking advantage of spontaneous opportunities to maximize learning—and make possible a more natural process of language acquisition. We call this informal, nonsystematic, yet potentially powerful aspect of English language development, which can occur at any moment during the school day, the “teachable moment.”

How do serendipitous moments turn into learning opportunities? Teachable moments are captured when teachers assess the context and provide on-the-spot immediate input by briefly modeling, clarifying, or explaining a language need and providing an opportunity for practice. For example: Two students are in a conflict. The teacher insists students use “I” statements and models, “When you (do \_\_\_\_\_), I feel \_\_\_\_\_.” This gives the students a

language frame—the mortar words to plug the bricks into. The teacher can also supply the bricks—by asking, “Do you feel sad, mad, hurt?” and then modeling these bricks within the mortar frame.

Or, Gabriela walks in and says, “Look, teacher, I got new red *choose*,” in her best approximation of *shoes*. Appreciating the new shoes with correct modeling—“Look at Gabi’s new shoes” (with an emphasis on the sound of *sh*)—provides Gabi with immediate comprehensible input. A brief minilesson on the *sh/ch* distinction provides the clear goal, safe context, and instructional feedback needed to call attention to the distinction between these phonemes. An explanation of how English has two different sounds whereas Spanish uses one sound for both graphemes provides the relevant metalinguistic understanding.

Another example: Kenji walks into class and announces, “I earn \$10 yesterday and I earn \$10 tomorrow too.” A quick assessment by the teacher suggests the opportunity not only to present a mathematics minilesson but also to focus on language forms (past and future tense verb distinctions), by having Kenji and his classmates talk through several word problems revolving around his earnings.

Or, a student is writing an essay discussing the benefits of going to college and is stuck on how to get from one paragraph to the next. This difficulty allows the teacher to provide an on-the-spot lesson on the mortar words needed for *transitions* to help the student’s paper *flow*. A quick brainstorming regarding college preparation requirements helps the student fill in the brick vocabulary in this essay as well.

Teachable moments occur every day—from a butterfly flying into the room to the latest news headline—and during almost every lesson. Whether corrective feedback turns into learning or not depends on how the teacher handles the moment, the safety of the environment, how comprehensible the input is for the student, and whether or not opportunities for output are supported. Even given the most artful teacher, however, these random moments do not make up, as some teachers suggest, an entire ELD program. They are, rather, a series of serendipitous opportunities to accelerate the learning of a new language form or expand vocabulary in a functional context. They do not take the place of systematic ELD instruction nor eliminate the need for front-loading language for content instruction.

It is important to set clear daily goals with respect to both language and content development, and it is also important to know when to seize an opportunity that presents itself to teach a language skill at a perfect moment of receptivity. There are no hard-and-fast rules, though, for when to stay focused on

goals and when to seize the moment. This is where teaching becomes an art, not a science. Just as an architect must balance the structural and aesthetic demands of his or her work, so must a teacher balance the science and the art of teaching.

## Conclusions

Having presented the role of teacher as architect in implementing a well-designed approach to English language instruction, let us consider the knowledge base these architects will need. We return to Fillmore and Snow's (2000) discussion of what linguistic knowledge teachers must possess in light of the demographic and linguistic diversity in our world today. We agree that all teachers need to understand the linguistic features of English and have some ability to compare and contrast the most common languages of the students they serve. Furthermore, we believe that teachers need a fundamental understanding of the central role that academic language plays in learning and of the components of a comprehensive approach to ELD, including how to structure all three components—systematic ELD, front-loading language for content instruction, and maximizing the “teachable moment”—into their instructional day. They also need to be skilled in using the design features of functions, forms, and fluency to help plan their lessons. Finally, they need to be proficient enough with the above knowledge and skills to be able to create a rich language-learning environment. Perhaps future teacher preparation examinations will include tests of linguistic knowledge and of the underlying principles of English language development.

Studies by Haycock (1998) and others suggest that low teacher expectations with respect to language-minority students, as exhibited by assigning low-level tasks and providing minimal instruction, are widespread (see Coppola, chapter 8, and Chang, chapter 11, in this volume). English language learners face tremendous challenges in gaining both the linguistic and academic proficiencies required for academic success, and each student deserves thoughtful, rigorous, and well-designed instruction that is targeted to his or her level of language proficiency and provides for application of increasingly high levels of speaking, listening, reading, writing, and thinking skills. Our hope is that an architectural approach will help teachers, administrators, and policy-makers rethink the structure and design of academic language instruction in

schools. Further study might usefully focus on how best to develop teacher ELD knowledge, and research is needed on the most effective use of the constellation of ELD components and design features presented here.

We believe that the architectural approach provides a powerful metaphor for English language instruction. For one thing, it gives proper prominence to the *design* aspect of language instruction. If teachers take seriously their role in planning for the teaching of language every day, English language learners will gain the tools to build durable foundations and strong academic language structures that will allow them to function comfortably in any academic or applied setting.

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