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 Wong Fillmore and Snow (2000) in their call for including linguistic knowledge in the wide range of competencies required by 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 lay out 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 of the teachers in the United States either had English language learners or had taught them previously whereas only one in seventeen had any coursework in teaching English as a second language (Hamayan, 1990). The number of English language learners in the United States has increased dramatically in the past decade. The most recent statistics indicate there were nearly three and a half million limited English proficient students in K-12 schools across the country in 1997-1998. (Macías, 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 to successfully develop academic language competence in all students.

The theoretical basis for our approach stems from the major tensions in the second language literature (Beebe, Selinger, Genessee, Long, Cummins and Scover, 1988, Bourhis, 1990). The research has uncovered a number of tensions related to language instruction (Hakuta and McLaughlin, 1996). The most influential of these lies in the debate regarding language acquisition versus language learning.

The two theories, that second language is acquired in the same way as first language (Krashen & Terrel, 1983), or that it ought to be systematically and explicitly taught (McLaughlin, 1985), have been discussed at length in the literature. Krashen's influence on second language acquisition in the classroom greatly influenced practices in California for the past twenty years. Under the guise of "natural language acquisition" many teachers resisted direct teaching of language and instead provided cooperative learning environments for students to learn from one another. There is significant evidence that, though more interaction occurred, 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 action for classroom instruction should say "yes" to both informal and formal language learning opportunities.

Another tension is whether students should analyze language processes by looking at language as an object of study and seeking the patterns and rules of language, or by intuiting patterns and rules of language by engaging in purposeful language activity.

Blueprint for teaching English throughout the day

The blueprint we propose embraces these tensions and focuses on the development of academic language, or 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 in both 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 where meaning is carried through visual cues, and props and gestures, to decontextualized input, where students can 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 the assessment or outcome of language development (Swain, 1986).

The blueprint includes three components of ELD taught throughout the day. The first component is a vertical slice of the curriculum. This is systematic ELD referring to English instruction as its own discipline that 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.

Figure 1: Blueprint for teaching English throughout the day

Systematic ELD	Reading/ Lang. Arts	Math	History/ Social Studies	Science/ Health	PE	Art
Purpose Develop a solid language foundation	**Front-loading EL**					
	Purpose Ensure access to content instruction taught in English by preteaching for upcoming language demands					
Content Follows scope and sequence of language skills in functional contexts	*Content* Determined by language purposes. Teaches sentence structures and vocabulary needed to engage in content skills or concepts					
Organized by level of English proficiency	**Maximizing the Teachable Moment**					
	Purpose 1) Help ensure access throughout the day and 2) Utilize odd moments for expanding and deepening language skills					
	Content 1) Unanticipated language needs as they arise 2) Developing language skills.					

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 describes a focus on language preceding a content lesson. The linguistic demands of a content task are analyzed and taught in an up-front investment of time to render the content understandable to the student. This front-loading refers not only to the vocabulary, but also to the forms or structures of language needed to discuss the content. The content instruction, like the action of a piston, switches back and forth from focus on language, to focus on content, and back to language.

The third component of English language instruction maximizes the "teachable moment." That is, the utilization of 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 using 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. The graphic below illustrates the blueprint for teaching English throughout the day.

We suggest that each of these three components of ELD is essential to student success. Such a comprehensive approach is not required to develop everyday language, but is necessary to develop academic language to 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 develop the design features and instructional principles 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 skill to interpret and infer meaning from oral and written language, discern precise meaning and information from text, relate ideas and information, recognize conventions of various genres, and use a variety of strategies for distinct purposes.

For both native English speakers and second language learners, learning academic uses of language is a lifelong endeavor. Anytime we enter a new field or domain, there are new areas of academic language to master and academic language is continually develop throughout our lives. 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, combine sentences, compose and write text, interpret graphs charts and word problems, and extract information from texts (Wong Fillmore and Snow, 2000, Scarcella, 1996), must not be left to chance encounters. It must be continuously developed and explicitly taught across all subject areas. Achieving full proficiency in English includes far more than mere fluency in conversation; it means English learners know English well enough to be academically competitive with native English-speaking peers (Hakuta, Goto Butler, and Witt, 2000).

Academic language proficiency helps students achieve long term success in school. Yet many students at the intermediate and advanced levels of English proficiency receive no formal language instruction (California Department of Education, 2000), leaving them fluent in everyday language (what Cummins refers to as Basic Interpersonal Communication Skills or BICS), 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. However, length of time in second language environments alone does not 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). While there are many opportunities during the course of a day in a language-rich classroom environment for language learning, merely being exposed to, and even engaged in, activity in English is not sufficient to assure the development of full academic proficiency (Doughty and Williams, 1998).
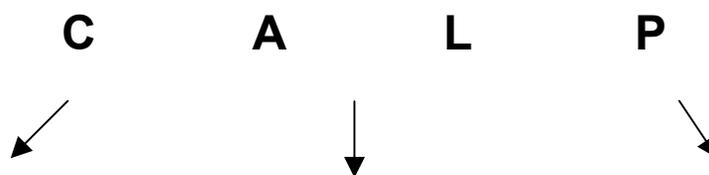
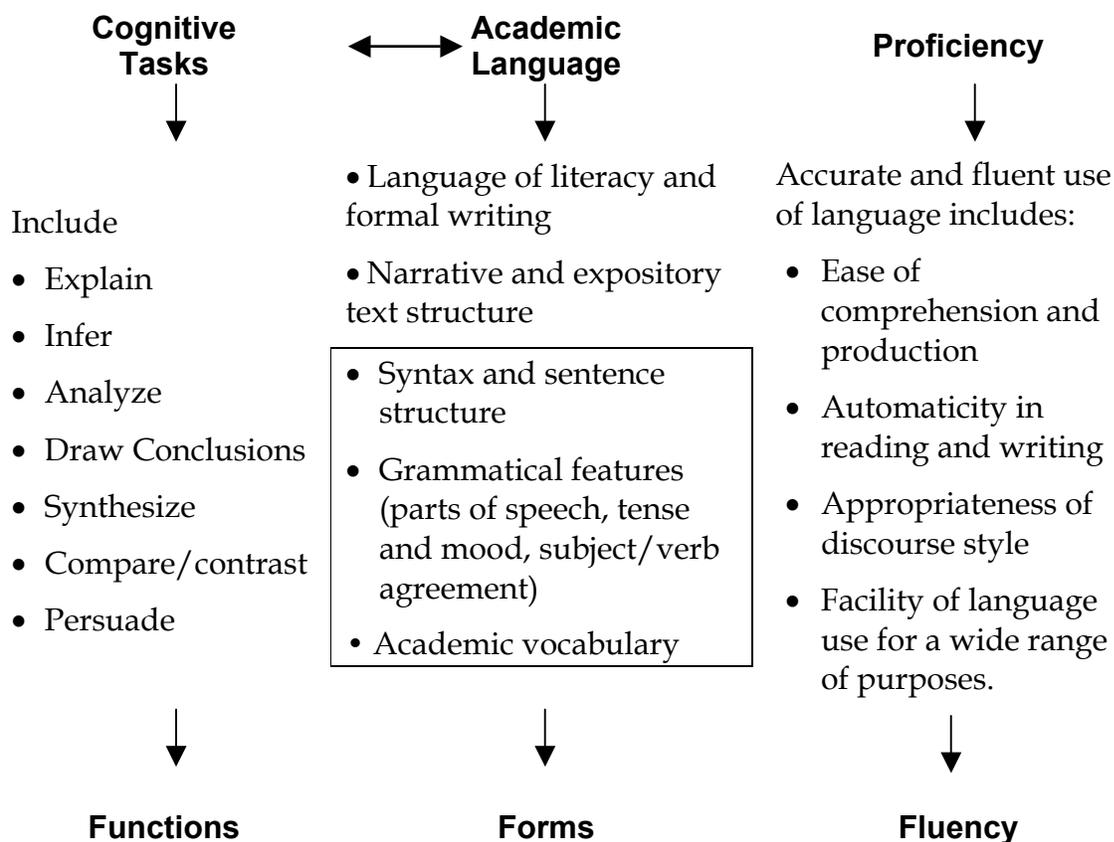## Developing Academic English: Functions, Forms & Fluency

The teacher, like the architect, must understand the design features necessary to construct the vision and how the features fit into the blueprint for English language instruction throughout the day. Our formula for designing instruction is "Functions, Forms, and Fluency." It consists of analyzing the concept and skill requirements of lessons for:

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

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

Here we attempt to draw parallels with Cummin's approach to academic language and the three design features essential to our approach. The following graphic is helpful in operationalizing Cummin's definition of Cognitive Academic Language Proficiency in a planning design of functions, forms, and fluency:

C   A   L   P

Cognitive Tasks	←→	**Academic Language**	**Proficiency**

Include

- Explain
- Infer
- Analyze
- Draw Conclusions
- Synthesize
- Compare/contrast
- Persuade

• Language of literacy and formal writing

• Narrative and expository text structure

- Syntax and sentence structure
- Grammatical features (parts of speech, tense and mood, subject/verb agreement)

• Academic vocabulary

Accurate and fluent use of language includes:

- Ease of comprehension and production
- Automaticity in reading and writing
- Appropriateness of discourse style
- Facility of language use for a wide range of purposes.

Functions	**Forms**	**Fluency**

Adapted from a graphic by Jeanne Herrick

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 the functions, forms, and fluency features and address these in the planning process. Like the master carpenter guiding an apprentice, teachers must anticipate the task to be learned (build a window frame or install ceiling beams), determine which tools are needed for the task (hammer, level, table saw), and plan for providing practice. The practice will increase competence and

develop skill in using the appropriate tools to successfully build that window frame, skills that will then be applied to other tasks.

An effective approach to English language instruction begins with an analysis of the linguistic demands of instruction and assignments. This means instructional planning that extends beyond analysis of curricular content and skills to include a careful analysis of the *function* language plays in that lesson. Lesson design includes a strategy for introducing and reinforcing the specific language *forms*, or structures, and vocabulary needed for each task. To develop *fluency* the teacher must consider how to provide opportunities for practicing the newly acquired language forms. Let us develop each of these three design features in greater depth.

Functions (Tasks)

Functions are the tasks or purposes and uses of language (Halliday, 1973, Brown, 1994). That is, we use language to accomplish something in formal or informal settings, and 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 questions, asking and answering clarifying questions, relating information, comparing, contrasting, explaining cause and effect, justifying, drawing conclusions, summarizing, evaluating, persuading, and conducting research. Many language functions have both everyday and academic applications, while 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 and Bloor, 1995), we assert that teaching English language learners how to use language for a variety of academic and non-academic purposes is both efficient and rigorous. Our design incorporates a functional approach to grammar as opposed to what might be considered traditional skill-driven instruction or a natural acquisition approach. Grammar is taught through the lens of meaning and use. For example, we teach past

tense verbs so students can retell, comparative adjectives so they can compare, and the conditional tense so they can hypothesize. Thus, functions connect thinking and language use and provide the context for language instruction.

We argue that well-planned instruction and early use of academic language accelerates acquisition. 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 upon stages of ELD, i.e. California Department of Education). Let us first consider the specific function of describing people, places, or things. It requires the speaker/writer to know how to use parts of speech, particularly verbs, nouns, and adjectives. The chart below illustrates possible utterances used to describe brown bears.

Function chart for describing people, places and things

Beginning	Early Intermediate	Intermediate	Early Advanced	Advanced
Brown, <u>brown</u> bear	The bear <u>is</u> <u>brown</u>. It <u>has</u> <u>claws.</u>	The brown bear <u>has thick fur</u> and <u>sharp claws</u>.	The brown bear <u>isn't a predator</u> even though it <u>has</u> <u>sharp claws and</u> <u>teeth</u>.	Before they <u>hibernate</u> for the winter, brown bears <u>give birth to</u> <u>cubs</u>.

Source: A Teacher's Guide: A Focused Approach to English Language Development, CRLP, Dutro & Prestridge

Another specific language function under the umbrella of relating information is locating objects in space. Examples by level of proficiency might be:

Function chart for locating objects in space

Beginning	Early Intermediate	Intermediate	Early Advanced	Advanced

| Respond to direction:

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

Source: A Teacher's Guide: A Focused Approach to English Language Development, CRLP, Dutro & Prestridge

The function of describing location calls for different vocabulary and grammar, particularly prepositional phrases (behind, in front of, beneath, around, above). A third example is the function of describing action to relate past events, which requires verbs, adverbs, and words that sequence.

Function chart for describing action

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

Source: A Teacher's Guide: A Focused Approach to English Language Development, CRLP, Dutro & Prestridge

As illustrated in these examples, there are specific language functions (describing actions, locations, or things) within larger functions (relating information), that carry distinct linguistic demands. Competence in other language functions requires competence in comprehending and generating different parts of speech in different sentence structures. However, increasing competence in any language function obligates the speaker or writer to use increasingly complex sentence structures. Consider these examples from 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) and content concept (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 content areas. Students practice and extend their language skills for comparing by applying it in different ways. Consider the graphic below with examples of comparison statements across content areas:

Function chart for comparing/contrasting

Beginning	Early Intermediate	Intermediate	Early Advanced	Advanced
triangle square three four	Triangles have three sides. Squares have four sides.	A triangle has three sides, <u>but</u> a square has four sides. They <u>both</u> have straight lines.	Triangles and squares <u>are alike because</u> they both have straight lines. They <u>are different because</u> a triangle has 3 sides and a square has 4 sides.	<u>While</u> squares and triangles are similar because <u>both have</u> straight lines, a triangle is three sided and a square is four sided.
big ocean small lake	An ocean is <u>big.</u> A lake is <u>small</u>.	An ocean is <u>larger than</u> a lake.	An ocean is enormous <u>compared to</u> a lake.	An ocean is vast. Even the largest lake is small <u>by comparison</u>.
Eagles fly Penguins swim.	Eagles <u>can</u> fly. Seagulls <u>can</u> fly. Penguins <u>can</u> swim.	Eagles and seagulls <u>can</u> fly, <u>however</u> penguins <u>cannot</u>.	Eagles fly <u>high, while</u> seagulls tend to fly <u>lower</u>. Penguins <u>can't</u> fly <u>at all</u>.	<u>Both</u> eagles <u>and</u> seagulls <u>have</u> the gift of flight. <u>However</u>, penguins <u>do not</u>; <u>instead</u> they <u>are</u> able swimmers.
pig spider	Wilbur <u>is</u> a <u>big</u> pig. Charlotte <u>is</u> a <u>small</u> spider.	Wilbur <u>is</u> a <u>young</u> pig, <u>but</u> Charlotte <u>is</u> a <u>grown</u> spider.	Wilbur <u>acts</u> immature and panics a lot, <u>but</u> Charlotte <u>remains</u> calm and reassuring.	Wilbur <u>appears</u> immature and excitable, <u>whereas</u> Charlotte <u>seems</u> the voice of reason.

Source: A Teacher's Guide: A Focused Approach to English Language Development, CRLP, Dutro & Prestridge

Reading the chart from left to right demonstrates a progression of increased proficiency. Reading it vertically demonstrates a range of comparative statements at a

given level of proficiency. Using this approach, learning interesting content, and how to talk and write about it, is not delayed until more advanced levels of proficiency are reached. Academic language is developed from the beginning stages of second language learning. Competence in a range of functions equips students to participate in content instruction and supports academic language proficiency. Language becomes a vehicle, rather than a barrier, to learning.

Forms (Tools)

Once the functions of language in a lesson are determined, the second feature of the design plan for language learning is forms, or grammatical features and word usage. These are the tools for discourse, reading and writing, complex language, and cognitive processes. Forms include parts of speech, verb tenses, subject/verb agreement, use of pronouns, conjunctions, and sentence structure or syntax (i.e. complex and compound sentences, embedded/tag questions, 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. Limitations in knowledge of English preclude inferring subtleties, discerning irony, and comprehending relationships between and among ideas, characters, or events. These limitations include a lack of vocabulary and difficulty comprehending complex sentence structures. Students' ability to analyze sentences begins with simpler constructions and builds in complexity. Full understanding of verb tense, voice, and mood are essential to increasing language proficiency. Consider the importance of distinguishing between "we have had" and "we would have had." 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 assure perception as a proficient speaker, allowing students full participation in academics and use of their voice to advocate for themselves and their positions (Delpit, 1995).

Just as the architect understands the structural, plumbing, and electrical systems of a well-functioning building, so the teacher must understand the way English works. This requires more advanced linguistic knowledge than currently possessed by most teachers. For example, they must recognize that English uses modals to express the conditional mood (If I had a dollar for every mistake I made, I would be rich); when and why to use the perfect tenses (He has been driving me crazy) rather than simple ones; and how phonemes (sound units), morphemes (meaning units), and basic syllable patterns work (consonant-vowel-consonant) (Moats, 2000; Wong-Fillmore, Snow, 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 students recognize, know, and use language orally and in writing that is appropriate to a given task. This knowledge of the scope of English grammar, morphology, and phonology supports teaching of reading and academic language to all students. This is basic teacher knowledge that our current student population demands.

Additionally, teachers of English learners must understand the general sequence of how language forms are learned in a second language. For instance, English verb forms move along a continuum of difficulty, such as:

- Present progressive-statements (is walking, is not walking);
- Past progressive tense (was 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…);
- 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.); and

• Passive voice (It <u>was written by</u>, This picture <u>was taken by</u> 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. This highlights the importance of teaching and assessing forms in second language instruction because without ensuring that students learn accurate and appropriate use of a full range of grammatical forms, gaps in language knowledge that appear developmental can become permanent (Brown, 1994, Scarcella, 1996).

<u>Vocabulary</u>

We define forms to include not only grammatical forms, but vocabulary. Many words in English have a multitude of meanings. Teachers need to realize the complex demand on students learning English, not only to determine the correct meaning of a word, but also to determine the correct meaning of the same word in different contexts. Consider the simple word *play* (play a trick, play a game, play the piano, a double play, an award-winning play) and a more difficult word, such as *absorbed* (soaked up liquid, digested, engrossed). Knowledge of word usage and a rich and varied vocabulary are critically important aspects of language proficiency and essential to academic success. (Beimiller, 1999; Kame'nui and Simmons, 1998; Moats, 2000; Stahl, 1999). This includes idiomatic phrases and expressions, which are used extensively in English. Everyday idiomatic expressions, such as *cut it out, take a seat, hit the roof*, and *scared silly* can be incomprehensible to a student learning English who may attempt to interpret them literally. An intervention study showed that the vocabulary knowledge and reading comprehension gap between English language learners and native English speakers can be significantly reduced with enriched vocabulary instruction (McLaughlin, et. al, 2000).

One way to organize vocabulary is by types of words or phrases: basic, general utility, and low utility or content specific words. We further organize vocabulary within these categories with an emphasis on their function in the sentence.

Continuing our architectural metaphor, let us now turn to the materials in constructing this academic language: the "mortar" or "brick" words.

Brick and Mortar Words

"Brick" words are the vocabulary *specific to the content* and concepts being taught and include words such as: *government, mitosis, metaphor, revolt, arid, revolution, habitat, paddle, predator, adaptations, climate, grams, right-angle, polarized, and germinate.* Traditionally, this is the vocabulary teachers pre-teach at the beginning of a content area lesson or unit. At the earlier grades, many of these words are nouns, such as *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 *basic and general utility* vocabulary required for constructing sentences. They are the words that determine the relationships between and among words. They are the words that hold our language together and are essential to comprehension. Some examples of mortar words include:

- Connecting words required to construct complex sentences such as: because, then, but, sometimes, before, therefore, however, whereas

- Prepositions and prepositional phrases such as: on, in, under, behind, next to, in front of, between, in the background

- Basic regular and irregular verbs such as: leave, live, eat, use, saw, went

- Pronouns such as: she, his, their, it, us, each other, themselves

- General academic vocabulary such as: 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. This basic and general utility vocabulary is best taught explicitly in the context of language use, as these words do not generally stand alone, but within the context of a sentence or phrase with brick, or content, words.
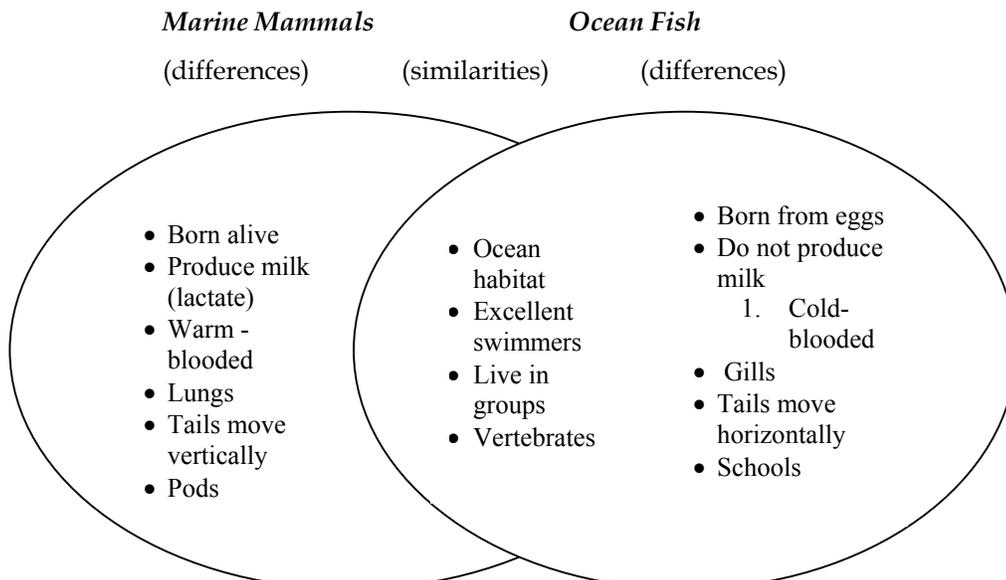
Without deliberate instruction in the use of these words, students may not discern the time/place relationships among the rest of the words in a sentence or passage.

Linking functions and forms

To illustrate the importance of addressing both brick and mortar vocabulary for language teaching that links function and form, let us consider again the language function of comparison. Students are called upon to compare across the content areas. For example, in mathematics, teachers might expect students to describe the similarities and differences among geometric shapes or express number value (larg<u>er</u>/small<u>er</u>, less/more than); in health, the relative nutritional value of different foods, the characteristics of bats and owls in science, or two characters in a novel in English.

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 below. This vocabulary is essential to the concept that there are physical and behavioral similarities and differences between these two types of animals.

Venn diagram of brick words for marine mammals and fish

Marine Mammals   *Ocean Fish*

(differences)   (similarities)   (differences)

- Born alive
- Produce milk (lactate)
- Warm - blooded
- Lungs
- Tails move vertically
- Pods

- Ocean habitat
- Excellent swimmers
- Live in groups
- Vertebrates

- Born from eggs
- Do not produce milk
  1. Cold-blooded
- Gills
- Tails move horizontally
- Schools

However, the brick (content specific) words of the Venn diagram alone do not equip students to demonstrate their comprehension. They also need mortar words and phrases in order to generate the sentences that make it possible to compare the

characteristics of marine mammals and ocean fish. By removing the brick words that are specific to content, the mortar words and phrases used in the sentences are revealed. For example:

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

_____ are _____, but _____are _____.

The basic subject/verb/object structure of this comparison sentence can be adapted by varying the verbs (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 the conceptual understanding of a lesson calling for comparison.

As illustrated previously (Functions chart for comparing/contrasting), sentences that compare range from simple to complex. Other frames illustrate more complex and varied sentence structures, such as:

- While ___(subject 1)___ have _____, _____(subject 2)_____ have _____.
- _____ and _____ are similar because they both _____. They are different in that _____ _____, but _____ _____.
- There are several major differences between _____ and _____. The most notable is _____.

Thus, the level of difficulty in a comparison task can be modulated by teaching the mortar vocabulary and sentence structures at levels of complexity appropriate to students' language skill, allowing students to engage in the work regardless of their level of English proficiency.

Another essential point is that these sentence frames can be use 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 more importantly, how to use language to compare. If taken to the metacognitive level by processing the tools of comparative language, students will be more apt to transfer those skills for making comparisons to triangles in math or cultures in social studies. Wall charts labeled "Words and Phrases for Comparing" along with

"Sentence Frames for Comparing" provide ongoing, practical references and become resources for student writing and support further developing metalinguistic awareness.

Functions (such as comparing marine mammals and ocean fish) and forms (the vocabulary, grammar and syntax to do it) are two of the three design features of our instructional design for teaching English. The third feature is fluency.

Fluency

Accurate facility in a wide range of language functions, grammatical forms, and a rich vocabulary are 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 oral and written comprehension and 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 student speak, write, and comprehend written and oral language.

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

Students develop fluency through focused and deliberate engagement in a variety of uses of language – both oral and written – and many opportunities to practice newly learned structures in different contexts.

Now that we have established our conceptual framework, presented the components of ELD and design features as the model for planning instruction, the next section of this paper will take a 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 of the chapter will lay out the basic principles of English language instruction. These principles apply to the entire approach including the three components of ELD in the blueprint: systematic ELD, content area front-loading, and the responsive instruction engendered by the teachable moment. We embed the design features of functions, forms, and fluency into the guiding principles.

These six guiding principles are drawn from the literature in cognitive psychology, language acquisition, and instructional practice. To develop high levels of language proficiency, we contend the teacher must:

1) build on student's prior knowledge of both language and content;
2) create meaningful contexts for functional use of language;
3) provide comprehensible input and modeling forms of language in a variety of ways connected to meaning;
4) provide a range of opportunities for practice and application 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:

1. Prior knowledge

Building on students' prior knowledge is essential. The value of tapping into the prior schema that we use to organize information and existing concepts about a topic has been apparent for a number of years due to the work of cognitive psychologists (Rumelhart and McClelland,1986; Palinscar and Brown, 1984) as well as socio-culturalists (Heath, 1983; Au, 1980). This body of work suggests using such strategies as semantic mapping, graphic organizers, story walking, etc. It is essential that every lesson take into account what students bring to the lesson and build on that existing

knowledge and language skill. Native language used strategically can solve some specific problems in connecting new learning to prior concepts or language forms (Gersten and Baker, 2000).

2. Meaningful contexts

We know creating context is essential for students to map new knowledge onto prior knowledge or new forms and labels onto existing concepts. This is why a functional approach that creates purposeful settings to use language is essential to instruction. Additionally, we know that moving from the concrete to the abstract is important. For example, the use of visuals, gestures, graphic organizers, and word banks to reinforce concepts and vocabulary is effective (Gersten and Baker, 2000). Use of simulations, gestures, realia, and theater are powerful in the early levels of English proficiency, moving to comparisons, metaphors, and analogies (Marzano, 1998) at higher levels of language functioning.

3. Comprehensible input connected to meaning

Language, whether it is first or second language, is learned through modeling within a communicative context (Long, 1991). This holds true for tasks 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 pedagogical tasks facing the learner, such as applying for a job, buying a house, planning a trip, or applying for college (Doughty and Williams, 1998).

4. Application and practice

The goal for language learners is to move from the stage during which capacity is limited and the skill is new, to automatic processing (Brown, 1994). Creating situations for focused interaction through debates, theater, interactive writing, etc., gives students opportunities to try out new language learning. Cooperative group work around a

situational task offers students the chance to use language purposefully and receive feedback on output. Cooperative learning is most beneficial when tasks are highly structured (Gersten and Baker, 2000). Language output and practice are maximized when tasks are structured, 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 and Baker, 2000). Though English language learners at similar levels of proficiency do not make more errors with each other than when speaking to fluent speakers, they cannot help each other discern how to correct these errors (Lightbrown and Spada, 1999) and do not provide one another the needed corrective feedback.

5. Safe context, clear goals, and 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 1980's 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 6th 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 where 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 (Marzano, 1998; Lightbrown and Spada, 1999).

6. Reflection on forms and process

Modulating cognitive and language demands by lowering the cognitive demand while the language demand is high, and lowering the linguistic demand when the cognitive demand is higher, allowing students to move back and forth from focus on concept to 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, avoiding cognitive overload. Pre-teaching critical vocabulary prior to student reading (Rousseau, Tam and Ramnarain, 1993) allows students to focus on form before

focusing on content. Metalinguistic reflection applies particularly with English language learners who can reflect on their native language to give insights into the new language forms being learned, whether in oral or written language (Moran and Calfee, 1993). A focus on 5-7 words allows the short-term memory to retain the information while it is being stored in long-term memory. Helping students reflect on their process in learning language will help them to mediate their own future learning situations.

Operationalizing the Blueprint:
Three Components of English Language Development

These six guiding principles are essential to the development of a strong systematic ELD component, as well as to ensure that front-loading language instruction and use of the teachable moment serve to develop academic language to the highest level. We will now describe each of the three components of a comprehensive ELD program in more detail.

I. 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 and chance encounters. It is the vertical slice of the blueprint; it is its own discipline. Systematic ELD is related to English language arts, and supports student achievement in other content areas. 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 the advanced levels or in mainstream programs are not receiving ELD; and 4) ELD instruction is not tied to specific standards or expected outcomes.

Research has shown that regardless of the sequence of language presented, English language learners acquire certain structures before others. While it is beneficial to modify speech to assure comprehension, it is not necessary to limit utterances or restrict exposure (Lightbrown and Spada, 1999). However, explicit instruction in language structures at and just above the level of proficiency accelerates learning and assures that students learn less common usage or specifically academic forms. It makes sense, then, to anticipate the next level of language learning with focused instruction. Effective ELD instruction is targeted to the edge of what students can already do with English and teaches 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 component of the instructional day. Ongoing assessment for mastery of forms and the ability to apply them in different contexts drives instructional planning to assure that learning is on track.

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

The "focus on forms" frame 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 from the initial stages, and application to develop proficiency, with practice that moves into variations so students can define when the form is appropriate to the context. Lessons

can be based on literature, content, or activities, but must provide focus on the forms of the language.

Finally, well-developed, systematic ELD instruction provides for reflection and analysis of learning to achieve metacognitive understanding of how the forms of language learned are applied in a range of situations.

Levels of Proficiency

Training for a novice construction worker includes a careful introduction to each of the tools of the trade on the job site, starting with the simple hammer and saw and moving later to power tools. By the same logic, a novice learner of second language should be introduced to the forms or structures (tools) of language in a developmental sequence from simple commonly used forms, to more complex, abstract, and academic related forms. As with the construction worker, this should not occur in an isolated lab, but rather in a functional approach that provides practical applications to immediately useful contexts. Let's now look at how this systematic approach works at different levels of development.

At a beginning level the focus of the ELD lesson is often on understanding commands, giving simple one-word responses to survival tasks like asking for what you need, following directions etc. As understanding develops, students learn basic common everyday vocabulary and simple grammatical, present, past, and future tenses. They practice extensively in a variety of ways with instructional feedback from more experienced speakers and the teacher. Reading and writing are introduced at the beginning levels through labeling, modeling of sentence frames, practice completing them with words from banks, webs and other resources, and predictable, patterned texts with basic vocabulary and sentence structures. Lesson plans may revolve around a 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 provides situations relevant in the life of the student. Where a

kindergartner might be practicing "I want a snack," a high school student at this level might be practicing "I need help with math."

Intermediate level students are engaged in more reading and writing, and using a variety of verb tenses and grammatical structures. There is tremendous vocabulary growth as students learn synonyms (large, giant, huge) antonyms (quick/slow, strong/weak, subtraction/addition) and basic idioms (cut it out, raining cats and dogs). Writing might focus on forms and conventions such as pronoun usage and past tense verb endings; oral language might include reporting, dialogues, skits, games, and simulated experiences to use the language. Meaningful contexts include an array of academic purposes for which students need to use the tools of language. This might mean sorting words into categories (foods, tools, building materials) or using comparative language (instead of, rather than, both, neither) for the purpose of writing brief essays comparing different indigenous cultures at intermediate grade levels. For younger students at the intermediate level, instruction could involve the same vocabulary sort using comparative functions (bigger, smaller, taller, shorter, darker, lighter, this, not that) relevant to their age and experience.

Systematic ELD instruction currently is rare at the 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 with reading comprehension, teaching idioms, metaphor and figurative language, and deconstructing the organization of expository text (Kinsella, 1997). As students' language skill develop, they merge toward the proficiency of grade level English speaking peers. In the upper grades the intermediate and advanced levels are extended for longer periods. This is because the gap between first and second language learners increases with the age of the language learner. Teachers need

strategies to accelerate learning. Intense attention to vocabulary development, modeling and clear instruction in reading comprehension strategies and written composition, use of graphic organizers, and many opportunities to practice new skills are essential for older learners. Emphasis on metalinguistic knowledge and intentional focus on how language works can also 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 of development, however, systematic ELD alone is not sufficient. ELD must be incorporated into all academic areas.

II. Front-loading language teaching

The second component of a comprehensive ELD program is the horizontal slice of the design, crossing all content disciplines. Front-loading is making an investment up front, ahead of time, to help ensure content lessons are comprehensible to English language learners by strategically pre-teaching the vocabulary and language forms needed to comprehend and generate language appropriate to the upcoming lesson. It is driven by function, or the purpose of the language to be used. Front-loading a content lesson anticipates the linguistic competence the learning will require and intentionally teaches those skills ahead of time. The target skills are determined by the language requirements of the discipline in general and the lesson in particular.

A contractor anticipates which tools will be needed for a specific construction task, such as building a bookcase. Because the requirements for any given task involve multiple skills, the carpenter must know how to use a range of tools, such as the table saw, measuring tape, hammer, sander, level, and for more detailed work, a router. If the task is to install a sink the tools required are different, but may overlap. Just as the measuring tape and level would still be crucial, though one task would require a wrench instead of the hammer; so it is for linguistic tasks within a given content

discipline. Students must have an array of linguistic skills to manage a range of language uses, purposes and tasks. Some of these, such as mastery of 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 h/she wants students to make conditional statements and teach his/her students to use that language. Analysis of the linguistic demands of cognitive tasks is at the heart of front-loading.

The ability to use many language tools is developed in the systematic ELD program where the focus is on laying a solid foundation of language skills and gaining knowledge of basic and general utility vocabulary. However, this foundation alone will not provide the English learner the tools necessary for the range of language demands across content areas. Front-loading is necessary to help students learn the specific language to write a science lab report, frame an argument about the causes of a historical event, or summarize the plot of a novel. Front-loading helps students develop the different language skills required to participate in a classroom discussion about current events, present an oral report on the need for recycling, or describe the development of a character in a story. Front-loading language teaches students the language of the content discipline. Before we describe the steps to planning front-loading English language instruction, we will describe essential elements of content instruction, discuss the sheltered approach for English language learners, and argue the need to add front-loading to existing approaches to content area instruction.

Content Area Instruction

Content area instruction requires special attention for 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 to make it accessible to students learning English. The adapted instruction is designed to provide an opportunity for English

language learners to learn content and academic language (Bunch, Abram, Lotan, and Váldes, 2001). However, many mainstream content area teachers teach English Learners and receive little or no support in how to adapt teaching methods to ensure they have meaningful access to the content. The need to rethink ELD in content areas should be important to all teachers.

The general principles of ELD hold true for content area instruction (Moran, 1996). Content curriculum must be bridged to the knowledge and experience the students bring to the classroom (Díaz, Moll and Mehan, 1986; Heath, 1983). It is important to find out what students know about the topic and find some link to connect the curriculum to their lives. Creating meaningful contexts includes the use of organizational strategies - tools that fit a concept into the bigger picture as well as organize bits of information within the context or the topic (Calfee, 1981; Hernández, 1989). Organizational tools are utilized at every level of the process. Meaningful contexts and practice through interaction with the language and concepts must be varied depending on the content and the function, but it is clear that interaction, whether in social studies, science, or hands-on math, enhances learning. (Reyes, 1991; Hudelson, 1989). A positive and supportive environment in content instruction implies a sensitivity to competing cognitive demands between the challenging content and the complex linguistic demands. Synthesis of new information occurs right after processing, and reporting or sharing is encouraged through a variety of modes of expression, both orally and in writing. This is supported by the teacher modeling and providing sentence frames and relevant vocabulary (Kinsella, 1997). Students can utilize these frames as they learn to combine parts into a whole. Finally, students have the opportunity to reflect on the process of what they learned as well as how they learned it. This supports metacognition and increases the probability of transfer of the learning to new situations. All pieces are interwoven in effective instruction.

Research in sheltered instruction has brought some definition to the program and the teacher knowledge in this area. The Sheltered Instruction Observation Protocol (SIOP) model includes both content and language objectives, along with content concepts, in the

preparation phase (Echevarria, Vogt, and Short, 2000). The Science-Language Integration rubric (Stoddart, Pinal, Latzke, and Canaday, in press) defines five levels of teacher knowledge of content/language integration. These range from a novice first level, with no integration; through thematic instruction, and interdisciplinary teaching; to a proficient teacher who knows how to analyze the situation and make instructional decisions in integrating the two; to an expert, flexible, and responsive to the context who knows how and why to integrate both language and content into the lesson. The distinctions we will define may help teachers move up through these levels in their understanding and ability to successfully integrate language and content.

Sheltered instruction versus front loading for language

There are challenges in providing content instruction that is accessible and rigorous. As students progress through the grades, their linguistic and content demands increase substantially, challenging even the best-intentioned and most knowledgeable teacher to bridge students' language proficiency to the linguistic and content requirements of the task. There is a risk of over-simplifying the content to accommodate the language level. (Bunch, Abram, Lotan, and Váldes, 2001). Additionally, because the primary goal of content instruction is to teach the knowledge and concepts of the discipline, the emphasis on content tends to dominate while language demands tend to be given short shrift. Sheltered content area instruction often leads to sacrifices in learning English because teachers tend to emphasize content acquisition over building English language abilities and adequate time is not provided for English language learning (Gersten and Baker, 2000). Because of this lack of deliberate focus on the language required for accomplishing academic tasks, English language learners' linguistic skills can not keep pace with the ever-increasing demands, and the gap between what they know and what they need to know continues to grow. (Stanovich, 1986),

We suggest the use of front-loading language required for the content and tasks begins to address this difficulty in the sheltered model. By considering language and

content demands as distinct but related and complementary, we can help ensure students receive adequate time and attention to developing the linguistic competencies needed to support complex content learning.

By using familiar content to explicitly teach and practice the essential language skills an upcoming content lesson requires, the content demand is lowered so students can attend to the language learning. As a master carpenter would teach the novice the skills of measuring and sawing using basic cuts first, so it is in front-loading language for content instruction. The math teacher explains the language of lines and angles with familiar geometric shapes before asking student to apply the terms with complex figures. Without this instruction, the student may miss the concept being taught because s/he is preoccupied with attempting to understand what is meant by the phrase "is parallel to". But now that some of the key language has been taught, her attention is more likely to be focused on the content instruction. During the content lesson the teacher does not forget about language skills. Indeed, they will be practiced, reinforced, and revisited in a thoughtful approach during the content lesson. The purpose of front-loading is to anticipate and remove linguistic barriers to the upcoming task. Like the action of a piston described earlier, the emphasis shifts from language to content and back during the content portion, as needed. It should be noted here that the emphasis of a front-loading lesson is on the language requirements of the function-related tasks - how to do something with language, requiring what we have termed "mortar" vocabulary. The content specific vocabulary - or "bricks" is generally taught in the content lesson itself.

Steps in thinking through a front-loading language lesson

Any effective instruction requires the teacher begin with assessment of prior knowledge and schema of the content to be taught. As outlined earlier in the general principles for English language instruction section, language lessons, whether systematic or front-loading, provide modeling, guided and independent practice, application, and metacognition.

Given the complexity of language and quantity of content, teachers must strategically focus front-loading of language. A powerful approach is to determine the language function and identify the cognitive task a lesson targets. The teacher must first define the tasks by asking, "What are the cognitive/linguistic demands in 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 text structure of readings common to the discipline (textbooks, articles, web sites), including chapter/section headings, charts, graphs, and maps?"

Then follow the questions, "What forms will be needed to accomplish this task? Which grammatical structures and vocabulary will be needed? Is this going to require forming a question, talking in the past tense, contrast frames, transitional sentences?" At this point it is useful for the teacher to imagine the language s/he would like students to use both orally and in writing. What kinds of sentences would students use to express the ideas being taught?

Third, what support is needed to learn to use these structures? What are ways to engage students' interactions to further both linguistic and conceptual goals of the lesson? Once there is clarity of functions and forms, questions of developing fluency arise, such as how to structure opportunities for the student to use these new forms appropriately and foster the development of automaticity and comfort level.

The purpose of both systematic ELD and front-loading is to develop competence in English. Whereas systematic ELD is organized by proficiency level based on competence of forms, front-loading language teaching is planned according to the demands of the content lesson with a range of proficiency levels in mind. These demands may require teachers to stretch students beyond their current proficiency level in order to equip them for the upcoming challenges. For example, if the reading passage in an upcoming lesson uses the future tense, then the future tense is the target for front-loading language instruction, even if it is above students' current ELD level. This way, students will be able to understand the time relationships in the text when they

encounter it. Language functions not currently in students' repertoire are taught, such as asking negative questions or comparing. By itself front-loading is not a comprehensive ELD program and may leave gaps in language knowledge. It is a complementary component along with systematic ELD instruction.

We suggest that front-loading language not only enhances current sheltered instructional practices, but mainstream content instruction as well. As mentioned earlier, advanced English language learners continue to require instruction in the academic uses of English. Yet many, perhaps most students at the higher levels of English proficiency are not in classes that provide sheltered or ELD instruction. They are often not able to compete academically in their classes and would benefit greatly from language instruction.

To summarize the planning steps: teacher awareness of the linguistic demands of the content area is the first step. Analysis of the language functions the discipline requires is next. This includes determining the language forms those functions require. The planning then entails determining varied ways to practice language skills with familiar content before the actual content lesson so students have the necessary tools to engage in the upcoming lesson. Teachers then remind students of what they have learned and how they will use it in the upcoming lesson before they infuse the newly learned language into the content lesson. With these thoughtful steps, bilingual, sheltered, and mainstream English content-area teachers can create more inclusive and appropriate environments for English language learners and help ensure increased academic success.

III. Teachable Moments

In this architectural metaphor of ELD instruction we have rolled out our blueprint of three components of ELD, described the design features, laid the foundation of underlying principles, and raised some scaffolding and some detail finish work on the components of systematic ELD and front loading language teaching for content instruction. Just as any good architect will take advantage of the natural terrain in the

design, such as a giant boulder or a significant tree, we also recognize the importance of contextual, incidental circumstances that create special learning opportunities.

The language rich classroom can provide a wealth of linguistic experiences for listening, speaking, reading, and writing which deepen understanding of English and expand vocabularies. A substantial amount of language learning can occur in this way. Good teaching includes creating such language rich environments and takes advantage of the spontaneous opportunities to maximize learning, a more natural approach to language instruction. For this reason our third component of ELD embraces this informal, non-systematic, yet potentially powerful aspect of ELD which can occur at any moment during the school day. We call this the "teachable moment."

In this section we describe how teacher use of the underlying principles and design features we have presented can enhance the benefits of teachable moments. But first we provide the context to understand why this is the third of three components of ELD and not the entire approach.

We have often heard well-intentioned teachers of English language learners proclaim "I teach English all day long; I don't separate it. Everything I do is teaching English." Our belief is that this kind of proclamation generally indicates the lack of a clearly articulated approach to ELD and confusion between teaching "in" English and teaching English.

The natural language approach became, for some teachers, an approach to ELD based on random opportunities and cooperative group work. We include the teachable moment as a third component of a comprehensive program not only to validate its pervasive use in classrooms, but also to distinguish between the value it holds, and its limitations as an approach to English language development.

How do those serendipitous teachable moments turn into language-enhanced learning opportunities? As teachers internalize the general principles of ELD and learn to use the design features to assess the functions, model forms, and practice for fluency, the teachable moments became a series of ongoing opportunities to extend language learning just when it is most accessible.

The second general principle we laid out suggests creating meaningful contexts for language learning. By definition, the teachable moment takes place in a meaningful context and addresses a specific functional need. 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. In the following examples we will demonstrate how the teacher can use the other principles and design features provided in this chapter to maximize learning.

Two students are in a conflict. The teacher insists students use "I" statements and models, "When you ___ I feel ___." This gives the student a language frame or 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 inside the mortar frame.

Gabriela walks in and says, "Look teacher I got new red *Choose*", in her best approximation of *shoes*. Appreciation of the new shoes with correct modeling, such as "Look at Gabi's new shoes (with an emphasis on the sound of sh) provides Gabi with immediate comprehensible input. A brief mini-lesson for a small group on the sh/ch distinction would provide the clear goal, safe context, and instructional feedback needed to call attention to the distinction of phonemes. An explanation of how English has two different sounds whereas Spanish uses one sound for both graphemes provides the metalinguistic understanding of the challenge. Asking each student in the group to remark on Gabi's new shoes affords extensive practice as everyone in the group has the chance to admire Gabi's new shoes.

Kenji walks into class and announces, "I earn $10 yesterday and I earn $10 tomorrow too." A quick functional analysis by the teacher suggests the opportunity to present not only a mathematics mini-lesson, but also to focus on form (past and future tense verb distinctions), and fluency by having Kenji and classmates talk through several word problems using Kenji's earnings. Using the opportunities the student brings to the classroom provides a clear link with prior knowledge and meaningful context.

The 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. The quick analysis of the language function allows the teacher to provide an on-the-spot lesson on the mortar words needed for transitions to help the student's paper flow from one topic to the next. A quick brainstorming of college preparation requirements helps the student fill in the brick vocabulary in this essay as well.

Responding to the butterfly that flew into the room, the latest item in world news, or the informal learning that goes on during project work are also part of this important element in teaching language, but they should not make up the entire language program.

Teachable moments occur every day, during almost any 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 with the most artful teacher, these random opportunities do not comprise, as some teachers suggest, an ELD program. They are a series of random opportunities that can accelerate the learning of a new language form and expand vocabulary in a functional context. They do not take the place of systematic ELD instruction nor the need for front-loading language for content instruction. It is important to set clear daily goals for both language and content growth, and it is important to know when to seize an opportunity which has presented itself to teach exactly the right skill at the perfect moment of receptivity. There is no hard rule for when to stay focused on the goal 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/her work, so must a teacher balance the science and the art of teaching.

Conclusion

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 Wong Fillmore and Snow's (2000) discussion of what linguistic knowledge teachers must possess given 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 contrast the most common languages of the students they serve. Further, we believe that teachers need a fundamental understanding of the central role that academic language plays in learning, and 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 proficient in using the design features of functions, forms, and fluency to plan 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 exams will include linguistic knowledge, underlying principles of ELD, and components and design features of comprehensive language teaching for developing academic language proficiency.

Studies by Haycock (1998) and others suggest that low teacher expectations for language minority students, as exhibited by assigning low-level tasks and providing minimal instruction, are widespread. English language learners face tremendous challenges in gaining both the linguistic and academic proficiencies required for academic success. Each student deserves thoughtful, rigorous and well-designed instruction that is targeted to their level of language proficiency and requires 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 policymakers rethink the structure and design of academic language instruction in schools. Further study should focus on how best to develop teacher knowledge and research is needed on the effective use of the constellation of ELD components and the design features presented here.

We believe the architectural approach is a powerful metaphor for English language instruction. It gives the design aspect of instruction its proper prominence. If

teachers take seriously their role in planning language instruction into every aspect of the 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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