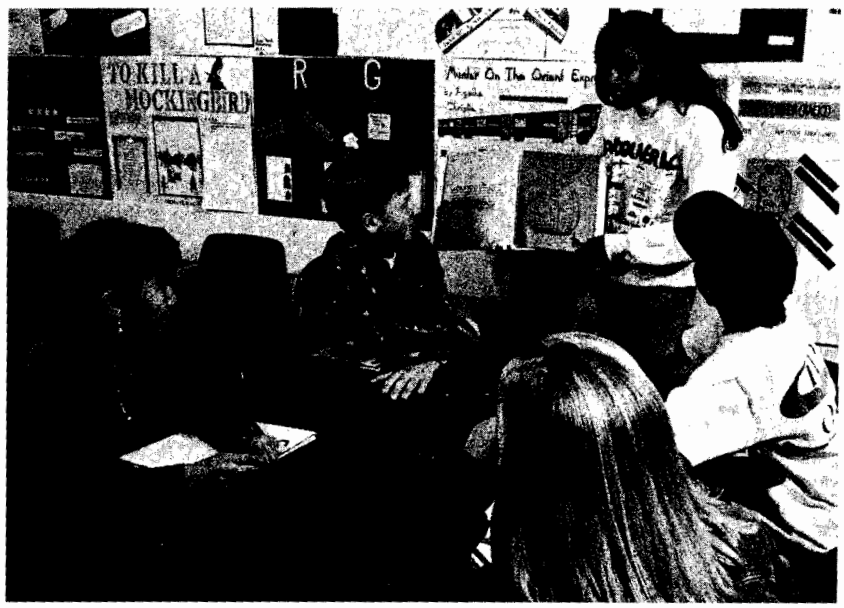
Chapter

# 3 Learning about Second-Language Acquisition

*Students develop communicative competence as they use language to interact with one another.*




Without communication the world would be so dark. Life would be boring. It is through language that we find a way into people's hearts, their lives, and their culture. Through language we explore into the secrets of other cultures.

I was born in Afghanistan. I came to the United States when I was sixteen years old. This was my new home and yet, because I could not speak any English, I was a stranger to my new home. How I wished to express my gratitude to people who helped my family and me, but all I could do was to give them an empty look and a confused smile. I was living among the people and yet I was not one of them. I thought everybody was cold and unfriendly. Sometimes I got angry and wanted to scream at the whole world.

Slowly the ice broke. I started learning English. New windows started opening. The once cold and unfriendly became warm and caring. My family and I found a way into hearts of the people.

**Ahmad Shukoor, grade 12, in Shukoor (1991, p. 34)**



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Almost five million students in the United States face the daily challenge of attending school in a new language—English. Teachers have the opportunity to guide and inspire English learners in new ways; to learn about their students, their lives and cultures, and their dreams and expectations; and during this process, to expand their own teaching repertoires. By knowing about language acquisition and use, teachers (particularly those who are monolingual) can come to recognize and use communication strategies that help break down barriers. Collaboration and cooperation with students, parents, and community members enrich the lives of all. Classrooms become lively and productive places.

As an introduction to the study of language teaching and learning, this chapter presents an overview of historical and contemporary theories that will help the teacher place issues of English-language development within an orienting framework.

## Historical Theories of Language Teaching and Learning

Humans have been describing and analyzing language for over 2,300 years. Many methods of second-language teaching have been used throughout recorded history, each based on an underlying rationale or set of beliefs about how language is best learned. Table 3.1 presents an overview of historical methods of language acquisition, the underlying theoretical premise of the method, and the contribution made by each theory. As each method is discussed, the strengths and shortcomings of each are weighed.

As early as the fourth century BC, Greek philosophers were debating the nature of language. Early theory held that words were the natural and logical representations of ideas and objects, rather than arbitrarily chosen symbols. The early Greeks identified two classes of words, one that identified the action performed in a sentence and one that identified the person or thing that performs the action. In about the second century BC, Dionysius Thrax identified eight different word classes. His book *The Art of Grammar* became a model for both Greek and Latin grammars. Latin was the model for grammar throughout the Middle Ages. When grammarians finally began writing grammars for vernacular languages, they generally copied the Latin grammars, using the same terminology and the same word classes (Kitzhaber, Sloat, Kilba, Love, Aly, & Snyder, 1970). Unfortunately, Latin was not an appropriate model for all languages, but the model persisted nonetheless.

### Grammar-Translation Methodology

Throughout the Middle Ages and even until the earliest years of the twentieth century, the educated classes in Europe used the method by which Latin grammar was taught as a model for learning language. Teaching consisted of translating Latin into the student's primary language and then drilling on vocabulary, verb tenses, and parts of speech. Teachers were not expected to speak the second language, merely to have a thorough knowledge of grammatical rules.

This grammar-translation method of instruction is still widely used throughout the world in settings in which the main goal of instruction is reading and grammar knowledge of the second language. Students learn only what is required and are rewarded

Table 3.1

Historical Methods of Second-Language Acquisition, Underlying Theoretical Premise, and Contribution to Second-Language Teaching

| Method of Instruction | Underlying Theory | Contribution to Second-Language Teaching |
|---|---|---|
| Grammatical analysis | The beginnings of rationalism. | Laid a foundation for language analysis. |
| Grammar translation | Second language is learned by understanding its structure—largely its grammar. | Used throughout the Middle Ages in western Europe for the study of Latin, grammar-translation methodology is still widely used, particularly in China, Japan, and Korea, as a method of learning a second language when grammar and vocabulary are deemed most important. |
| Structural linguistics (and contrastive analysis) | Second language is learned by describing its structure, including sounds; by comparing languages with one another; and by classifying similar languages into groups. | Assisted in the recognition of language similarity and world language families, as well as universal features of languages, but was not as useful as a second-language-teaching methodology. |
| Behaviorism as audiolingualism | Second language is learned by habit formation, especially by training in correct pronunciation. | Provided repetitious, structured practice to allow learners to acquire correct pronunciation in a foreign language. |
| Behaviorism as direct teaching and mastery learning | Second language is learned by dividing what is to be learned into small units and using rote repetition, with much drill and practice. | Laid a foundation for later computer-assisted drill-and-practice programs. |

for precisely defined goals such as memorizing word lists or correct translation. Grammar-translation pedagogy can be seen as a traditionalist form of behaviorism.

The strengths of this methodology are twofold. First, desirable results are clearly defined, and success can be precisely correlated to the amount of effort expended. Second, the curriculum can be carefully structured and controlled, with students' access to the second language limited to that which the teacher or other authorities determine to be valuable.

Drawbacks are that students have little choice in what they learn, little contact with actual speakers of the language they are acquiring, almost no actual use of the language in a social context, and little stimulation of curiosity, playfulness, and exploration—aspects of learning that are intrinsic to the nature of the mind. In contrast, current second-language teaching, especially in the elementary school, features extensive social interaction and active language use among learners (see Takahashi, Austin, & Morimoto, 2000).

## Structural Linguistics

In the eighteenth and nineteenth centuries, scholars began to notice similarities among languages. Studying written documents of earlier forms of languages, they traced the

origins of words and sounds, attempted to show that languages had undergone changes over time, and traced historical relationships among various languages. Linguists developed a method for identifying the sound units of languages, for analyzing the ways that morphemes form words and words form sentences.

This *descriptive* linguistics led to the comparison of languages for the purpose of teaching. Diagramming sentences became an important pedagogical tool; sentences were divided into two parts, or constituents, each of which could be further subdivided, until the entire sentence had been analyzed. Knowledge of the grammar and sound structure of one language was believed to transfer to a second language so that the second language could be explained in terms of the first. The belief that comparing the first and second languages to predict what might be easy or difficult for the learner is called *contrastive analysis.*

A major advantage of descriptive linguistics was that exotic languages could be seen and learned in the context of their language family—that is, having learned Finnish, one could presumably learn Hungarian more easily because both are members of the Finno-Ugric language family. Because more of the world was being explored in the twentieth century, linguists had many more languages to describe and learn.

However, contrastive analysis—with its premise that the more similar two languages, the easier a speaker of the first would learn the second—proved to be an unworkable predictor of learning ease or difficulty in a second language. (See Gass & Selinker [2001] for a discussion of contrastive analysis.) If, for example, Chinese and English are comparatively different in many aspects (writing system, tonal system, word structure, verb tense system, etc.), these differences do not exactly predict what difficulties a particular learner might experience. Therefore, descriptive linguistics and contrastive analysis are largely ineffectual in second-language teaching.

## Behaviorism

Although behaviorism is not strictly a linguistic theory, its vast influence on learning theory has affected second-language teaching. Behaviorists claim that the mind is a "blank slate"; a learner must be filled with content during the course of teaching (see Skinner [1957]). Strict principles of timing, repetition, and reward led to classroom methodology that incorporated extensive drill and practice of language components, from sounds to complex sentences. Three aspects of behaviorism are still used in contemporary language teaching: audiolingualism, direct teaching/mastery learning, and Total Physical Response (TPR). The latter is explained in Chapter 4.

**Audiolingualism.** The audiolingual method of language learning is based on behavioral principles. Oral practice is believed to be the primary means to language learning. Teachers provide oral pattern drills that are based on specific grammatical forms; for example, a complete lesson can be centered on a tag question ("It's cold today, *isn't it?*"). The goal for the learner is to learn new habits of speech, including correct pronunciation, in the second language. Students develop correct language behavior by repetitious training, often using technology such as tape recordings in language

laboratories. The role of the teacher is to direct and control students' behavior, provide a model, and reinforce correct responses (Doggett, 1986). Errors are corrected immediately to discourage "bad" habit formation. Reading and writing are often delayed until the student has an adequate oral base.

**Direct Teaching and Mastery Learning.** Direct teaching and mastery learning are both forms of behaviorist instruction, and their widespread use in classrooms of English learners with reading programs such as Open Court and Direct Instruction demonstrates that behaviorism is still widely practiced. Direct teaching incorporates explicit instructional objectives for students and promotes the learning of facts, sequenced steps, or rules. The instructor maximizes learning time by using carefully scripted lessons that move at a lockstep pace. Students are regularly tested over the material that is covered and receive immediate remediation if performance lags.

Direct teaching resembles mastery learning; in both methods, the course of study is divided into small units with specific objectives. In mastery learning, rather than learning in strict unison, students progress at their own rates and demonstrate mastery of each unit before proceeding to the next. As in other systems of behavioral management, mastery learning provides immediate feedback and reinforcement of performance. In the best use of mastery learning, students are gradually taught how to self-monitor, regulate, and reward their own actions.

**Advantages and Disadvantages of Behavioral Methods for Second-Language Teaching.** The strength of the audiolingual method is its focus on correct pronunciation. An advantage of direct teaching and mastery learning is the focus on the subskills of language, including word recognition and low-level comprehension skills, and the focus on immediate remediation when these skills are weak.

A weakness of audiolingual pedagogy is that it limits exposure to the target culture and fails to emphasize self-motivated language acquisition; it also places pressure on learners to perform accurately under classroom or laboratory conditions instead of equipping learners with a language repertoire that would enable them to communicate spontaneously with native speakers.

## Example of Concept: **Communicating with Language Learned by Audiolingual Instruction**

In 2000 I (Díaz-Rico) spent a week in Beijing. Unfortunately, due to a busy schedule, before departing to the People's Republic of China I had no opportunity to review the Chinese-language materials I still have from my graduate years at the University of Pittsburgh, a training that had consisted in part of long hours in a language laboratory repeating phrases in Mandarin. During the second taxi trip across Beijing, I gathered up my courage to speak Mandarin. I strung together every word I could remember and—not sounding too bad, at least to myself!—I asked the driver if he thought it would rain.

That one sentence was my downfall! In return for my one sentence, I was treated to a twenty-minute treatise on local weather conditions—I guess—I could understand so lit-

tle of it! When I asked the question, my adequate pronunciation—a result of audiolingual instruction—must have sounded like I knew what I was saying, but my comprehension certainly did not keep pace with my accent! ■

The weakest part of direct teaching is that students are seldom asked to set their own goals in learning or pursue their own interests (as they might do in a literature-based program that encouraged free choice in reading), and they have little time to explore language creatively. Balancing the strengths and weaknesses of behavioral-based pedagogy, one might conclude that these teaching approaches have a distinct, yet limited, role in instruction.

**ADAPTED INSTRUCTION: Using Behavioral Methods**

- Advanced students can benefit from drills on correct pronunciation in the language laboratory or from a software program.
- Beginning and intermediate students benefit more from activities that emphasize fluency.
- Having students work in pairs or small groups of peers allows them to adjust their speech output to make themselves understood.

## Current Theories of Language Development

Starting in the mid-twentieth century, several important new theories have shaped current understanding of language acquisition and development. In 1959, Noam Chomsky criticized the prevailing belief that language is learned through constant verbal input shaped by reinforcement. He claimed that language is not learned solely through a process of memorizing and repeating, but that the mind contains an active language processor, the language acquisition device (LAD), that generates rules through the unconscious acquisition of grammar.

In 1961, Hymes directed attention away from the structural analysis of language toward the idea of communicative competence: that the *use* of language in the social setting is important in language performance. Halliday (1975) elaborated on the role of social relations in language by stating that the social structure is an essential element in linguistic interaction. Current theories of language have thus moved away from the merely linguistic components of a language to the more inclusive realm of language in use—which includes its social, political, and psychological domains.

Current language teaching is being shaped by several important ideas. First, the shift toward a cognitive paradigm means that *learning* has taken precedence over *teaching*. What the student learns is the important outcome of the teaching–learning process, not what the teacher teaches. Second, learning is maximized when it matches the processes that take place naturally within the brain. Third, thematic integration across content areas unifies the language processes of reading, writing, speaking, listening, thinking, and acting. Thus, current perspectives on second-language learning align with brain-compatible instruction that emphasizes higher-order thinking skills.

## Transformational Grammar

Following Chomsky's lead, transformational grammarians envision language as a set of rules that human beings unconsciously know and use. They believe that human beings, once exposed to the language(s) of their environment, use their innate ability to understand and produce sentences they have never before heard, because the mind has the capacity to internalize and construct language rules. The rules help native speakers distinguish whether a group of words forms a sentence in their language. The goal of transformational grammar is to understand and describe these internalized rules.

In the early 1970s, some grammar texts created for the use of mainstream English classroom teachers included the use of transformational grammar to explain language structures, but this never became a popular approach to teaching grammar. Although Chomsky himself was not a second-language-acquisition theorist, much of Krashen's monitor model can be traced to Chomsky's influence.

## Krashen's Monitor Model

Krashen (1981, 1982) proposed a theory of second-language acquisition that provided a framework for understanding the processes by which adults learn second languages. Krashen's theory stated that people acquire second-language structures in a predictable order only if they obtain comprehensible input, and if their anxiety is low enough to allow input into their minds. A *monitor,* or internal editing device, gradually acquires and applies a sense of correct language usage.

Krashen's theory included five hypotheses: the *acquisition-learning hypothesis,* which distinguished acquisition (which leads to fluency) from learning (which involves knowledge of language rules); the *natural order hypothesis,* which asserted that language rules are acquired in a predictable order; the *monitor hypothesis,* which postulated a device for attaining accuracy; the *input hypothesis,* which claimed that languages are acquired in only one way—by comprehending messages; and the *affective filter hypothesis,* which described the mental and emotional blocks that can prevent language acquirers from fully comprehending input.

Although the monitor model has been extensively criticized, it has nonetheless provided the theoretical base for the Natural Approach, which has had an extensive impact on changing the nature of second-language instruction in the United States.

**The Acquisition-Learning Hypothesis.** Krashen defined *acquisition* and *learning* as two separate processes in the mastering of a second language. Learning is "knowing about" a language. It is the formal knowledge one has of a second language. Formal teaching promotes learning by providing the learner with explicit knowledge about the rules of a language. Acquisition, on the other hand, is an unconscious process that occurs when language is used for real communication. Formal teaching of grammatical rules is not a part of acquisition (Krashen, 1981, 1982, 1985). Acquirers gain a "feel" for the correctness of their own utterances as their internal monitor is gradually adjusted, but they may not be able to state any specific rules as to why such utterances are "correct."

If asked to choose between language learning and language acquisition, Krashen would consider acquisition more important. He used child language-acquisition studies to strengthen his point: "Research in child language acquisition suggests quite strongly that teaching [the rules of a language] . . . does not facilitate acquisition. Error correction in particular does not seem to help" (Krashen & Terrell, 1983, p. 27).

This hypothesis has its detractors. Some find the distinction between learning and acquisition vague, difficult to prove, or misleading (Af Trampe, 1994; Ellis, 1986; McLaughlin, 1990).

Despite these criticisms, for the classroom teacher, Krashen's distinction between acquisition and learning is important in that teachers acknowledge the fact that students will produce some language unself-consciously and will need rules and help for others. Thus, when children chat with one another as they work in cooperative groups, they are learning not only content (science, social studies) but also the English language.

**The Natural Order Hypothesis.** Krashen drew on studies of first- and second-language acquisition with children to formulate the hypothesis that there appears to be a natural order of acquisition of English morphemes. The order is slightly different for second-language learners from the first-language order, but there are similarities.

Here is an example of the developmental sequence for the structure of negation (Krashen, 1982):

1. Negative marker outside the sentence
   *No Mom sharpen it.* (child L1 acquisition)
   *Not like it now.* (child L2 acquisition)
2. Negative marker between the subject and the verb
   *I no like this one.* (L2 acquisition)
   *This no have calendar.* (L2 acquisition)
3. Negative marker in correct position
   *I don't like this one.*

This example demonstrates that children acquire correct usage of grammatical structures in their second language (L2) gradually, as do children acquiring a first language (L1).

Again, critics argue that there is insufficient evidence for the natural order hypothesis, claiming there is too much variability in the learners' contexts to support the notion of a predictable order of acquisition (Ellis, 1994; McLaughlin, 1987). For the classroom teacher, however, the importance of this hypothesis is the fact that learners go through a process to achieve full control of a grammatical structure, and that this process seems to follow a predictable order.

**The Monitor Hypothesis.** This hypothesis also distinguishes acquisition and learning: Acquisition initiates an utterance and is responsible for fluency; learning serves to develop a monitor, an editor (Krashen, 1981, 1982). The monitor is an error-detecting mechanism; it scans an utterance for accuracy and edits—that is, confirms or repairs—the

utterance either before or after attempted communication. However, the monitor cannot always be used. In a situation involving rapid verbal exchange, an individual may have little time to be concerned with correctness.

The monitor hypothesis is not without flaws. The monitor is difficult, if not impossible, to observe or distinguish during its use (Shannon, 1994). Krashen's claim that children are more successful language learners because they are not burdened by the monitor is disputed by McLaughlin (1987), who argues that adolescents are more successful learners than are children. Thus, several theorists dispute the usefulness of the monitor as a construct.

Despite these objections, however, Krashen, through his monitor construct, has changed the orientation that previously drove language instruction. The notion that language is best learned through conscious study of grammatical rules has been replaced by the realization that a "natural" language-rich environment facilitates acquisition. Additional mediation can be provided for students in the form of specific suggestions or explicit grammatical hints, but these specific lessons should be interspersed throughout a general communicative environment.

**The Input Hypothesis.** The input hypothesis claims that language is acquired in an "amazingly simple way—when we understand messages" (Krashen, 1985, p. vii). Language is acquired not by focusing on form but by understanding messages. But what kind of messages? Contrary to popular belief, simply immersing a learner in a second language is not sufficient. Imagine, for example, listening to Finnish on the radio. Unless the listener had some knowledge of that language beforehand, there would be no way to understand words or even topics. Language must contain what Krashen calls "comprehensible" input.

Comprehensible input has generally been assumed to contain predictable elements: shorter sentences; more intelligible, well-formed utterances; less subordination; and more restricted vocabulary and range of topics with a focus on communication. Topics often center on the here-and-now. Simpler structures roughly tuned to the learner's ability are used, and speech is slower. To conceptualize the input hypothesis, Krashen introduced the expression $i + 1$, where $i$ stands for the current level of the acquirer's competence and 1 is the next structure due to be acquired in the natural order. Input needs to contain structures at the $i + 1$ level for the acquirer to proceed.

However, research in first- and second-language acquisition indicates that comprehensible speech is not what Krashen calls "finely tuned"—that is, including only structures at the $i + 1$ level. Critics have pointed out that there is in fact no way of measuring the $i + 1$ level. Therefore, it is impossible to tell what "comprehensible input" really means and, as Marton (1994) pointed out, Krashen's emphasis on comprehensible input ignores the active role of the learner in communicating and negotiating useful and understandable language.

For the classroom teacher, the relevance of this hypothesis lies in its emphasis on "comprehensible." When working with English learners, teachers need to use a variety of techniques and modalities, including visual and kinesthetic, to ensure that their speech is understandable.

**The Affective Filter Hypothesis.** This hypothesis addresses emotional variables, including anxiety, motivation, and self-confidence. These are crucial because they can block input from reaching the language acquisition device (LAD). If the affective filter blocks some of the comprehensible input, less input enters the learner's LAD, and thus less language is acquired. A positive affective context increases the input. These emotional variables are discussed in Chapter 1. Like others of Krashen's hypotheses, the affective filter is virtually impossible to define operationally. Most teachers understand, however, that a nonthreatening and encouraging environment promotes learning, and that it is important to increase the enjoyment of learning, raise self-esteem, and blend self-awareness with an increase in proficiency as students learn English (see Chapter 1, Adapted Instruction feature "Ways to Deal with Excessive Student Anxiety").

## Cummins's Theories of Bilingualism and Cognition

Jim Cummins's work falls within the cognitive approach to language, with its emphasis on the strengths the learner brings to the task of learning a second language. The cognitive approach to learning is based on the premise that learners are not "empty vessels waiting to be filled" but instead come with considerable knowledge of the world. Dispelling the notion that bilingualism impedes classroom learning, Cummins's research has furthered the belief that being bilingual is a cognitive advantage and that knowledge of the first language provides a firm foundation for second-language acquisition. Moreover, Cummins's concept of *cognitive academic language proficiency* (CALP) helps teachers to identify and teach the type of language that students need to acquire for academic success. Cummins's work helps teachers recognize the resources that learners bring to the classroom and how to build on those resources as English is being acquired.

**Separate or Common Underlying Proficiency.** Some critics of bilingual education have charged that educating children in the primary language reduces their opportunity to acquire English. This argument assumes that proficiency in English is separate from proficiency in a primary language and that content and skills learned through the primary language do not transfer to English—a notion that Cummins (1981b) has termed *separate underlying proficiency (SUP)*. In contrast, Cummins asserted that cognition and language fundamentals, once learned in the primary language, form a basis for subsequent learning in any language. This position assumes a *common underlying proficiency (CUP)*, the belief that a second language and the primary language have a shared foundation, and that competence in the primary language provides the basis for competence in the second language.

For example, children learning to read and write in Korean develop concepts about print and the role of literacy that make learning to read and think in English easier, despite the fact that these languages do not share a similar writing system. The surface differences in the languages are less important than the deeper understandings about the function of reading and its relationship to thought and learning. Cummins (1981b) cited much evidence to support the idea of a common underlying proficiency.

Students do not have to relearn in a second language the essentials of schooling: how to communicate, how to think critically, and how to read and write (Association for Supervision and Curriculum Development [ASCD], 1987).

**Basic Interpersonal Communication Skills and Cognitive Academic Language Proficiency.** Cummins (1979a, 1980) posited two different yet related language skills: basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP). BICS involve those language skills and functions that allow students to communicate in everyday social contexts that are similar to those of the home, as they perform classroom chores, chat with peers, or consume instructional media as they do television shows at home. Cummins called BICS *context embedded* because participants can provide feedback to one another, and the situation itself provides cues that further understanding. However, the language required for school is vastly more complex than that required at home.

CALP, as the name implies, is the language needed to perform school tasks successfully. Such tasks generally are more abstract and decontextualized. Students must rely primarily on language to attain meaning. Cummins (1984) called CALP *context-reduced* communication because there are few concrete cues to aid in comprehension. Successful educators are aware that students need skills in both language domains.

During the elementary school years, and then even more so throughout middle and high school, students need to master a completely new kind of scholastic language to succeed in school. Those who may appear to be fluent enough in English to survive in an all-English classroom may in fact have significant gaps in the development of academic aspects of English. Conversational skills have been found to approach nativelike levels within two years of exposure to English, but five or more years may be required for minority students to match native speakers in CALP (Collier, 1987; Cummins, 1981a; Hakuta, Butler, & Witt, 2000).

Both BICS and CALP are clearly more than words. BICS involves the totality of communication that takes place between two or more people in their everyday activities. Some exchanges with people involve no words at all; for instance, a nod of the head while passing in the hallway at work may serve the same communicative purpose as a greeting. CALP, on the other hand, is more difficult to define. Beyond words, it also involves systematic thought processes. It provides the human brain with necessary tools to systematically categorize, compare, analyze, and accommodate new experiences. CALP represents the cognitive toolbox, entire systems of thought as well as the language to encode and decode this thought. Without the acquisition of CALP, students are incapable of acquiring the in-depth knowledge that characterizes the well-educated individual in a complex modern society.

Cognitive academic language proficiency requires a complex growth in many linguistic areas simultaneously. This growth is highly dependent on the assistance of teachers because, for the most part, CALP is learned exclusively in school. The complexity of CALP can be captured by examination of the five Cs: communication, conceptualization, critical thinking, context, and culture (see Table 3.2). Many of the skills that are a part of CALP are refinements of BICS, whereas others are more exclusively school centered.

Table 3.2

## Components of Cognitive Academic Language Proficiency (CALP)

| Component | Explanation |
|---|---|
| Communication (see *California English Language Development Framework,* online at www.cde.ca.gov/re/pn/fd/englangart-stnd-pdf.asp) | Reading: Increases speed; uses context cues to guess vocabulary meaning; masters a variety of genres in fiction (poetry, short story) and nonfiction (encyclopedias, magazines, Internet sources) to "read the world" (interprets comics, print advertising, road signs).<br>Listening: Follows verbal instructions; interprets nuances of intonation (e.g., in cases of teacher disciplinary warnings); solicits, and profits from, help of peers.<br>Speaking: Gives oral presentations, answers correctly in class, and reads aloud smoothly.<br>Writing: Uses conventions such as spelling, punctuation, report formats. |
| Conceptualization | Concepts become abstract and are expressed in longer words with more general meaning (*rain* becomes *precipitation*).<br>Concepts fit into larger theories (*precipitation* cycle).<br>Concepts fit into hierarchies (rain → precipitation cycle → weather systems → climate).<br>Concepts are finely differentiated from similar concepts (*sleet* from *hail, typhoons* from *hurricanes*).<br>Conceptual relations become important (opposites, subsets, causality, correlation). |
| Critical thinking | Uses graphic organizers to represent the structure of thought (comparison charts, Venn diagrams, timelines, "spider" charts).<br>Uses textual structures (outlines, paragraphing, titles, main idea).<br>Uses symbolic representation (math operators [<, >, +, =]; proofreading marks, grade indications [10/20 points, etc.]).<br>Reads between the lines (inference).<br>Employs many other kinds of critical thinking.<br>Plans activities, monitors progress, evaluates results, employs self-knowledge (metacognition).<br>Increases variety and efficiency in use of learning strategies. |
| Context | Nonverbal: Uses appropriate gestures (and is able to refrain from inappropriate); interprets nonverbal signs accurately.<br>Formality: Behaves formally when required to do so.<br>Participation structures: Fits in smoothly to classroom and schoolwide groups and procedures. |
| Culture | Draws on experience in mainstream culture (background knowledge).<br>Uses social class markers, such as "manners."<br>Moves smoothly between home and school.<br>Marshals and controls parental support for school achievement.<br>Deploys primary-language resources when required.<br>Maintains uninterrupted primary-culture profile ("fits in" to neighborhood social structures).<br>Develops and sustains supportive peer interactions. |

### Example of Concept: **Teaching Students to Use CALP**

A look at an elementary classroom shows the integrated work that takes place across these CALP areas.

Mrs. Gómez found in her second-grade transitional bilingual class that although the students were fairly fluent English conversationalists they were performing poorly in academic tasks. Students seemed to understand English when pictures and other visual clues were present. However, when she gave instructions or briefly reviewed concepts, the students appeared lost. She realized that students needed lessons that eased them along the continuum from their interpersonal language usage to the more abstract academic requirements. When Linda and several of her classmates were jumping rope during recess, Mrs. Gómez wrote down many of the patterned chants the girls were reciting. She transferred these to wall charts and read and recited them with the children.

Next she introduced poems with more extensive vocabulary on wall charts, supplementing the charts with tapes that children could listen to in learning centers. At the same time, the class was studying the ocean. Mrs. Gómez set up other learning centers with shells, dried seaweed, fish fossils, and other ocean objects. The instructions for these centers featured patterned language similar to that already encountered in the rhymes and poems. Gradually Mrs. Gómez was able to record more complex and abstract instructions in the learning centers. This progression and integration of activities helped the children to move along the continuum from BICS to CALP. ■

## Communicative Competence

Since Hymes (1972) introduced the term *communicative competence,* the notion of what is involved in knowing a language has expanded. Communicative competence is the aspect of language users' competence, their knowledge of the language, that enables them to "convey and interpret messages and to negotiate meanings interpersonally within specific contexts" (Brown, 1987, p. 199). Language is a form of communication that occurs in social interaction. It is used for a purpose, such as persuading, commanding, and establishing social relationships. Knowing a language is no longer seen as merely knowing grammatical forms. Instead, the competent speaker is recognized as one who knows when, where, and how to use language appropriately.

Canale (1983) identified four components of communicative competence: grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. Each of these is discussed in the following paragraphs.

**Grammatical Competence.** Some level of grammar is required when learning vocabulary, word formation and meaning, sentence formation, pronunciation, and spelling. This type of competence focuses on the skills and knowledge necessary to speak and write accurately. Although an emphasis on fluency and vocabulary acquisition rather than on grammatical accuracy is preferable in the early stages of language learning, grammatical competence becomes increasingly important to the English learner in more advanced stages of proficiency.

**Sociolinguistic Competence.** To communicate well, one must know how to produce and understand language in different sociolinguistic contexts, taking into consideration such factors as the status of participants, the purposes of the interaction, and the norms or conventions of interaction. The appropriateness of an utterance refers to both meaning and form. One of the tasks of teachers is to help learners use both appropriate forms and appropriate meanings when interacting in the classroom. Unfortunately, in language classrooms emphasis has often been placed on grammatical competence over sociolinguistic competence; but in the real world, it is often more important to speak appropriately than to use correct grammar.

**Discourse Competence.** In both speaking and writing, the learner needs to combine and connect utterances (spoken) and sentences (written) into a meaningful whole.

### Example of Concept: **Discourse Competence in Kindergarten Students**

An example of discourse competence can be seen in the following conversation between two kindergarten boys, one a native-English speaker and the other an English learner:

**Andrew:** Can I play?
**Rolando:** No.
**Andrew:** There're only three people here.
**Rolando:** Kevin went to the bathroom.
**Andrew:** Can I take his place 'til he comes back?
**Rolando:** You're not playing.

Rolando was able to respond appropriately (though not kindly) to Andrew's request and to add information about his decision at the proper moment. This conversation shows that Rolando has discourse competence. ■

A speaker may be both grammatically correct and appropriate socially but lack coherence or relevance to the topic at hand. Such a disconnected utterance shows a lack of discourse competence.

**Strategic Competence.** A speaker may use strategic competence in order to compensate for breakdowns in communication (as when a speaker forgets or does not know a term and is forced to paraphrase or gesture to get the idea across) and to enhance the effectiveness of communication (as when a speaker raises or lowers the voice for effect).

Use of this competence occurred when one of the authors (Weed) was taking an oral Spanish exam. The tester asked her to read a poem and then explain it. Everything but the main word, the subject of the poem, was clear. So Weed decided to use the word *it* throughout her explanation, figuring (rightly) that if she started off positively, the tester would rate her more highly than if she admitted up front she didn't

know that particular word. Weed used strategic competence in this situation to achieve a more satisfying outcome—a higher score on the test.

**Language-Use Strategies Involving Communicative Competence.** Chesterfield and Chesterfield (1985) found a natural order of strategies in students' development of second-language proficiency. These are not teaching strategies but methods the mind uses in an untutored way to try to retain and process information when faced with the task of communicating in a second language. Teachers who are aware of these language-use strategies can incorporate them into instruction to build on students' developing competence. These strategies, in their order of development, include the following:

- *Repetition in short-term memory:* Imitating a word or structure used by another
- *Formulaic expressions:* Using words or phrases that function as units, such as greetings ("Hi! How are you?")
- *Verbal attention getters:* Using language to initiate interaction ("Hey!" "I think . . .")
- *Answering in unison:* Responding with others
- *Talking to self:* Engaging in subvocal or internal monologue
- *Elaboration:* Providing information beyond that which is necessary
- *Anticipatory answers:* Responding to an anticipated question or completing another's phrase or statement
- *Monitoring:* Correcting one's own errors in vocabulary, style, and grammar
- *Appeal for assistance:* Asking another for help
- *Request for clarification:* Asking the speaker to explain or repeat
- *Role-play:* Interacting with another by taking on roles

## Example of Concept: **Spontaneous Language-Use Strategies**

Weed (1989) found evidence of almost all of these strategies among English learners in kindergarten. For example, the earliest strategy, repetition, occurred while three kindergarten girls were working puzzles together. Upon noticing that one of the girls had new shoes, the English speaker started chanting, "Pretty shoes, Daniela, pretty shoes." One of the Spanish-speaking girls picked up the chant and repeated, "Pretty shoes." Spontaneous role-play, a later strategy, occurred in the same kindergarten class. Ms. Anderson, the teacher, had to use the phone, which was situated by the playhouse area. Jimmy, a Vietnamese speaker, picked up the play phone and watched the teacher's actions. After a pause, he said, "Hello, hello, anybody home?" He then left, but another boy picked up the phone and called, "Jimmy, it's your mom." "Where, where?" called Jimmy as he ran to the phone. "Hi, mom," he said as he spoke into the instrument. ■

Teachers can specifically plan to increase students' skills in discourse and sociolinguistic and strategic competence by building experiences into the curriculum that involve students in solving problems, exploring areas of interest, and designing projects. Students carry over knowledge of how to communicate from experiences in their first language. This knowledge can be tapped as they develop specific forms and usage in English.

### Example of Concept: **Developing Communicative Competence**

In a high-school economics class, Mr. Godfried often demonstrated consumer economics to the students by having them role-play. In the fifth-period class, several students were recent immigrants who had been placed in this class as a graduation requirement despite their limited English. Mr. Godfried's job became more complicated than in the past; now he had to teach not only economics but also basic communication skills in English. The process of opening a checking account was not difficult for Takeo, a Japanese student, who had had a checking account as a student in Japan. But Vasalli, an immigrant from Byelorussia, found the task mystifying. He had had limited experience with consumerism in general and no experience with the concept of a checking account. What he did have, however, was a general knowledge of how to interact with an official. Through the role-plays, Mr. Godfried was able to help the students use their background knowledge to conduct appropriate verbal interactions in the banking situation and use their communication experience to expand their content knowledge. ■

## The Social Context for Language Learning

Learning a language is not strictly a communicative endeavor; it includes social and cultural interaction. The Russian psychologist Lev Vygotsky emphasized the role played by social interaction in the development of language and thought. According to Vygotsky (1978), teaching must be matched in some manner with the student's developmental level, taking into consideration the student's "zone of proximal development." Vygotsky defines this zone as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development . . . under adult guidance or in collaboration with more capable peers" (p. 86).

Using peer conversation as a means of enriching a student's exposure to language maximizes the opportunity for a student to hear and enjoy English. Mixing more-skilled with less-skilled speakers supplies more advanced language models to English learners. Thus, the context of instruction plays as critical a role in language development as does the actual language exchanged.

The teacher who is aware of the social uses of language provides a classroom environment in which students engage in communicative pair or group tasks. These can include practicing a readers' theater with other students in order to perform for their class or school, developing interview questions in order to survey local opinion on a timely topic, and planning an exhibition of art or written work to which to invite parents or other students.

Just as important as providing ample opportunity for students to interact within an information-rich environment is the assurance that such interaction takes place between language equals. Placing equal value on the primary language and its speakers creates a classroom in which there is no unfair privilege for native-English speakers.

## Discourse Theory

Discourse theorists have analyzed conversation to understand how meaning is negotiated. According to them, face-to-face interaction is a key to second-language

acquisition. By holding conversations (discourse), non-native speakers acquire commonly occurring formulas and grammar as they attend to the various features in the input they obtain. Through their own speech output, they affect both the quantity and the quality of the language they receive. The more learners talk, the more other people will talk to them. The more they converse, the more opportunity they have to initiate and expand topics, signal comprehension breakdowns, and try out new formulas and expressions.

In constructing discourse, second-language learners use four kinds of knowledge: knowledge about the second language, competence in their native language, ability to use the functions of language, and their general world knowledge. The language they produce is an *interlanguage,* an intermediate system that they create as they attempt to achieve nativelike competence. Selinker's interlanguage hypothesis (1972, 1991) asserted that "non-native speaking students do not learn to produce second languages; what they do is to create and develop interlanguages in particular contexts" (1991, p. 23). Through a variety of discourse opportunities, learners sort out the ways language is used and gradually achieve proficiency.

Based on this understanding of the active role of the language learner, teachers need to provide many opportunities for English learners to engage in discourse with native speakers of English, in a variety of situations. ELD programs that restrict English learners to certain tracks or special classrooms, without incorporating specific opportunities for native–non-native-speaker interaction, do a disservice to English learners.

**ADAPTED INSTRUCTION: Encouraging Native-Speaker–Non-Native-Speaker Interaction**

- Students can interview others briefly on topics such as "My favorite sport" or "My favorite tool." The responses from the interviews can be tallied and form the basis for subsequent class discussion.
- English learners can also interact with native-English speakers during school hours through cross-age or peer interactions.

Understanding how discourse is used during instruction and modifying classroom discourse to encourage participation by English learners is a large part of specially designed academic instruction in English (SDAIE; see Chapter 5) and also culturally compatible teaching (see Chapter 10).

## Meaning-Centered v. "Bottom-Up" Approaches to Language Acquisition

**Meaning-Centered Approaches.** Researchers (Goodman, 1986; Smith, 1983) looking at children learning to read in naturalistic settings noticed that they actively seek meaning. They work to make sense of text. They combine text clues with their own prior knowledge to construct meanings. The theory called *whole language* arose from the idea that meaning plays a central role in learning, and that language modes (speaking, listening, reading, writing) interact and are interdependent. Whole language, a

philosophy of reading instruction, complemented many of the findings of studies in first- and second-language acquisition.

Meaning-centered systems of language acquisition (also called *top-down* systems—see Weaver [1988]) support the view of language as espoused by Halliday (1978), that language is a complex system for creating meanings through socially shared conventions. The notion of *meaning-making* implies that learners are generating hypotheses from and actively constructing interpretations about the input they receive, be it oral or written. Language is social in that it occurs within a community of users who attach agreed-upon meaning to their experiences.

Meaning-centered-language advocates view the learning of language as the process that occurs when language is used for specific purposes. Language is learned not from drills and worksheets but rather through learners' exchanging information while doing a science project or researching aspects of their local history. It is best achieved through direct engagement and experience when the learners' purposes and intentions are central. This view of language and literacy underlies a "constructivist" perspective. Constructivist-oriented classrooms tend to be those in which students' lives and experiences are valued, and in which they explore the multiple functions of literacy, reading, and writing to satisfy their own needs and goals.

**Bottom-Up Approaches.** Advocates of *bottom-up* approaches are concerned that learners connect the individual sounds of language with its written form as soon as possible, leading to the ability to decode whole words. Once words are identified, meaning will take care of itself. Instruction in decoding the sound–symbol relationship includes a set of rules for sounding out words. This approach is often intertwined with the sight-word approach, in which students commit to memory a stock of basic words that do not follow the sound–symbol "rules."

To present the learner with easily decodable text, basal reading materials with controlled vocabulary are used to present simplified language, and teachers are encouraged to "preteach" vocabulary words that appear in reading passages. The emphasis is on skills for identifying words and sentence patterns, rather than on strategies for creating meaning from text.

Research and observation of children learning to read indicates that in fact readers use both top-down strategies and bottom-up skills as they read. Current reading instruction now favors a balanced approach (see Tompkins [2003], particularly Chapter 1, for further discussion; also see Fitzgerald [1999]). Perhaps because the stakes have been large—the fortunes of publishers of reading textbooks have risen and fallen on sales of materials that reflect acceptable theories—the field of reading instruction has been characterized by pendulum swings between contrasting theories of language acquisition. Theories of second-language acquisition have naturally been coupled with those that affect first-language instruction.

## Semiotics

Not all second-language acquisition depends on verbal language. Semiotics is a discipline that studies the ways in which humans use signs to make meaning. According to

semiotic theory, there are three kinds of signs: symbols, icons, and indexes. *Symbols* are signs for which there is an arbitrary relationship between the object and its sign; the word *table,* for example, is arbitrarily linked to the object "table." *Icons* are signs that resemble what they stand for, such as a drawing of a table. *Indexes* are signs that indicate a fact or condition; for instance, thunderclouds indicate rain.

Signs are organized into systems of objects and behaviors. Thus, the way chairs are arranged in a classroom and the manner in which students are expected to respond to the teacher are both signs that signal meaning. Signs—and the meanings they carry—vary across cultures and languages, adding richness to the study of second language that words alone seldom express fully.

Semiotics provides a perspective for examining human development through the interplay of multiple meaning systems. As students learn English, wise teachers provide and accept various ways through which students demonstrate their knowledge.

**ADAPTING INSTRUCTION: Using Semiotics to Acquire a Second Language**

- Students can view themselves, other students, teachers, the community, and culturally authentic materials (phone books, voicemail messages, advertising brochures, music videos, etc.) to examine ways that meaning is communicated using both verbal and nonverbal messages.
- Students can engage in a variety of purposeful cross-media activities—produce music, create collages, and write poems, journal entries, or advertising slogans—to display their identities, values, or ideas.
- Students can "people-watch" using semiotics to read nonverbal messages sent by dress styles, posture, demeanor, and so forth as a way to increase their interactions with one another at all levels of language proficiency.

*Source:* Díaz-Rico and Dullien (2004).

Semiotics has become increasingly important within the last decade as visual information, rather than primarily text, has become increasingly available and salient in the lives of students. Sophisticated computer art, animation, and graphics programs available through the Internet have opened up a language of two-dimensional shape and color that supplements, if not replaces, text as a source of information and experience for many young people. To learn more about this field, see Chandler (2005), Kress and Van Leeuwen (1995), Scollon and Scollon (2003), and Ryder (2005).

## Contributions of Research about the Brain

A basic question concerning second-language acquisition is "What is the role of the brain in learning language?" Neurolinguists attempt to explain the connection between language function and neuroanatomy and to identify, if possible, the areas of the brain responsible for language functioning. Recent studies have looked at the role of emotions and visual and gestural processing in second-language acquisition, tracing the brain processing not only of verbal language but also of nonverbal input such as gestures, facial expressions, and intonation (Paradis, 2005; Schumann, 1994).

Several contemporary educators have specialized in developing learning methods that take into consideration brain processing. According to research (Caine & Caine, 1994; Hart, 1975, 1983), learning is the brain's primary function. Many parts of the brain process reality simultaneously, using thoughts, emotions, imagination, and the senses to interact with the environment. This rich reaction can be tapped to facilitate language acquisition (see Table 3.3). For further information about brain-based learning, see *Brain/Mind Learning Principles in Action: The Fieldbook for Making Connections, Teaching, and the Human Brain* by Caine, Caine, McClintic, and Klimek (2004); Jensen's *Teaching with the Brain in Mind* (1998); Lyons and Clay's *Teaching Struggling Readers: How to Use Brain-Based Research to Maximize Learning* (2003); and Smilkstein's *We're Born to Learn* (2002).

### ADAPTED INSTRUCTION: Using Principles of Brain-Based Learning in Oral Presentations

**Before a Presentation**

- Have students lower anxiety by taking a few deep breaths, visualizing success, and repeating positive self-talk phrases (brain-based principle 2: Learning engages the entire physiology).
- Remind students to review the structure of the information, especially how the parts of the presentation fit together (brain-based principle 6: The brain processes parts and wholes simultaneously).

**During the Presentation**

- The speaker concentrates on the task while staying tuned to the needs of the audience (brain-based principle 7: Learning involves both focused attention and peripheral perception).
- Tenseness that is redefined as "eustress" ("good stress") supplies energy for learning rather than inhibits performance (brain-based principle 11: Learning is enhanced by challenge and inhibited by threat).

**After the Presentation**

- Students evaluate their accomplishment, ask for feedback and tune in to the reactions of others, identify problem areas, and make a plan for improvement (brain-based principle 10: Learning occurs best when facts and skills are embedded in natural, spatial memory—including the memory of positive performance).

Theories of second-language acquisition provide the rationale and framework for the daily activities of instruction. Teachers who are aware of the basic principles of contemporary language acquisition and learning are better equipped to plan instruction and explain their practices to peers, parents, students, and administrators.

Although the teacher's role is valuable as students learn a second language, the actual language learned is the responsibility of the learner. Research on cognitive processes shows that learners construct and internalize language-using rules during problem solving or

## Table 3.3

Principles and Implications for Brain-Based Instruction

| Principle | Implications for Instruction |
|---|---|
| 1. The brain can perform multiple processes simultaneously. | Learning experiences can be multimodal. As students perform experiments, develop a play from the text of a story, or take on complex projects, many facets of the brain are involved. |
| 2. Learning engages the entire physiology. | Stress management, nutrition, exercise, relaxation, and natural rhythms and timing should be taken into consideration during teaching and learning. |
| 3. The search for meaning is innate. | Language-learning activities should involve a focus on meaning; language used in the context of interesting activities provides a situated, meaningful experience. |
| 4. The brain is designed to perceive and generate patterns. | Information is presented in a way that allows brains to extract patterns and create meaning rather than react passively. |
| 5. Emotions are crucial to memory. | Instruction should support the students' backgrounds and languages. Interaction should be marked by mutual respect and acceptance. |
| 6. The brain processes parts and wholes simultaneously. | Language skills, such as vocabulary and grammar, are best learned in authentic language environments (solving a problem, debating an issue, exploring) in which *parts* (specific language skills) are learned together with *wholes* (problems to be solved). |
| 7. Learning involves both focused attention and peripheral perception. | Music, art, and other rich environmental stimuli can enhance and influence the natural acquisition of language. Subtle signals from the teacher (processed peripherally by students) communicate enthusiasm and interest. |
| 8. Learning always involves conscious and unconscious processes. | Students need opportunities to review what they learn consciously so they can reflect, take charge, and develop personal meaning. This encourages and gives shape to unconscious learning. |
| 9. There are at least two types of memory: spatial memory and rote learning systems. | Teaching techniques that focus on the memorization of language bits—words and grammar points—use the rote learning system. Teaching that actively involves the learner in novel experiences taps into the spatial system. |
| 10. Learning occurs best when facts and skills are embedded in natural, spatial memory. | Discrete language skills can be learned when they are embedded in real-life activities (demonstrations, field trips, performances, stories, drama, visual imagery). |
| 11. Learning is enhanced by challenge and inhibited by threat. | Teachers need to create an atmosphere of acceptance. Learners are taken from the point where they are at present to the next level of competence through a balance of support and challenge. |
| 12. Each brain is unique. | Teaching should be multifaceted. English learners can express developing understanding through visual, tactile, emotional, and auditory means. |

authentic communication. The shift from *what the teacher does* to *what the learner does* is a characteristic of contemporary thinking about learning in general and language acquisition specifically and has wide implications for teaching English learners.

## LEARNING MORE

### Further Reading

Excellent general background reading on discourse and context is Mercer's *Words and Minds* (2000), which traces the codevelopment of language and thinking. Mercer gives many examples of how people use discourse to shape events, such as arguing, persuading, laying the ground rules for conversation, and even giving and receiving a bribe. The discussion of the role of the teacher in fostering communicative talk in the classroom is broadly applicable across many levels of schooling.

### Web Search

The *Open Court Reading* Website (online at www.sraonline.com/index.php/home/curriculumsolutions/reading/ocr/622) gives the rationale for teaching reading through a structured program based on systematic and explicit scaffolding of skills. In contrast, the Heinemann Website (online at www.heinemann.com/shared/products/E00541.asp) offers reading materials such as Paugh and Dudley-Marling's *A Classroom Teacher's Guide to Struggling Readers* that present a child-centered view of the reading process. Use these two Websites to contrast top-down and bottom-up reading practices and their related underlying theories of learning.

### Exploration

Visit several local ESL teachers to investigate the second-language learning theories underlying their classroom practice. Ask what they know about Krashen's monitor theory, or such terms as *comprehensible input* and *affective filter.* Ask if they recognize the terms *basic interpersonal communication skills* (BICS) and *cognitive academic learning proficiency* (CALP). If not, ask what techniques they use to make instruction understandable to their English learners, and if they believe that lowering anxiety (the affective filter) increases learning.

### Experiment

Ask a friend to learn ten names in a foreign language (you supply) as a personal favor. If the friend agrees, see how long it takes him or her to memorize the names to your satisfaction. Next, ask the same friend if he or she would have learned the names faster for a reward. If so, what reward would have been sufficient? Does your friend think the reward would have increased the speed of learning? Why or why not? (For a guide to the pronunciation of Asian names, see www.csupomona.edu/~pronunciation.)

COVERS CTEL CONTENT

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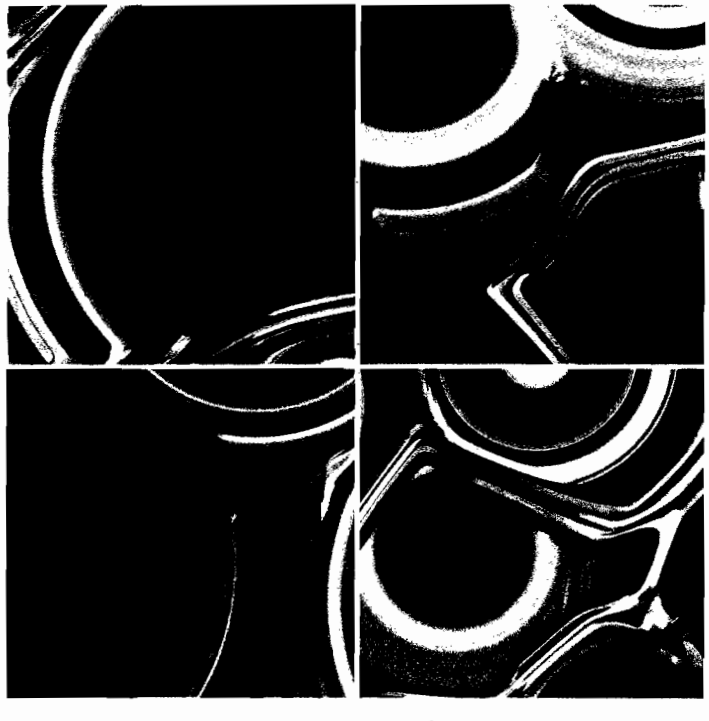

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