After reading, discussing, and engaging in activities related to this chapter, you will be able to meet the following content and language objectives.

**Content Objectives**
- List characteristics of English learners that may influence their success in school.
- Distinguish between content-based ESL and sheltered instruction.
- Explain the research supporting the SIOP Model.

**Language Objectives**
- Discuss the benefits and challenges of school reform and their effects on English learners.
- Develop a lexicon related to the SIOP Model.
- Compare your typical instruction with SIOP instruction.
Javier put his head in his hands and sighed. He watched Ms. Barnett standing at the board and tried to understand what she was saying to the class. He looked at the clock; she’d been talking for 12 minutes now. She wrote some numbers on the board and he noticed his classmates getting out their books. Copying their actions, he opened his social studies book to the page matching the first number on the board. He looked at the words on the page and began to sound them out, one by one, softly under his breath. He knew some words but not others. The sentences didn’t make much sense. Why was this class so tough? He could understand the teacher much better in science. Mrs. Ontero let them do things. They would all crowd around a table and watch her as she did an experiment and then he got to work with his friends, Maria, Huynh, and Carlos, trying out the same experiment. He even liked the science book; it had lots of pictures and drawings. Mrs. Ontero always made them look at the pictures first and they talked about what they saw. The words on the pages weren’t so strange either. Even the big ones matched the words Mrs. Ontero had them write down in their personal science dictionaries. If he forgot what a word meant in the textbook, he would look it up in his science dictionary. Or he could ask someone at his table. Mrs. Ontero didn’t mind if he asked for help. This social studies class just wasn’t the same. He had to keep quiet, he had to read, he couldn’t use a dictionary, they didn’t do things. . .

Javier is experiencing different teaching styles in his seventh-grade classes. He has been in the United States for 14 months now and gets along pretty well speaking English with his classmates. They talk about CDs and TV shows, jeans and sneakers, soccer and basketball. But schoolwork is hard. Only science class and PE make sense to him. Social studies, health, math, language arts—they’re all confusing. He had a class in English as a second language (ESL) last year, but not now. He wonders why Mrs. Ontero’s science class is easier for him to understand than his other classes. Ironically, Javier is luckier than a number of English learners. He has one teacher who provides effective instruction as he learns content through English, a new language. If more of Javier’s teachers learn the techniques that Mrs. Ontero uses, then Javier will have a chance to develop academic literacy in English and succeed in school. But it will take significant effort on the part of schools, districts, and universities to make this happen for Javier and other students like him.
Background on English Learners

Demographic Trends

Javier is one of many English learners in our schools. In fact, he represents the fastest growing group of students. During the decade from 1998–99 to 2008–09, the English learner population in pre-K–12 schools increased 51%, but the total pre-K–12 population, which includes these students, grew only 7.2%. In 2008–09, 11% of the students in U.S. schools were English learners, equaling over 5.3 million students out of a total enrollment of close to 49.5 million. At the current rate of growth, the English learner population in U.S. schools is projected to be 8 million in 2019–20 (NCELA, 2011).

However, it is important to recognize that the reported numbers refer to the identified English learners currently in language support programs or still being monitored. The number would be much higher if we added in the students who have passed their proficiency tests but are still struggling with academic English, the language used to read, write, listen, and speak in content classes to perform academic tasks and demonstrate knowledge of the subject standards.

The rise in English learners conforms to the increase in the immigrant population in the United States. The results of the 2010 American Community Survey estimated that 13% of the population was foreign born and 21% spoke a language other than English. Of these 21% who were age 5 or older, 42% reported not speaking English very well (the U.S. Census Bureau’s classification of limited English proficiency) (U.S. Census Bureau, 2012). Children age 5–17 make up about 19% of the U.S. population and within this group, 23% are reported as not speaking English very well.1 One in four children under the age of 18 live in immigrant families (Migration Policy Institute, 2012). Furthermore, over 70% of English learners in our schools were born in the United States; that is, they are second- or third-generation immigrants, including 55% of the adolescent English learners (ages 12 and older) (Flores, Batalova, & Fix, 2012).

The states with the highest numbers of limited English proficient individuals in 2010 were California, Texas, New York, Florida, Illinois, and New Jersey. These six states account for 67% of the limited English population in the United States. The top six states with the highest growth in limited English proficient individuals from 1990 to 2010 were not the same; these new destination states were Nevada, North Carolina, Georgia, Arkansas, Tennessee, and Nebraska (Pandya, Batalova, & McHugh, 2011).

The distribution picture is a little different when we consider the English learners in our pre-K–12 schools. The states with the highest numbers of English learners are California, Arizona, Texas, Colorado, New York, Florida, Illinois, and North Carolina. The states that have experienced the most growth in pre-K–12 English learner enrollment (more than 200% change) from 1999–2000 to 2009–10 are Illinois, Kentucky, Virginia, Delaware, South Carolina, and Mississippi (NCELA, 2011).

1Calculations for children age 5–17 not speaking English very well are based on data found at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_C16004&prodType=table (retrieved July 8, 2012).
Another consideration is the linguistic isolation our English learners experience. Many of them are in linguistically segregated schools. More than half of the elementary and secondary English learners were in schools where more than 30% of the student population was identified as limited English proficient (Batalova, Fix, & Murray, 2007).

Changes in the geographic distribution of English learners to these new destination states present many challenges to the numerous districts that have not served these students before. Academic programs are not well established; sheltered curricula and appropriate resources are not readily available; and, most important, many teachers are not trained to meet the needs of these second language learners.

Diverse Characteristics

In order to develop the best educational programs for English learners, we need to understand their diverse backgrounds. These learners bring a wide variety of educational and cultural experiences to the classroom as well as considerable linguistic differences, and these characteristics have implications for instruction, assessment, and program design. When we know students’ backgrounds and abilities in their native language, we can incorporate effective techniques and materials in our instructional practices.

All English learners in middle and high schools are not alike. They enter U.S. schools with a wide range of language proficiencies (both in English and in their native languages) and much divergence in their subject matter knowledge. In addition to the limited English proficiency and the approximately 180 native languages among the students, we also find diversity in their educational backgrounds, expectations of schooling, socioeconomic status, age of arrival, personal experiences while coming to and living in the United States, and parents’ education levels and proficiency in English. Some English learners are newcomers (i.e., new arrivals to the United States), some have lived in the United States for several years, and some are native born. Figure 1.1 shows some background factors that should be considered when planning programs and instruction so English learners can succeed in school.

- Some immigrant English learners had strong academic backgrounds before coming to the United States. Some are above equivalent grade levels in certain subjects—math and science, for example. They are literate in their native language and may have already studied a second language. Much of what these learners need is English language development so that as they become more proficient in English, they can transfer the knowledge they learned in their native country’s schools to the courses they are taking in the United States. A few subjects not previously studied, such as U.S. history, may require special attention. These students have a strong likelihood of achieving educational success if they receive appropriate English language and content instruction in their U.S. schools.

- Some other immigrant students had very limited formal schooling—perhaps due to war in their native countries or the remote, rural location of their homes. These students have little or no literacy in their native language, and they may not have had such schooling experiences as sitting at desks all day, changing
Background on English Learners

Teachers with each subject, or taking high-stakes tests. They have significant gaps in their educational backgrounds, lack knowledge in specific subject areas, and need time to become accustomed to school routines and expectations. These English learners with limited formal schooling and below-grade-level literacy are most at risk for educational failure.

- There are also English learners who have grown up in the United States but who speak a language other than English at home. Some students in this group are literate in their home language, such as Mandarin, Arabic, or Spanish, and will add English to their knowledge base in school. If they receive appropriate English language and content instruction, they too are likely to be academically successful.

- Some other native-born English learners who do not speak English at home have not mastered either English or their native language. There is a growing number of English learners in this group who continue to lack proficiency in

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**FIGURE 1.1 Diverse Characteristics of English Learners**

<table>
<thead>
<tr>
<th>English Knowledge</th>
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<tbody>
<tr>
<td>• Exposure to English</td>
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<tr>
<td>• Familiarity with Roman alphabet and numbers</td>
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<tr>
<td>• Proficiency in spoken English</td>
</tr>
<tr>
<td>• Proficiency in written English</td>
</tr>
<tr>
<td>• English being learned as a third or fourth language</td>
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<table>
<thead>
<tr>
<th>First Language (L1) Knowledge</th>
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</thead>
<tbody>
<tr>
<td>• Proficiency in spoken L1</td>
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<tr>
<td>• Literacy in the first language</td>
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<table>
<thead>
<tr>
<th>Educational Background</th>
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<tbody>
<tr>
<td>• On-grade level schooling in home country</td>
</tr>
<tr>
<td>• On-grade level schooling in U.S. schools (in L1 or English)</td>
</tr>
<tr>
<td>• Partial schooling in L1</td>
</tr>
<tr>
<td>• No schooling in L1</td>
</tr>
<tr>
<td>• Partial schooling in English</td>
</tr>
<tr>
<td>• No schooling in English</td>
</tr>
<tr>
<td>• Long-term English learner</td>
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<table>
<thead>
<tr>
<th>Sociocultural, Emotional, and Economic Factors</th>
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</thead>
<tbody>
<tr>
<td>• Poverty level</td>
</tr>
<tr>
<td>• Mobility</td>
</tr>
<tr>
<td>• Exposure to trauma, violence, abuse, and other serious stressors</td>
</tr>
<tr>
<td>• Refugee or asylee status</td>
</tr>
<tr>
<td>• Parents’ educational background</td>
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<table>
<thead>
<tr>
<th>Other Educational Categories</th>
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</thead>
<tbody>
<tr>
<td>• Special education</td>
</tr>
<tr>
<td>• Tier 2 or Tier 3 (Response to Intervention)</td>
</tr>
<tr>
<td>• Migrant</td>
</tr>
<tr>
<td>• Reclassified English learner</td>
</tr>
<tr>
<td>• Gifted and talented</td>
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</tbody>
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English even after five, six, or more years in U.S. schools. These students are referred to as long-term English learners (Menken & Kley, 2010). They typically have oral proficiency in English, but lack English reading and writing skills in the content areas. They struggle academically (Flores, Batalova, & Fix, 2012; Olsen, 2010).

Sociocultural, emotional, and economic factors also influence English learners’ educational attainment (Dianda, 2008). Poorer students, in general, are less academically successful (Glick & White, 2004). Undocumented status affects socioeconomic and postsecondary educational opportunities. Mobility can impinge on school success: Students who had moved were twice as likely not to complete high school as those who had not faced such transitions (Glick & White, 2004). Refugee students who experienced significant trauma during journeys to refugee camps or to the United States may struggle in school. The parents’ level of education also influences their children’s success. Parents with more schooling are typically more literate and have more knowledge to share with their children, whether through informal conversations or while helping with homework.

Some students are dually identified, which has implications for educational services. Besides being English learners, some students have learning disabilities or other special education needs. Unfortunately English learners tend to be over- or under-represented in special education because a number of districts struggle to distinguish between a delay in developing second language proficiency and a learning disability. Even when students are appropriately identified, districts have difficulty providing effective services to bilingual special education students. Others, such as English learners and redesignated English learners who score poorly on reading assessments, may need additional services to improve their reading achievement, such as Tier 2 or Tier 3 in a Response to Intervention (RTI) program. While we believe that the SIOP Model we present in this book is the best option for Tier 1 instruction and may help avoid Tier 2 and 3 placements (see Echevarría & Vogt, 2011), not all schools utilize SIOP instruction. Other students are migrant English learners who may move from school to school in the same year, jeopardizing their learning with absences and potentially incompatible curricula across districts or states.

**Achievement Gaps**

While the number of students with limited proficiency in English has grown exponentially across the United States, their level of academic achievement has lagged significantly behind that of their language-majority peers. There exists growing evidence that most schools are not meeting the challenge of educating these students well. Consider the following statistics:

- On the National Assessment for Educational Progress (NAEP) exams for reading in 2011, English learners performed poorly at eighth grade (National Center for Education Statistics [NCES], 2012b).
- The achievement gap between the average scores of non-English learners and English learners was 43 points, similar to the gap for the 2007 and 2009 administrations of the test.
Seventy-one percent of the eighth-grade English learners performed Below Basic, but only 22% of the non-English learners did. Only 3% of English learners scored as Proficient in Reading, and none as Advanced, while 35% of non-English learners were Proficient and 4% were Advanced.

The pattern on the 2011 NAEP mathematics assessment was not much different for eighth graders (NCES, 2012a).

The achievement gap between the average scores of non-English learners and English learners was 42 points, the same as the gap for the 2009 administration and greater than the gap for the 2007 administration.

Seventy-one percent of the eighth-grade English learners performed Below Basic, but only 24% of the non-English learners did. Further, only 6% of English learners performed at Proficient or Advanced levels, while 45% of non-English learners reached those higher levels.

A five-year, statewide evaluation study found that English learners with 10 years of schooling in California had less than a 40% chance of meeting the criteria to be redesignated as fluent English proficient (Parish et al., 2006). They pass the English language proficiency test, but do not pass the state content achievement tests.

English learners struggle academically in high school. Compared to non-English learners, English learners’ grade point averages (GPAs) are lower and their accrual of core academic course credits is less (NCES, 2011).

Since the No Child Left Behind (NCLB) Act was implemented in 2001, an increasing number of English learners are not receiving a high school diploma:

More English learners fail high school exit tests despite fulfilling all other graduation requirements (Biancarosa & Snow, 2004; Human Resources Research Organization, 2010, reported in Dietz, 2010; Kober et al., 2006; McNeil et al., 2008).

Students of color graduate at lower rates than White and Asian American students (Alliance for Excellent Education, 2010).

English learners are more likely to drop out than other student groups (Dianda, 2008; New York City Department of Education, 2011; Rumberger, 2011).

The lack of success in educating linguistically and culturally diverse students is problematic because federal and state governments expect all students to meet high standards, and they have adjusted national and state assessments as well as state graduation requirements to reflect new levels of achievement and to accommodate requirements of the No Child Left Behind Act (2001). However, we test students before they are proficient in English. We should not be surprised if they don’t score at the proficient level because by definition they are not proficient if they are classified as English learners.

Apart from the testing issues, English learners also have difficulty in school when program designs, instructional goals, and human and material resources do not match these students’ needs. The number of English learners has increased without a comparable increase in ESL or bilingual certified teachers. Despite the demographic
trends, only six states require specific coursework for all teacher candidates on topics like ESL methods and second language acquisition: Alaska, Arizona, California, Florida, Pennsylvania, and New York (National Comprehensive Center on Teacher Quality, 2009). As a result, most mainstream teachers are underprepared to serve ELs when they exit their preservice institutions (McGraner & Saenz, 2009). Curricula that develop subject area knowledge in conjunction with academic English are lacking, too. State policies limit the number of years that students have access to language support services; in fact, in Massachusetts, Arizona, and California, the goal is to move students into regular classrooms after one year, even though research strongly shows that students need more time with specialized language support (Saunders & Goldenberg, 2010).

We know that conversational fluency develops inside and outside of the classroom and can be attained in one to three years (Thomas & Collier, 2002). However, the language that is critical for educational success—academic language (Cummins, 2000)—is more complex and develops more slowly and systematically in academic settings. It may take students from four to seven years of study, depending on individual and sociocultural factors, before they are proficient in academic English (Collier, 1987; Hakuta, Butler, & Witt, 2000; Lindholm-Leary & Borsato, 2006; Thomas & Collier, 2002).

When policies and programs that complement the research on second language acquisition are in place, we see more positive outcomes. For example, analyses from New York City and the states of New Jersey, Washington, and California reveal that former English learners outperformed students as a whole on state tests, exit exams, and graduation rates (DeLeuw, 2008; New York City Department of Education, 2004; State of New Jersey Department of Education, 2006; Sullivan et al., 2005). These results indicate that when English learners are given time to develop academic English proficiency in their programs and are exited (and redesignated) with criteria that measure their ability to be successful in mainstream classes, they perform, on average, as well as or better than the state average on achievement measures.

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**School Reform, Standards, and Accountability**

Unfortunately, we do not yet have strong, research-based policies and programs in place nationwide for English learners; yet the pressure for academic success is high. The No Child Left Behind (NCLB) Act of 2001 holds schools accountable for the success of all of their students, and each state has standards for mathematics, reading, language arts, English language development, and science; all states implement high-stakes tests based on these standards.

NCLB has had positive and negative impacts on educational programs (Dianda, 2008). On the positive side, the education of English learners is part of school improvement conversations. More attention is paid to providing better educational opportunities for the learners and monitoring their language proficiency growth and academic progress. More funding is available to help teachers strengthen their instruction so students develop academic literacy skills and can access core content. More schools analyze assessment data to determine the progress of their efforts and adjust programs, instruction, and resources as indicated. Some states have allocated
additional resources for English learner programs, such as grants for specialized services for newcomers and students with interrupted educational backgrounds (Short & Boyson, 2012).

Negative effects of NCLB include penalties to schools and older students. Schools have been labeled “low performing” or “needs improvement” if their subpopulation of English learners does not attain testing achievement targets set for native English speakers on tests that have not been designed or normed for English learners (Abedi, 2002). After three subsequent years of such labels, many schools face corrective action. High schools are reluctant to enroll ninth-grade age or older English learners with no English, low native language literacy, and/or interrupted educational backgrounds because they are unlikely to meet NCLB’s four-year graduation cohort requirement. Teachers report pressure to “teach to the test,” which reduces their implementation of creative lessons, project-based learning, and interdisciplinary units (Short & Boyson, 2012).

Although more money is available for professional development, it is not always well spent. Numerous studies have shown that sustained, job-embedded, and research-based professional development is needed if comprehensive school reform is to become a reality, but one-shot workshops and disconnected interventions continue (Alliance for Excellent Education, 2011a; Calderón & Minaya-Rowe, 2011; Darling-Hammond & Richardson, 2009; Wei et al., 2009). Further, Ballantyne, Sanderman, and Levy (2008) report that only 26% of mainstream teachers with ELs in their classrooms have had professional development related to instructional practices for these learners.

Additional standards-based reforms are taking place. As of the 2012–13 school year, 46 states have adopted a common set of K–12 English language arts and mathematics standards, called the Common Core State Standards (NGA & CCSSO, 2010a, 2010b). Educators in these states are working on implementation activities such as modifying their current curriculum frameworks to ensure the required standards are included, and the U.S. Department of Education (USED) is requiring participating states to revise their NCLB assessments. On the one hand, these national standards are appealing because they place an emphasis on college and career readiness. If implemented as envisioned, high school graduates will be autonomous learners who effectively seek out and use resources to assist them in daily life, in academic pursuits, and in their jobs. On the other hand, the standards may be problematic for English learners. The developers decided not to address English learners’ second language development needs in the standards. For instance, there are foundations of literacy in grades K–5 (e.g., standards related to phonics) but not in grades 6–12. This oversight ignores the needs of adolescent English learners such as newly arrived immigrant students who are not literate when they enter secondary school. It remains to be seen if and how states will accommodate the language development needs of English learners as they implement the Common Core. (See www.corestandards.org/assets/application-for-english-learners.pdf for more information.)

2A similar effort has taken place for science. Twenty-six states led by Achieve, with support from science professional organizations, drafted Next Generation Science Standards for K–12 students and solicited public feedback. These standards were released in Spring 2013. (See www.nextgen-science.org for more details and updates.)
The foundation of school success is academic language and literacy in English. Age-appropriate knowledge of the English language is a prerequisite in the attainment of content standards. We learn primarily through language, and use language to express our understanding. As Lemke (1988, p. 81) explained,

[E]ducators have begun to realize that the mastery of academic subjects is the mastery of their specialized patterns of language use, and that language is the dominant medium through which these subjects are taught and students’ mastery of them tested.

Simply put, for English learners to have access to core content, they need academic language and literacy skills.

Educators and researchers in the field of second language acquisition and literacy have defined academic language or academic literacy in a number of ways. Most definitions incorporate reading, writing, listening, and speaking skills as part of academic language and refer to a specialized academic register of the formal written and spoken code. Although there is not yet a single agreed-upon definition, each one considers how language is used in school to acquire new knowledge and foster success on academic tasks (Anstrom et al., 2010; Bailey, 2007; Gibbons, 2002; Schleppegrell, 2004; Short, 2002). Without proficient oral and written English language skills, students are hard pressed to learn and demonstrate their knowledge of mathematical reasoning, science skills, historical perspectives, and other academic concepts.

Relationship to Second Language Learning

Academic language is used by all students in school settings, both native English speakers and English learners alike. However, this type of language use is particularly challenging for English learners who are beginning to acquire English at the same time that school tasks require a high level of English usage. Participation in informal conversation demands less from an individual than joining in an academic discussion (Cummins, 2000). While the distinction is not truly dichotomous, it is widely accepted that the language skills required for informal conversation differ from those required for academic processes such as summarizing information, evaluating perspectives, and drawing conclusions. Certainly, one may converse in a cognitively demanding way—such as debating a current event that requires significant knowledge of both sides of the topic—but that is not the typical social conversation. The distinction becomes clearer when we recognize that students have the ability to converse in English without needing strong academic language skills. English learners appear to speak English well in hallways, on playing fields, and in small talk before a lesson begins, but they struggle to use English well in classroom assignments or on tests. This situation occurs because they have not yet acquired a high level of academic language, which is cognitively demanding and highly decontextualized (Cummins, 1984).
Role in Schooling

The relationship between literacy proficiency and academic achievement grows stronger as grade levels rise—regardless of individual student characteristics. In secondary school classes, language use becomes more complex and more content area specific (Biancarosa & Snow, 2004). English learners must develop literacy skills for each content area in their second language as they simultaneously learn, comprehend, and apply content area concepts through their second language (Garcia & Godina, 2004; Short & Fitzsimmons, 2007).

Specifically, English learners must master academic English, which includes semantic and syntactic knowledge along with functional language use. Using English, students, for example, must be able to

- read and understand the expository prose in textbooks and reference materials,
- write persuasively,
- argue points of view,
- take notes from teacher lectures or Internet sites, and
- articulate their thinking processes—make hypotheses and predictions, express analyses, draw conclusions, and so forth.

In content classes, English learners must pull together their emerging knowledge of the English language with the content knowledge they are studying in order to complete the academic tasks. They must also learn how to do these tasks—generate the format of an outline, negotiate roles in cooperative learning groups, interpret charts and maps, and such. These three knowledge bases—knowledge of English, knowledge of the content topic, and knowledge of how the tasks are to be accomplished—constitute the major components of academic literacy (Short, 2002).

There is some general agreement about how best to teach academic language to English learners, including some targeted focus on the lexical, semantic, and discourse levels of the language as they are applied in school settings (Saunders & Goldenberg, 2010). Researchers such as Bailey and Butler (2007) found that there is content-specific language (e.g., technical terms like hypotenuse and cosine, phrases like “We hypothesize that . . .”) and general academic language (e.g., cross-curricular words like effect, cause, however) that are used across subject areas. Similarly, there are general academic tasks that one needs to know how to do to be academically proficient (e.g., create a timeline, structure an argument) and more specific subject assignments (e.g., write a scientific lab report). Teachers and curricula should pay attention to this full range of academic language. As a result, the enhancement of English learners’ academic language skills should enable them to perform better on assessments. This conclusion is bolstered by an older study: Snow et al. (1991) found that performance on highly decontextualized (i.e., school-like) tasks, such as providing a formal definition of words, predicted academic performance, whereas performance on highly contextualized tasks, such as face-to-face communication, did not.

The emphasis on teaching academic language is also reflected in the national ESL standards (Teachers of English to Speakers of Other Languages, 2006). Four of the five Pre-K–12 English Language Proficiency Standards specifically address the academic language of the core subject areas. Standards 2, 3, 4, and 5 state: “English
language learners communicate information, ideas, and concepts necessary for academic success in the area of [language arts (#2), mathematics (#3), science (#4), and social studies (#5)].” By 2012, 31 states and the District of Columbia had adopted English language proficiency standards (ELP) similar to TESOL’s, known as the WIDA (World-Class Instructional Design and Assessment) standards. Twenty-eight of these entities use the companion English language proficiency test, ACCESS for ELLs® (ACCESS: Assessing Comprehension and Communication in English State to State for English Language Learners), to guide and measure annual gains in English language proficiency (WIDA, 2005–11).

Research on Academic Language and Literacy

Findings from two major syntheses of the research on academic literacy and the education of English learners are useful to keep in mind as we plan instruction and programs for English learners. The National Literacy Panel on Language-Minority Children and Youth (NLP) (August & Shanahan, 2006) analyzed and synthesized the research on these learners with regard to English literacy attainment. Many of the studies that the 13-member expert panel examined looked at the reading and writing skills needed for successful schooling. The panel considered second language literacy development, cross-linguistic influences and transfer, sociocultural contexts, instruction and professional development, and student assessment. Figure 1.2 summarizes the findings of the NLP that appeared in the executive summary (August & Shanahan, 2006).

The second major review was conducted by researchers from the former National Center for Research on Education, Diversity & Excellence (CREDE). Their focus was on oral language development, literacy development (from instructional and cross-linguistic perspectives), and academic achievement. Both syntheses led to similar findings. Following are some of the findings that are closely related to the topics in this book:

- Processes of second language (L2) literacy development are influenced by a number of variables that interact with each other in complex ways (e.g., first

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FIGURE 1.2 Research Findings from the National Literacy Panel on Language-Minority Children and Youth

1. English language learners (ELLs) benefit from instruction in the key components of reading as defined by the National Reading Panel (NICHD, 2000) as phonemic awareness, phonics, fluency, vocabulary, and text comprehension.

2. Instruction in these five components is necessary but not sufficient to teach ELLs to read and write proficiently in English. Oral language proficiency is needed also, so ELLs need instruction in this area.

3. Oral proficiency and literacy in the student’s native language (L1) will facilitate development of literacy in English, but literacy in English can also be developed without proficiency in the L1.

4. Individual student characteristics play a significant role in English literacy development.

5. Home language experiences can contribute to English literacy achievement, but on the whole, the research on the influence of sociocultural factors is limited.

August & Shanahan, 2006, pp. 5-6
One positive outcome of the student performance measures put into place in response to the NCLB legislation is that schools have started to focus on the development of academic language and literacy skills in students who struggle academically, including English learners. Schools have sought to improve the educational programs, instructional practices, and the curricula and materials being offered to these students. Opportunities for ongoing professional development are moving teachers in the right direction. However, we have a long way to go, as the data and research findings about the poor performance of English learners on accountability measures presented in this chapter reveal.

This book, *Making Content Comprehensible for Secondary English Learners: The SIOP® Model*, offers a solution to one aspect of school reform needed for English learners’ acquisition of English and academic achievement, namely classroom instruction. It introduces a research-based model of sheltered instruction, provides teaching ideas for each of the model’s eight components, suggests ways to differentiate instruction in multi-level classrooms, and demonstrates through lesson scenarios how the model can be implemented across grades and subject areas. The model provides guidance for the best practices for English learners, grounded in more than two decades of classroom-based research, the experiences of competent teachers,
and findings from the professional literature. It has been used successfully in both language and content classrooms, and with this approach, teachers can help English learners attain the skills and knowledge associated with college and career readiness.

In addition, the SIOP Model has been used widely in classrooms that have a mix of English learners and English-speaking students. For many years, school district personnel around the United States have reported anecdotally that English speakers and English learners alike benefit when teachers use the SIOP Model in their classes, and they point to increased student achievement data to substantiate their reports. However, these were not controlled research studies. Recently, though, research studies have shown that all students in SIOP classes performed better than comparison or control groups (Echevarría, Richards-Tutor, Canges, & Francis, 2011; Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011). These findings indicate that English-speaking students are not disadvantaged when they are in SIOP classes with English learners and that they also benefit from SIOP practices.

**Content-based ESL and Sheltered Content Instruction**

Currently in the United States, content-based English as a second language (ESL) and sheltered instruction are acknowledged methods for developing academic English and providing English learners access to core content coursework in grades K–12. Ideally, these two approaches work in tandem: one, with a primary focus on academic (and where needed, social) language development; the other, on content standards and topics. In the ESL classes, the curricula are tied to the state standards for English language proficiency, the students are all English learners, and the teacher is ESL or bilingual certified. In sheltered content instruction classes, the curricula are tied to the state subject area standards, the students may be all English learners or mixed with native English speakers, and the teachers have content certification plus an endorsement or certification in ESL or bilingual education (see Figure 1.3).

In content-based ESL, material from multiple subject areas is often presented through thematic or interdisciplinary units. For example, in the seventh grade, one theme might be the impact of the Transcontinental Railroad. In their content-based ESL classes, the middle schoolers might read letters (in translation) written by Chinese immigrants who worked on the railroad and diary entries by Americans who migrated west; make maps of the progress of the railroad; watch video clips depicting changes to the Native Americans’ and cattle ranchers’ lives; and calculate the railroad’s economic impact (decreased travel time, improved movement of goods, etc.). They would thus explore objectives from language arts, social studies, geography, and math.

For the high school classroom, a theme such as “urbanization” might be selected, and lessons could include objectives drawn from environmental science, geography, world history, economics, and algebra. Students with less proficiency might take field trips around a local city and create maps, transportation routes, and brochures. Advanced students might learn to use reference materials and computer modeling to conduct research on the development of cities and their respective population growth. They might study persuasive language to debate advantages and disadvantages to urbanization.
In general, content-based ESL/ELD teachers seek to develop the students’ English language proficiency by incorporating information from the subject areas that students are likely to study or from courses they may have missed if they are new immigrants. Whatever subject matter is included, for effective content-based ESL instruction to occur, teachers need to provide practice in academic skills and tasks common to mainstream classes (Mohan, Leung, & Davison, 2001; Short, 2002).

In sheltered content classes, teachers deliver grade-level objectives for the particular content courses to English learners through modified instruction that makes the information comprehensible to the students while promoting their academic English development. The classes may be variously named Sheltered Chemistry, Introduction to Algebra, or the like, and a series of courses may constitute a program called Sheltered Instruction, or SDAIE (Specially Designed Academic Instruction in English). Sheltered instruction can extend the time students have for getting language support services while giving them a jump-start on the content subjects they will need for graduation.

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Effective sheltered instruction is not simply a set of additional or replacement instructional techniques that teachers implement in their classrooms. Instead, it draws from and complements methods advocated for both second language and mainstream classrooms. For example, some techniques include cooperative learning, connections to student experiences, culturally responsive activities, targeted
vocabulary development, slower speech and fewer idiomatic expressions for less proficient students, use of visuals and demonstrations, and use of adapted text and supplementary materials (Short & Echevarria, 2004).

In the 1990s, there was a great deal of variability in both the design of sheltered instruction courses and the delivery of sheltered lessons, even among trained teachers and within the same schools (August & Hakuta, 1997; Echevarría & Short, 2010). Some schools, for instance, offered only sheltered courses in one subject area, but not in other core areas. It was our experience as well that one sheltered classroom did not look like the next in terms of each teacher’s instructional language; the tasks the students were to accomplish; the degree of interaction that occurred between teacher and student, student and student, and student and text; the amount of class time devoted to language development versus content knowledge; the learning strategies taught to and used by the students; the availability of appropriate materials; and more. In sum, there was no model for teachers to follow and few systematic and sustained forms of professional development.

This situation was the impetus for our research: to develop a valid, reliable, and effective model of sheltered instruction.

Research and Development of the Sheltered Instruction Observation Protocol (SIOP®) Model

We developed the Sheltered Instruction Observation Protocol (SIOP®) Model as an approach for teachers to integrate content and language instruction for students learning through a new language. Teachers would employ techniques that make the content concepts accessible and also develop the students’ skills in the new language. We have been fortunate in securing funding and the participation of many schools and teachers since 1996 to research, develop, and refine the SIOP Model. Details of the SIOP Model research studies can be found in Appendix C of this book and in Short, Echevarria, and Richards-Tutor (2011). We present a brief overview here.

The first version of the Sheltered Instruction Observation Protocol (SIOP) was drafted in the early 1990s. We used it exclusively as a research and supervisory tool to determine if observed teachers incorporated key sheltered techniques consistently in their lessons. This early draft, like subsequent ones, pulled together findings and recommendations from the research literature with our professional experiences and those of our collaborating teachers on effective classroom-based practices.

The protocol evolved into a lesson planning and delivery approach, known as the SIOP Model (Echevarria, Vogt, & Short, 2000), through a seven-year research study, “The Effects of Sheltered Instruction on the Achievement of Limited English Proficient Students,” sponsored by the Center for Research on Education, Diversity & Excellence (CREDE) and funded by the U.S. Department of Education. The study began in 1996 and involved collaborating middle school teachers who worked with the researchers to refine the features of the original protocol: distinguishing between effective strategies for beginner, intermediate, and advanced English learners; determining “critical” versus “unique” sheltered teaching strategies; and making
the SIOP more user friendly. A substudy confirmed the SIOP to be a valid and reliable measure of sheltered instruction (Guarino et al., 2001).

Specifically, the SIOP is composed of 30 features grouped into eight main components:

- The features under Lesson Preparation initiate the lesson planning process, so teachers include content and language objectives, use supplementary materials, and create meaningful activities.
- Building Background focuses on making connections with students’ background experiences and prior learning, and developing their academic vocabulary.
- Comprehensible Input considers how teachers should adjust their speech, model academic tasks, and use multimodal techniques to enhance comprehension.
- The Strategies component emphasizes teaching learning strategies to students, scaffolding instruction, and promoting higher-order thinking skills.
- Interaction prompts teachers to encourage students to elaborate their speech and to group students appropriately for language and content development.
- Practice & Application provides activities to practice and extend language and content learning.
- Lesson Delivery ensures teachers present a lesson that meets the planned objectives and promotes student engagement.
- The Review & Assessment component reminds teachers to review the key language and content concepts, assess student learning, and provide specific academic feedback to students on their output.

You will read about each component and its features in subsequent chapters of this book. During four years of field testing, we analyzed teacher implementation and student effects. This CREDE research showed that English learners whose teachers were trained in implementing the SIOP Model performed statistically significantly better on an academic writing assessment than a comparison group of English learners whose teachers had no exposure to the model (Echevarría, Short, & Powers, 2006).

From 1999 to 2002, we field tested and refined the SIOP Model’s professional development program, which includes professional development institutes, videotapes of exemplary SIOP teachers (Hudec & Short, 2002a, 2002b), facilitator’s guides (Echevarría & Vogt, 2008; Short, Hudec, & Echevarría, 2002), and other training materials.

We continued to test and refine the SIOP Model in several later studies. From 2004–07, we replicated and scaled up the SIOP research in a quasi-experimental study in two districts at the middle and high school levels. The treatment teachers participated in the professional development program with summer institutes, follow-up workshops, and on-site coaching. Students with SIOP-trained teachers made statistically significant gains in their average mean scores for oral language, writing, and total proficiency on the state assessment of English language proficiency, compared to the comparison group of English learners (Short, Fidelman, & Louguit, 2012).

From 2005–12 we participated in the Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE), looking first at the SIOP Model in middle school science classrooms (Himmel, Short, Richards, & Echevarria, 2009) and later at the SIOP Model as the professional development framework for a schoolwide intervention (Echevarria, Short, Richards-Tutor, &
Himmel, in press). The results from the Year 2 experimental study showed that students who had teachers who implemented the SIOP Model with greater fidelity performed better than those who did not implement the SIOP Model to a high degree (Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011).

During the past decade, a number of school districts have also conducted program evaluations on their implementation of the model. A number of these can be reviewed in Implementing the SIOP® Model Through Effective Professional Development and Coaching (Echevarría, Short, & Vogt, 2008). In addition, other researchers have studied SIOP Model professional development programs (Batt, 2010; McIntyre et al., 2010).

A note about terminology is helpful before you read further. The SIOP term now refers to both the observation instrument for rating the fidelity of lessons to the model (as shown in Appendix A) and the instructional model for lesson planning and delivery that we explain in detail in the following chapters. Figure 1.4 shows the terminology we will be using in this book to distinguish between these two uses. In addition, we will use SIOP as a modifier to describe teachers implementing the model (SIOP teachers) and lessons incorporating the 30 features (SIOP lessons).

Effective SIOP® Model Instruction

As you continue to read this book, you will explore the components and features of the SIOP Model in detail and have the opportunity to try out numerous techniques for SIOP lessons. You will see that the SIOP Model shares many features recommended for high-quality instruction for all students, such as cooperative learning, strategies for reading comprehension, writers’ workshop, and differentiated instruction. However, the SIOP Model adds key features for the academic success of these learners, such as the inclusion of language objectives in every content lesson, the development of background knowledge, the acquisition of content-related vocabulary, and the emphasis on academic literacy practice.

Here we briefly describe the instructional practices that effective SIOP teachers use. You can compare your typical instruction with that of SIOP teachers, and you might find that you are already on the path to becoming a skillful SIOP teacher yourself!

In effective SIOP lessons, language and content objectives are systematically woven into the curriculum of one particular subject area, such as U.S. history, algebra, English 9, or life science, or in one ESL level, such as beginner, intermediate, or advanced. Teachers must develop the students’ academic language proficiency consistently and regularly as part of the lessons and units they plan and deliver (Echevarría & Graves, 2007; Short, 2002).

- Content teachers generally present the regular, grade-level subject curriculum to the students through modified instruction in English, although some special
curricula may be designed for students who have significant gaps in their educational backgrounds or very low literacy skills.

- Content teachers identify how language is used in their subjects and give students explicit instruction and practice with it.
- ESL teachers advance students’ English language development with curricula addressing language proficiency standards but incorporating the types of texts, vocabulary, and tasks used in core subjects to prepare the students for success in the regular, English-medium classroom.

Accomplished SIOP teachers determine students’ baseline understandings in their subject area and move them forward, both in their content knowledge and in their language skills through a variety of techniques.

- SIOP teachers provide rigorous instruction aligned with state content and language standards, such as the Common Core and WIDA.
- SIOP teachers make specific connections between the content being taught and students’ experiences and prior knowledge, and they focus on expanding the students’ vocabulary base.
- They modulate the level of English they use and the texts and other materials used with and among students.
- They make the content comprehensible through techniques such as the use of visual aids, modeling, demonstrations, graphic organizers, vocabulary previews, adapted texts, cooperative learning, peer tutoring, and native language support.
- SIOP teachers help English learners articulate their emerging understandings of the content both orally and in writing, often with sentence starters and language frame scaffolds.
- Besides increasing students’ declarative knowledge (i.e., factual information), SIOP teachers highlight and model procedural knowledge (e.g., how to accomplish an academic task like writing a science report or conducting research on the Internet) along with study skills and learning strategies (e.g., note-taking and self-monitoring comprehension when reading).

In effective SIOP lessons, there is a high level of student engagement and interaction with the teacher, with other students, and with text, which leads to elaborated discourse and critical thinking.

- Student language learning is promoted through social interaction and contextualized communication as teachers guide students to construct meaning and understand complex concepts from texts and classroom discourse (Vygotsky, 1978).
- Students are explicitly taught functional language skills, such as how to negotiate meaning, confirm information, describe, persuade, and justify.
- Teachers introduce English learners to the classroom discourse community and demonstrate skills such as taking turns in a conversation and interrupting politely to ask for clarification.
Through instructional conversations (Goldenberg, 1992–93) and meaningful activities, students practice and apply their new language and content knowledge.

Not all teaching is about the techniques in a lesson. SIOP teachers also consider their students’ affective needs, cultural backgrounds, and learning styles. They strive to create a nonthreatening environment where students feel comfortable taking risks with language.

SIOP teachers engage in culturally responsive teaching and build on the students’ potentially different ways of learning, behaving, and using language (Bartolome, 1994).

They socialize English learners to the implicit classroom culture, including appropriate behaviors and communication patterns.

They plan activities that tap into the auditory, visual, and kinesthetic preferences of the students and consider their multiple intelligences as well (Gardner, 1993).

The SIOP Model is also distinguished by use of supplementary materials that support the academic text. The purpose of these materials is to enhance student understanding of key topics, issues, and details in the content concepts being taught through means other than teacher lecture or dense textbook prose.

To present key topics or reinforce information, SIOP teachers find related reading texts (e.g., trade books), graphics and other illustrations, models and other realia, multimedia and computer-based resources, adapted text, and the like.

SIOP teachers use supplementary materials to make information accessible to students with mixed proficiency levels of English. For example, some students in a mixed class may be able to use the textbook, while others may need an adapted text.

When advances in technology are used effectively in the classroom, English learners can reap many benefits. Digital content is motivating for students, allows for a personalized learning experience, is multimodal, and can give students experience with meaningful and authentic tasks (Lemke & Coughlin, 2009).

Technology such as interactive whiteboards with links to the Internet, visual displays, audio options, and more offer a wealth of resources to support English learners’ acquisition of new information and of academic English.

Technology and digital learning “specifically provide the opportunity for increased equity and access; improved effectiveness and productivity of teachers and administrators; and improved student achievement and outcomes” (Alliance for Excellent Education, 2011b, p. 2).

SIOP teachers give students opportunities to use the technology for multiple purposes, such as access to information presented in the students’ native language, cyber-group learning interactions such as simulations and virtual field trips, self-paced research, and writing and editing tools.
Depending on the students’ proficiency levels, SIOP teachers offer multiple pathways for students to demonstrate their understanding of the content. In this way, teachers can receive a more accurate picture of most English learners’ content knowledge and skills through an assortment of assessment measures than they could through one standardized test. Otherwise, a student may be perceived as lacking mastery of content when actually he or she is following the normal pace of the second language acquisition process (Abedi & Lord, 2001; Solano-Flores & Trumbull, 2003).

- SIOP teachers plan pictorial, hands-on, or performance-based assessments for individual students; group tasks or projects; oral reports; written assignments; and portfolios, along with more traditional measures such as paper-and-pencil tests and quizzes to check student comprehension and language growth.
- Teachers use rubrics to measure student performance on a scale leading to mastery, and they share those rubrics with students in advance.
- Teachers dedicate some time to teaching students how to read and understand standardized test questions, pointing out the use of specific verbs or synonyms in the question stems and possible responses (Bailey & Butler, 2007; Kilgo, no date).

It is important to recognize that the SIOP Model does not require teachers to discard their favored techniques or to add copious new elements to a lesson. Rather, this model of sheltered instruction brings together what to teach by providing a framework for how to teach it. It acts as an umbrella, allowing teachers the flexibility to choose techniques they know work well with their particular group of students (see Figure 1.5).
Implementing the SIOP® Model

The goal of this book is to prepare teachers to teach content effectively to English learners as they develop their students’ academic English ability. The SIOP Model may be used as part of a program for preservice and inservice professional development, as a lesson planner for sheltered content lessons, and as a training resource for university faculty. Research shows that professional development approaches that improve teaching include the following: sustained, intensive development with modeling, coaching, and problem solving; collaborative endeavors for educators to share knowledge; experiential opportunities that engage teachers in actual teaching, assessment, and observation; and development grounded in research but also drawing from teacher experience and inquiry, connected to the teachers’ classes, students, and subjects taught (Borko, 2004; Darling-Hammond & Richardson, 2009). In our research studies, we found that SIOP implementation does not happen quickly. Teachers may take one to two years before they implement the model consistently to a high degree, and coaching helps get them to that level (Short, Fidelman, & Louguit, 2012). McIntyre and colleagues (2010) suggest that teachers’ proficiency in implementing the model may depend on their background teaching experiences and the design of their professional development.

Effective implementation of the SIOP Model is one key to improving the academic success of English learners. Preservice teachers need to learn the model to develop a strong foundation in best practice for integrating language and content in classes with English learners. Practicing teachers need the model to strengthen their lesson planning and delivery and to provide students with more consistent instruction that meets language and content standards. Site-based supervisors and administrators use the model to train and coach teachers and systematize classroom observations. Teacher education faculty also present the SIOP Model in their methods courses and use it in student teacher supervision.

Any program in which students are learning content through a nonnative language could use the SIOP Model effectively. It may be an ESL program, a late-exit bilingual program, a dual language/two-way bilingual program, a newcomer program, a sheltered program, or even a foreign language immersion program. The model has been designed for flexibility and tested in a wide range of classroom situations: with students who have strong academic backgrounds and those who have had limited formal schooling; with students who are recent arrivals and those who have been in U.S. schools for several years; and with students at beginning levels of English proficiency and those at advanced levels. For students studying in content-based ESL or bilingual courses, SIOP instruction often provides the bridge to the general education program. More discussion of getting started with the SIOP Model is found in Chapter 12.
Summary

As you reflect on this chapter and the impact of the SIOP Model on middle and high school English learners’ content and academic language learning, consider the following main points:

- Students who are learning English as an additional language are the fastest-growing segment of the school-age population in the United States, and almost all candidates in teacher education programs will have linguistically and culturally diverse students in their classes during their teaching careers. However, many of these future teachers—as well as most practicing teachers—are not well prepared to instruct these learners.

- School reform efforts, standards, and increased state accountability measures put pressure on schools and districts to improve their educational opportunities and practices with English learners. This pressure has had both positive and negative outcomes. Teachers can use the SIOP Model to help students meet Common Core standards and prepare English learners for college and careers.

- The SIOP Model has a strong, empirical research base. It has been tested across multiple subject areas and grade levels. The research evidence shows that the SIOP Model can improve the academic literacy of English learners.

- The SIOP Model does not mandate cookie-cutter instruction, but it provides a framework for well-prepared and well-delivered lessons for any subject area. As SIOP teachers design their lessons, they have room for creativity. Nonetheless, critical instructional features must be attended to in order for teachers to respond appropriately to the unique academic and language development needs of English learners.

- The model is operationalized in the SIOP protocol, which can be used to rate lessons and measure the level of SIOP implementation.

- Our research shows that both language and content teachers can implement the SIOP Model fully to good effect. The model is best suited for content-based ESL courses and sheltered content courses that are part of a program of studies for English learners, and for mainstream content courses with English learners and struggling readers. Together, these courses can be a promising combination when implemented schoolwide.

- We need students like Javier to be successful in school and beyond. In the long run, such success will benefit the communities in which these students live and the national economy as a whole.

Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
   a. List characteristics of English learners that may influence their success in school?
b. Distinguish between content-based ESL and sheltered instruction?

c. Explain the research supporting the SIOP Model?

d. Discuss the benefits and challenges of school reform and their effects on English learners?

e. Develop a lexicon related to the SIOP Model?

f. Compare your typical instruction with SIOP instruction?

2. Consider one middle or high school class of English learners. Identify the individual and sociocultural factors that may influence the educational success of these students. In what ways might instruction using the SIOP Model help them?

3. How would you characterize the type(s) of instruction offered to English learners in your school or schools you know: traditional ESL, content-based ESL, sheltered content, bilingual content, traditional content? Provide evidence of your characterization in terms of curricula and instruction. Are the English learners successful when they enter regular, mainstream content classes? Explain.

4. Many secondary level teachers using sheltered instruction, whether they had special training in a subject area or in second language acquisition, fail to take advantage of the language learning opportunities for students in sheltered content classes. Why do you think this is so? Offer two concrete suggestions for these teachers to enhance their students’ academic language development.

5. Look at one of your own lesson plans. Which characteristics of the SIOP Model do you already incorporate? Consider the components and features of the model as found in Appendix A.