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FIFTH EDITION

MAKING CONTENT COMPREHENSIBLE FOR ENGLISH LEARNERS

THE SIOP[®] MODEL

20 YEARS
OF RESEARCH

EMPIRICALLY VALIDATED • COLLEGE AND CAREER READINESS

Jana Echevarría

MaryEllen Vogt

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Making Content Comprehensible for English Learners: The SIOP[®] Model

fifth edition

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Preface

Even though the Sheltered Instruction Observation Protocol (now known as SIOP) has been used in schools for almost 20 years, it has never been more relevant than it is today with the emphasis on rigorous academic standards for all students such as the Common Core State Standards (CCSS) and Next Generation Science Standards (NGSS). Teachers—now more than ever—need a proven approach for making instruction understandable for English learners while at the same time developing their academic language skills. The SIOP is a mechanism for helping students reach high academic standards, and many of the features of SIOP are reflected in the standards, such as the emphasis on speaking and listening skills.

We hope that you will use this book (paper or electronic, depending on the book you've chosen) as a guide for lesson planning and teaching. SIOP teachers tell us that it is a resource they turn to again and again as they plan and carry out effective lessons, so we encourage you to highlight sections, mark pages with sticky notes, and fill margins with application ideas. We've written the book in a teacher-friendly way, and our hope is that it will become a valuable resource to you as you strive to become a high-implementing SIOP teacher. As you read, you will find lesson plans, teaching ideas, and many effective activities for working with English learners. Our recent research confirms that the SIOP Model makes a positive difference academically for all students, so what works well for English learners will work equally well with others in your classroom.

It is hard to believe that so many years have passed since we first began our journey with the SIOP Model. Back then, it would have been difficult to fathom that today, the SIOP Model would be implemented in schools throughout all 50 states in the United States, and in numerous countries. Whether you are already familiar with the SIOP Model or are just now learning about SIOP, we hope that you will find this fifth edition to be informative, helpful, and, most importantly, beneficial to the English learners and other students with whom you work. When we began our research, we recognized the need for a comprehensive, well-articulated model of instruction for preparing teachers to work with English learners. From this need, the SIOP was created. Now, with the widespread use of the SIOP Model, we have since written more than a dozen additional books on topics related to teaching English learners and SIOP implementation. (See Appendix D.)

Our work on the SIOP Model started in the early 1990s when there was a growing population of English learners, but no coherent model for teaching this student population. We began our efforts by reviewing the literature and examining district-produced guidelines for English learners to find agreement on a definition of sheltered instruction, also known as SDAIE (Specially Designed Academic Instruction in English) in some regions. A preliminary observation protocol was drafted and field-tested with sheltered instruction teachers. A research project through the Center for Research on Education, Diversity, & Excellence (CREDE) enabled us to engage in an intensive refinement process and to use the SIOP Model in a sustained

professional development effort with teachers on both the East and West Coasts. Through this process of classroom observation, coaching, discussion, and reflection, the instrument was refined and changed, and it evolved into the Sheltered Instruction Observation Protocol, or as it has come to be known, SIOP® (pronounced sī-ŏp). SIOP offers teachers a model for lesson planning and implementation that provides English learners with access to grade-level content standards, including the Common Core and Next Generation Science Standards. By providing this access, we help prepare students for life after high school in colleges or careers as well.

Although a number of approaches to teaching English learners have emerged over the years, at present, SIOP remains the only research-validated model of sheltered instruction. Our studies have appeared in numerous peer-reviewed professional journals. In fact, because of its applicability across content areas, the national Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) used the SIOP Model as a framework for comprehensive school-wide intervention in its research aimed at improving the achievement of English learners in middle school. The SIOP Model is now being implemented at all levels of education from pre-K to community colleges and universities. It is used in sheltered content classes (also called integrated ELD in some states), dual language programs, content-based ESL classes, special education instruction, and general education classrooms.

Since the first edition of this book was published, we have continued to develop and refine the SIOP Model, but we have not changed the eight components and 30 features. They have withstood the test of time. In our work with thousands of teachers and administrators throughout the country, our own understanding of effective sheltered instruction and the needs of English learners has grown substantially. We believe, and research on SIOP confirms, that when teachers consistently and systematically implement the SIOP Model's 30 features in lessons for English learners and English speakers alike, the result is high-quality, effective instruction and improvement of student achievement.

As the authors of this book, we have approached our teaching, writing, and research from different yet complementary fields. Jana Echevarría's research and publications have focused on issues in the education of English learners, and on English learners with special education needs, as well as on professional development for regular and special education teachers. MaryEllen Vogt's research and publications focus primarily on improving reading instruction, including improving comprehension in the content areas, content literacy for English learners, and teacher change and development. Deborah Short is a researcher and former sheltered instruction teacher with expertise in second language development, academic literacy, methods for integrating language and content instruction, materials development, and teacher change.

The strength of our collaboration is that we approach the issue of educating English learners from different perspectives. In writing this fifth edition of *Making Content Comprehensible for English Learners: The SIOP® Model*, we each provided a slightly different lens through which to view and discuss instructional situations. But our varied experiences have led us to the same conclusion: Educators need a resource for planning and implementing high-quality lessons for English learners and other students—lessons that will prepare students eventually for college and careers—and SIOP is fulfilling this need.

■ What's New in This Edition

In this fifth edition, we have added a number of features based on the feedback we have received from educators who use SIOP. In particular, we have digitized the book in order to put more resources at your fingertips. There are embedded links to video clips of lessons and interviews and to lesson plan templates. Cognizant of the importance of instructional technology today, we have added sections on “Teaching with Technology” to the chapters describing the SIOP components. Further, we have made the book more interactive with opportunities for you to assess and reflect on what you are learning as you read and apply the ideas in this book.

Specifically, the changes to chapters include the following:

Chapter 1 Introducing the SIOP[®] Model

- Updated demographics and research throughout
- Updated discussion of English learners’ backgrounds and academic performance
- Updated discussion of current educational trends, including the Common Core State Standards and the Next Generation Science Standards
- Up-to-date discussion of academic language and literacy
- New video links inserted throughout to illustrate chapter discussion
- New Reflect and Apply eText feature
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 2 Lesson Preparation

- Updated research throughout
- Enhanced sections discussing content and language objectives and how to write them
- New figures related to Lesson Preparation
- Revised Teaching Scenarios and lesson plan
- New Reflect and Apply eText feature in which readers explain their ratings of teachers’ lessons
- New feature: Teaching with Technology
- New video links inserted throughout to illustrate chapter discussion
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 3 Building Background

- Substantive discussion of three categories of academic vocabulary
- New feature: Teaching with Technology
- New video links inserted throughout the e-Text to illustrate chapter discussion
- New Reflect and Apply eText feature where readers explain their ratings of teachers’ lessons

- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 4 Comprehensible Input

- Updated research throughout
- New feature: Teaching with Technology
- Revised Teaching Scenarios lessons to reflect NGSS standards.
- New video links inserted throughout to illustrate chapter discussion
- New Reflect and Apply eText feature where readers explain their ratings of teachers' lessons
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 5 Strategies

- Updated description of strategic processing
- Reorganized classification of learning strategies
- New feature: Teaching with Technology
- New video links inserted throughout the eText to illustrate chapter discussion
- New Reflect and Apply eText feature where readers explain their ratings of teachers' lessons
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 6 Interaction

- Updated research throughout
- New video links inserted throughout to illustrate chapter discussion
- Revised discussion of the features including examples of the Common Core State Standards
- New feature: Teaching with Technology
- New Reflect and Apply eText feature where readers explain their ratings of teachers' lessons
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 7 Practice & Application

- Updated research throughout
- New Reflect and Apply eText feature where readers explain their ratings of teachers' lessons
- New feature: Teaching with Technology
- New video links inserted throughout to illustrate chapter discussion
- Revised Teaching Scenarios
- Revised discussion questions

- New end of chapter Review & Assessment quiz in eText

Chapter 8 Lesson Delivery

- Revised chapter objectives
- Updated research throughout
- Additional ideas for differentiation
- Revised Teaching Scenarios
- New Reflect and Apply eText feature where readers explain their ratings of teachers' lessons
- New feature: Teaching with Technology
- New video links inserted throughout to illustrate chapter discussion
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 9 Review & Assessment

- New discussion exploring the relationship between classroom context and assessment
- New questions to consider during progress monitoring students' reading development
- Expanded discussion on issues related to the formal and informal assessment of English learners
- New Reflect and Apply eText feature where readers explain their ratings of teachers' lessons
- New feature: Teaching with Technology
- New video links inserted throughout to illustrate chapter discussion
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 10 Issues of Reading, RTI, and Special Education for English Learners

- Updated discussion of reading and assessment issues for English learners,
- New section on the Common Core State Standards or other state English Language Arts Standards
- New Reflect and Apply eText feature
- Revised, comprehensive section on English learners and special education
- Updated research throughout
- New video links inserted throughout to illustrate chapter discussion
- Revised discussion questions
- New end of chapter Review & Assessment quiz in eText

Chapter 11 Effective Use of the SIOP® Protocol

- Updated and revised discussion of best practices in using the SIOP protocol and the use of SIOP scores
- New section: Using Non-Numeric Scores

- New video link to illustrate chapter discussion

Chapter 12 Frequently Asked Questions: Getting Started with the SIOP®

- New video links inserted throughout to illustrate answers to some of the frequently asked questions

Appendix B

- New lesson plan format

Appendix C

- Updated discussion of SIOP research

Appendix D

- Updated list of resources for further information, including books, journal articles, book chapters, and downloadable research briefs <https://siopblog.wordpress.com/>
- Web site with information about SIOP professional development, <http://siop.pearson.com>
- Web site for accessing SIOP Blogs <https://siopblog.wordpress.com/>

■ Highlights in the Book

- **Content and language objectives.** One of the most important aspects of SIOP is the inclusion of both content and language objectives for each and every lesson. Many teachers have found writing these objectives to be challenging, even as they acknowledge their importance both for their own planning and for their students' understanding of the lesson's content goals and language focus. Therefore, you will find an expanded section in Chapter 2 (Lesson Preparation) that provides specific guidance for writing a range of language objectives, along with recommendations for how to effectively present them orally and in writing to students.
- **Discussion of the eight components and 30 features of the SIOP.** Each chapter begins with discussion of a component of the SIOP and its various features. For example, the discussion of lesson planning is found in the first half of Chapter 2. As you read about each feature in this section, think about how it would “look” in an actual classroom setting and how teachers might use this information to prepare effective sheltered lessons.
- **Teaching scenarios.** The second half of each component chapter includes teaching scenarios. In these vignettes, teachers, who are teaching the same grade level and content, attempt to include the focal SIOP features, but with varying degrees of success. At the end of each teaching scenario, you will have the opportunity to use that component section of the SIOP to rate the effectiveness of the lesson in implementing these particular SIOP features. For example, as you read the teaching scenarios in Chapter 2, think about how well the three

teachers included the features of the Lesson Preparation component in their planning and introduction of the lesson to the class. Note that the illustrated lessons throughout the book range from elementary to high school and they cover a variety of content areas and student language proficiency levels. Many lessons reflect the Common Core State Standards (CCSS) or Next Generation Science Standards (NGSS) and specific standards are cited in several lessons.

- **Discussion of the three teaching scenarios.** Following the description of the three teachers' lessons, you will be able to see how we have rated the lessons for their inclusion of the SIOP features of effective sheltered instruction. We provide detailed explanations for the ratings and encourage you to discuss these with others in order to develop a degree of inter-rater reliability. In the eText, the Reflect and Apply feature allows you to explain your rating of each teacher's lesson in writing and print a copy for use during discussions in teacher preparation courses, in professional development sessions, or in learning groups at your school site.
- **Teaching with Technology vignettes.** New to this edition, each chapter has an added vignette that is related to the teaching scenarios. In the vignettes, the school's technology integration specialist, Ms. Palacios, suggests ways to enhance the target lessons by integrating specific technology applications. **Please note:** Due to the evolving nature of the Internet, it is a challenge to ensure that all of the links and Web programs listed in this chapter feature are updated and functional when you read the technology vignettes. While specific tools or services may appear in the narrative, we have also included the general term for each tool. If a specific service does not work or is no longer available, search with the general term for the tool and you should be able to find a comparable Web site.
- **Teaching ideas.** In this section in Chapters 2–10, you will find a variety of ideas and activities for implementing the eight SIOP components. Most of the ideas are appropriate for students in grades K–12, unless identified otherwise. Some activities may be familiar because you use them in your own classroom. We hope you'll be motivated to try the others because they represent best practice—those ideas and activities that are included have been found to be especially effective for English learners and learners still developing academic literacy skills.
- **Differentiating ideas for multi-level classes.** In this section found in Chapters 2–9, we show ways to differentiate instruction for various levels of language proficiency and academic skills.
- **Summary.** Each chapter has easy-to-read bulleted information that highlights the chapter's key points.
- **Discussion questions.** Based upon input from educators who have used this book, we have revised some of the discussion questions found at the end of each chapter to better reflect actual classroom practice with SIOP. We hope these questions will promote thinking about your own practice, conversations during professional development, and opportunities for portfolio reflection for preservice and inservice courses.

- **End of chapter Review & Assessment quiz in eText.** Readers who use an electronic version of the text will be asked to assess their understanding of the chapter through an end-of-chapter quiz.
- **The SIOP protocol.** In Appendix A, you will find both an extended version of the SIOP protocol and a two-page abbreviated protocol. The eight components and 30 features of the SIOP Model are identical in both instruments and they are included as options for your personal use.
- **SIOP lesson plan formats.** We have been asked frequently for assistance with lesson planning for SIOP. In this edition, we have included four different lesson plan formats for lesson plans (see Appendix B); we hope you will find one that is useful for you. In Chapters 2 and 5, you will also find complete plans for two of the lessons featured in the teaching scenarios (for Ms. Chen and Mr. Montoya). These lesson plans are written with different formats, grade levels, and subject areas.
- **Discussion of reading and assessment issues, and special education for English learners.** In our work with the SIOP Institutes and in district trainings, we have heard many educators ask questions about English learners who have reading or learning problems and are struggling academically because of them. Based on the published report of the National Literacy Panel on Language-Minority Children and Youth (August & Shanahan, 2006), the Response to Intervention (RTI) initiative, the Common Core State Standards, and the Next Generation Science Standards, we have updated Chapter 10 with information and recommendations that we hope you will find helpful in SIOP program design and implementation for students with special needs. (More detailed information can be found in Echevarría, Richards-Tutor & Vogt, 2016.)
- **SIOP research.** In Appendix C, you will find an overview of the findings from the original SIOP research as well as a discussion of the findings of several national research studies on the SIOP. If you are involved in a research study in your school, district, state, or university and have findings that contribute to the research literature on SIOP, we would greatly appreciate hearing about them.

■ Overview of the Chapters

The following section briefly describes each of the chapters in this new edition.

- The first chapter in the book introduces you to the pressing educational needs of English learners and to the SIOP Model of sheltered instruction. Issues related to English learner diversity, school reform accountability, No Child Left Behind, the Common Core State Standards and the Next Generation Science Standards, English learner programming, and academic language are also discussed.
- In Chapters 2 through 9, we explain SIOP in detail, drawing from educational theory, research, and practice to describe each component and feature. Teaching scenarios that are drawn from classroom lessons of sheltered instruction teachers follow. The features of the SIOP that pertain to each chapter are included

for the lesson descriptions in the teaching scenarios. After you read about each of the teachers' lessons, use the SIOP protocol to rate on the 4 to 0 rubric the degree to which the features are present. The eText provides an opportunity to explain your rating in writing and print a copy for use during discussions in teacher preparation courses, in professional development sessions, or in learning groups at your school site. The classroom scenarios reflect different grade levels and content areas in the chapters and are linked to core curriculum objectives. All the classrooms include English learners, and many also include native English speakers. Some have newly arrived English learners, known as newcomers.

- In Chapter 10, we discuss the special needs of English learners who have reading problems and/or learning disabilities. You may wish to read this chapter before you delve into SIOP, especially if you have had little experience teaching English learners. It will assist you in situating the SIOP in “real” classrooms with English learners who have a wide variety of academic and literacy abilities and needs.
- Chapter 11 provides a discussion of scoring and interpreting the SIOP protocol, explaining how the instrument can be used holistically to measure teacher fidelity to SIOP and strategically to guide the teacher in planning lessons for one or more targeted SIOP components. A full lesson from one research classroom is described and rated, revealing areas of strength and areas for improvement that can guide the teacher in future planning and teaching.
- Chapter 12 provides ideas and recommendations for implementing SIOP in the classroom, and in schools and districts. Frequently asked questions are included to guide you as you begin working with SIOP.
- In the Appendices, you will find the Sheltered Instruction Observation Protocol (SIOP®), both the comprehensive and the abbreviated versions. You will also find four lesson planning formats to guide your lesson design and implementation. Further, we have included an appendix that details SIOP research to date and another that lists a variety of resources including additional SIOP books, research articles, book chapters, research briefs, and SIOP internet resources. The book concludes with a Glossary of terms related to the instruction of English learners.

■ Acknowledgments

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We also thank the many teachers and administrators in whose schools we have conducted research on the SIOP Model, both past and present. Their willingness

to let us observe and discuss their teaching of English learners has enhanced our understandings and validated our work. The contributions of these fine educators to the ongoing development of SIOP are many, and we are grateful for their continued interest and encouragement. Our colleagues and fellow researchers on these projects deserve our gratitude as well.

Two talented educators worked with us on the preparation of the manuscript for this book: Daniel Scibienski (ellconsulting.org), a SIOP teacher experienced with technology infusion, who created Ms. Palacios, the technology integration specialist you will meet in the chapters; and Dr. Laurie Weaver (Professor, Bilingual and Multicultural Studies, University of Houston-Clear Lake in Texas), a SIOP expert who created the Checking Your Understanding questions for the eText. We thank them for their contributions, and most especially, for being long-time SIOP supporters. In their respective roles as educators, both have created useful SIOP tools that enhance implementation of the model.

We found the comments and suggestions from our reviewers: Kellie Bugajski, Wayne State University; Teresa A. Franson, Virginia Commonwealth University; Jeanne Carey Ingle, Eastern Connecticut State University; Henriette W. Langdon, San Jose State University; and Anastassia McNulty, Concordia University Chicago to be of great help, and we thank them. We also appreciate the ongoing support, assistance, and patience of our Pearson team, including Janet Domingo, our project manager, our copy editor, Kathy Smith and our editor, Julie Peters.

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Finally, we express appreciation to our families, whose ongoing support has enabled us to pursue our professional interests.

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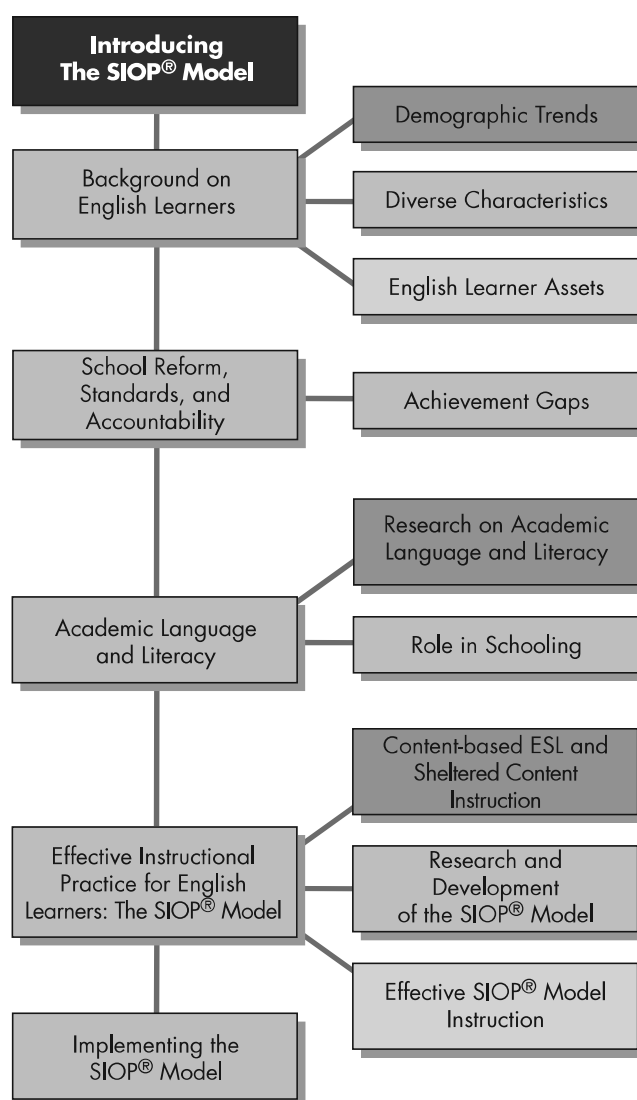
English learners. Dr. Vogt has provided professional development in all 50 states and in several other countries, including Germany, where she was invited to serve as a Visiting Scholar (for SIOP) at the University of Cologne. She was inducted into the California Reading Hall of Fame, received her university's Distinguished Faculty Teaching Award, and served as President of the International Reading Association.



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Introducing the SIOP® Model



Learning Outcomes

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 its effects on English learners.

Develop a lexicon related to the **SIOP Model**.

Compare your typical instruction with **SIOP instruction**.

“*Hola prima,*” called Graciela to her cousin, Jocelyn, on the playground. “*¡Ayúdame con mi tarea!*” Graciela asked her cousin for help with a homework assignment. “*Cúal es el problema?*” replied Jocelyn. Graciela went on to explain that she had to write a paper about recycling. She had to write an action plan, but she didn’t know what an action plan was.

The two girls are cousins from Central America who had entered fourth grade in Bray Elementary School together seven months earlier. They had been placed in different classes in this suburban set-

ting, but because the fourth-grade science teachers all assigned the same project, Jocelyn knew how to help her cousin. She explained that her class had already started to work on that project. They had looked through the trash can in the lunchroom and found many things that could be recycled. They were creating a bulletin board with vocabulary and pictures about recycling. They had watched two videos, one about neighborhood families recycling and one about a recycling plant. They were going to make paper the next day. “We have to make a poster with our partner telling why it is important to recycle,” Jocelyn told her cousin. “We made a list in class of reasons, and I decided to try to stop pollution in the sea. Ms. Sylvan showed us two posters from last year’s class. Then she bookmarked some Web sites for me to look at. Some of them are in Spanish and you can listen to people talking about pollution and recycling. What did you do in class?”

Graciela explained that one day the teacher had talked to them for a long time about what recycling is and why it is important. “She told us to take notes when she talked, but it was hard. She talked too fast and she didn’t write anything on the board. Then we read a few pages in our science textbook and answered questions yesterday. Today she gave us this sheet and told us to start writing our ideas.” Graciela showed her cousin the assignment:

Think of a recycling project. What needs to be improved in your school or town?
Write an action plan proposing that the school board or the town council take steps to alleviate the problem or introduce a new program.

Jocelyn shook her head slowly as she looked at the paper. “I know what we can do. Let’s go ask Ms. Sylvan. She just came out of the cafeteria.” ●



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Graciela and Jocelyn have experienced different teaching styles in their fourth-grade classrooms. Graciela's teacher uses a teacher-directed approach with an emphasis on mini-lectures and textbook reading. She provides little **scaffolding** for her English learners—indeed, little scaffolding for any of her students. Recycling, a topic that can connect science, engineering, and the environment, lends itself easily to visuals, hands-on materials, field trips, and more, but it is not brought alive in her classroom. Nor was a model for the action plan presented. Ms. Sylvan, on the other hand, provides a range of activities that help children understand the concept of recycling and see its application in their everyday lives. Her lessons built background and vocabulary for the fourth-graders and gave them hands-on experiences. She tapped into the students' different learning modes and supported her English learners with access to Web sites in their **native language**.¹ Her lessons reveal a great deal of preparation that will lead to the success of all her students.

Jocelyn is luckier than a number of English learners. She has a teacher who provides effective instruction as she learns content through English, a new language. If more teachers learn the techniques that Ms. Sylvan uses, then many more English learners will have a chance to develop academic literacy in English and be successful in elementary school. But it will take significant effort on the part of schools, districts, and universities to make this happen for Graciela and other students like her.

■ Background on English Learners

Demographic Trends

Graciela is one of many English learners in our schools. In fact, she represents the fastest growing group of students. In eight years, from 2002–03 to 2010–11, the population of students participating in English learner programs in pre-K–12 schools increased about 14%, but the total pre-K–12 population, which includes these students, grew only 2%. In 2010–11, nearly 10% of the students in U.S. schools were English learners, equaling almost 4.7 million students out of a total enrollment of close to 49.5 million (National Center for Educational Statistics [NCES], 2013a).

However, it is important to recognize that the reported number refers to the *identified* English learners in language support programs. In some situations, students are no longer in English learner programs because they have completed the available course levels, yet they have not met the criteria to be redesignated as a former English learner (Parish et al., 2006). The number would be much higher, perhaps doubled, if we also add 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 results of the 2013 American Community Survey estimated that 13% of the U.S. population was foreign born. Further, immigrants and their children who have been born in the United States represent about 25% of the population. Within the U.S. population of all people age 5 or older, 21% spoke a language other than English at home. Children age 5–17 make up about 17% of the U.S. population, and

¹ For more information about a unit on recycling designed for classes with English learners, see Syvanen, 2000.

within this group, 21% are reported as speaking a language other than English at home and 4.8% are reported as not speaking English very well (the U.S. Census Bureau's classification of limited English proficiency).² In 2013, one in four children under the age of 18 lived in immigrant families (Zong & Batalova, 2015). Furthermore, over 75% of English learners in our elementary schools were born in the United States; that is, they are second- or third-generation immigrants (Fix & McHugh, 2009).

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 accounted 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 percentages of English learner students (more than 10% of the enrollment) are Alaska, California, Colorado, Hawaii, Nevada, New Mexico, Oregon, and Texas. The top six states that have experienced the greatest percentage growth in pre-K–12 English learner enrollment from 2002–03 to 2010–11 are Arkansas, California, Hawaii, Kansas, Nevada, and South Carolina, (NCES, 2013a).

Changes in the geographic distribution of English learners to these new destination states present many challenges to the numerous districts that have not served large numbers of these students before. Academic programs are typically 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. Further, they bring linguistic assets and other funds of knowledge that we ought to acknowledge. 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 K–12 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,

² Calculations for children age 5–17 not speaking English very well are based on data found at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5_YR_B16004&prodType=table (retrieved April 13, 2015).

FIGURE 1.1 Diverse Characteristics of English Learners*English Knowledge*

- Exposure to English (social and academic)
- Familiarity with Roman alphabet and numbers
- Proficiency in spoken English
- Proficiency in written English
- English being learned as a third or fourth language

First Language (L1) Knowledge

- Oral proficiency in L1
- Literacy in the first language

Educational Background

- On-grade level schooling in home country
- On-grade level schooling in U.S. schools (in L1 or English)
- Partial schooling in L1
- No schooling in L1
- Partial schooling in English
- No schooling in English
- Long-term English learner

Sociocultural, Emotional, and Economic Factors

- Poverty level
- Mobility and absenteeism
- Exposure to trauma, violence, abuse, and other serious stressors
- Refugee or asylee status
- Parents' educational background

Other Educational Categories

- Special education
- Tier 2 or Tier 3 (Response to Intervention)
- Migrant
- Reclassified English learner
- Gifted and talented

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 important points to keep in mind follow:

- Some immigrant English learners had strong academic backgrounds before coming to the United States. Some are at or above equivalent grade levels in certain subjects—math and science, for example. They are literate in their native language and may have started studying a second language. Much of what these learners need is **English language development (ELD)** 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 social studies, 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 classrooms for different subjects, 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 English even after five, six, or more years in U.S. schools. These students are referred to as *long-term English learners* (Menken & Kleyn, 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) and often are unable to pass state tests required for reclassifying as fully English proficient (Saunders & Marcelletti, 2013).

 Watch this video to hear Mark Poulterer and Dr. Robert Jimenez talk about the variety in the educational and cultural backgrounds of their students. Note the ways they work to reduce student anxiety in classroom settings. How do you reduce anxiety for your students?

Sociocultural, emotional, and economic factors also influence English learners' educational attainment (Dianda, 2008).

- Poorer students, in general, are less academically successful (Glick & White, 2004) than all others.
- Undocumented status affects socioeconomic and postsecondary educational opportunities for some students and sometimes diminishes their motivation in high school.
- Mobility and absenteeism 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). Students who are chronically absent are more likely to demonstrate poor academic performance (Balfanz & Byrnes, 2012).
- Post-traumatic stress, violence, abuse, family reunification, and experiences as a refugee or asylee are all issues that may lead an English learner to 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. For example, besides being English learners, some students have learning disabilities or are gifted and talented.

- English learners tend to be over- or underrepresented 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, some districts have difficulty providing effective services to bilingual special education students. Federal regulations require students to receive instructional hours for language development as well as for identified special education needs (U.S. Department of Justice, Civil Rights Division, & U.S. Department of Education, Office of Civil Rights, 2015).
- Some English learners and former 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, Richards-Tutor, & Vogt, 2015), not all schools utilize SIOP instruction.
- Some students are migrant English learners who move from school to school in the same year, jeopardizing their learning with absences and potentially incompatible curricula and assessments across districts or states.
- Some students have abilities that fit the criteria for gifted and talented services, but schools struggle to identify (and then instruct) them, particularly if they have low or no proficiency in English and speak a language other than Spanish.

English Learner Assets

When planning programs and instruction for English learners, we sometimes focus solely on what they are not yet proficient in and fail to consider the assets they bring to school. These assets are related to language and cultural practices in the home. For example, children learn to make guesses and predictions at home that act as precursors to **academic language** development in school, where they learn to call these notions *estimates*, *hypotheses*, or *theories* depending on the subject area. Similarly, in some **cultures** older children mentor younger siblings in performing chores and other tasks. Teachers can build on these relationship roles to construct collaborative learning environments in the classroom.

Teachers need to be aware of the language and literacy skills their students have and use outside of school. Figure 1.2 identifies some that are particularly relevant.

- **Oral language skills in the native language**—Many aspects of the native language learned at home through oral interaction can apply or transfer to learning academic English (August & Shanahan, 2006; Genesee et al., 2006; Guglielmi, 2008). These include phonemic awareness and phonics, vocabulary cognates, knowledge of affixes and roots, and listening comprehension strategies.

FIGURE 1.2 Linguistic and Sociocultural Assets of English Learners

- Oral language skills in the native language
- Literacy (reading and writing) skills in the native language
- Out-of-school literacy skills
- Language brokering roles
- Cultural funds of knowledge
- Life experiences

- **Literacy (reading and writing) skills in the native language**—Knowing how to read and write in the native language facilitates learning those skills in a second or new language (August & Shanahan, 2006; Genesee et al., 2006). Consider someone who can read and find the main idea in a native language text. That learner has mastered the cognitive reading strategy already. She or he may need to learn the words and syntax of English, but not how to find the main idea.
- **Out-of-school literacy skills**—Students use literacy outside of school, sometimes for family purposes (e.g., making a shopping list, reading a utility bill) and sometimes for personal reasons (e.g., using social media). These practices help them understand that literacy is used for different purposes and is found in different formats (Alvermann & Moore, 2011; Skerrett & Bomer, 2011).
- **Language brokering roles**—School-age English learners often assume the role of language broker in families where the adults do not speak English well (Cline, Crafter, O'Dell, & de Abreu, 2011). Students learn to engage with others using English, experiencing different interaction patterns, and being responsive to others' utterances. They learn to turn-take, ask for clarification, paraphrase, interpret, and translate.
- **Cultural funds of knowledge**—In their homes, students participate in language and cultural practices and activities that can be shared in the classroom. Teachers may learn about these funds through home visits and interviews. They may plan authentic classroom tasks around these funds that connect with the curriculum and invite parents as guest speakers (Gonzalez, Moll, & Amanti, 2005).
- **Life experiences**—Our students do not enter schools as blank slates. Many have had life experiences that are pertinent to the curricula. Some students farmed in their native countries and know about plant growth, animal reproduction, and more. Some students' families had market stalls, and the children learned about supply and demand, revenue and debt. They have lived in different climatic zones and biomes or have traveled across countries and continents. These children have much to offer to the instructional process.

■ School Reform, Standards, and Accountability

Our English learners enter U.S. schools in an academically demanding era. Schools have been increasing the academic rigor of instruction since the No Child Left Behind (NCLB) Act of 2001, and most English learners do not have time to learn English before they study the different subject areas in English. NCLB holds

schools accountable for the success of all of their students, and each state has standards for at least mathematics, reading, language arts, English language development, and science. Further, 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, with attention being given to providing better educational opportunities for the learners and monitoring their language proficiency growth and academic progress. More schools regularly analyze assessment data to determine the progress of their efforts and adjust programs, instruction, and resources as indicated. More funding is available to help practicing teachers strengthen their instruction so students develop academic literacy skills and can access core content. Schools can tap federal and state funds to provide sustained professional development opportunities, including job-embedded coaching. Some states have also allocated additional resources for English learner programs, such as grants for specialized services for newcomers and students with interrupted educational backgrounds (Short & Boyson, 2012).

Unfortunately, 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).

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). This is especially problematic because most students are tested in English before they are proficient in the language. After three subsequent years of such labels, many schools face corrective action. Teachers report pressure to “teach to the test,” which reduces their implementation of creative lessons, project-based learning, and interdisciplinary units (Short & Boyson, 2012).

Additional reforms have taken place in terms of **standards-based** instruction and **assessment**, with the goal of preparing all students for colleges and careers. As of the 2014–15 school year, more than 40 states, the District of Columbia, and several U.S. territories have adopted a common set of K–12 English language arts/literacy and mathematics standards, called the **Common Core State Standards** (National Governors Association & Council of Chief School Officers [NGA & CCSSO], 2010a, 2010b). Educators in these states have modified their curriculum frameworks to ensure the required standards are included. On the one hand, if the standards are 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 have been problematic for some English learners because the developers did not address English learners’ second language development needs. For instance, although there are standards related to foundations of literacy in grades K–5 (e.g., standards related to phonics), there are none

in grades 6–12. This oversight ignores the needs of newly arrived adolescent English learners who are not literate when they enter secondary school.

A set of K–12 science standards has also been written and adopted by about a quarter of the states and the District of Columbia (as of the 2014–15 school year). In contrast to the CCSS, the authors of these **Next Generation Science Standards** (NGSS Lead States, 2013) did consider the second language acquisition process in their guiding principles and proposed practices for science and engineering.

The states that have adopted the Common Core language arts and mathematics standards have also had to revise their state assessments for these areas.³ Many of these states have decided to use one of two new national assessments that were initially developed with federal funding. Both are computerized, which has implications for newly arrived English learners who may not yet have the technical skills to perform the online tasks. One of these, **SBAC** (Smarter Balanced Assessment Consortium), uses adaptive technology whereby the next question posed to a student is determined by the accuracy of the prior question's response. In the 2014–15 school year, SBAC consortium members included 21 states and the U.S. Virgin Islands. Students in 13 states participated in the other assessment, **PARCC** (Partnership for Assessment of Readiness for College and Careers) in the 2014–15 school year.

These computerized assessments also have some features that may assist English learners such as a translated pop-up glossary, a highlighter tool, and a digital notepad. The language arts tests are planned to measure all four language domains (reading, writing, listening, and speaking) so students will have opportunities to demonstrate their knowledge in several ways. The assessments include multiple choice items but also have short constructed responses and essays.

Achievement Gaps

These challenging academic standards and new assessments have not resulted in closing the achievement gap between English learners and non-English learners. While the number of students with limited proficiency in English has grown exponentially across the United States, their level of academic achievement continues to lag significantly behind that of their language-majority peers. Consider the following statistics:

- On the National Assessment for Educational Progress (NAEP) exams for reading in 2013, English learners performed poorly at the fourth and eighth grades (National Center for Education Statistics [NCES], 2013b).
 - ◆ In fourth grade, the achievement gap between the average scores of **non-English** learners and English learners was 39 points, a larger gap than in 2011. Sixty-nine percent of the fourth-grade English learners performed Below Basic, but only 28% of the non-English learners did. Only 7% of English learners scored as Proficient or Advanced in Reading, whereas 38% of non-English learners were Proficient or Advanced.
 - ◆ In eighth grade, the achievement gap between the average scores of non-English learners and English learners was 45 points, also a larger gap than

³ At the time of this writing, no national assessment has been developed for the Next Generation Science Standards, although some states are revising their state tests to align to these standards.

in 2011. Seventy percent of the eighth-grade English learners performed Below Basic, but only 20% of the non-English learners did. Only 3% of English learners scored as Proficient in Reading, and none as Advanced, while 33% of non-English learners were Proficient and 4% were Advanced.

- The pattern of achievement on the 2013 NAEP mathematics assessment was similar to the results for reading for fourth and eighth graders (NCES, 2013b).
 - ◆ In fourth grade, the achievement gap between the average scores of non-English learners and English learners was 25 points, slightly higher than in 2011. Forty-one percent of the fourth-grade English learners performed Below Basic, but only 15% of the non-English learners did. Further, only 14% of English learners performed at Proficient or Advanced levels, while 44% of non-English learners reached those higher levels.
 - ◆ In eighth grade, the achievement gap between the average scores of non-English learners and English learners was 41 points, slightly better than in 2011. Sixty-nine percent of the eighth-grade English learners performed Below Basic, but only 24% of the non-English learners did. Further, only 5% of English learners performed at Proficient or Advanced levels, while 37% of non-English learners reached those higher levels.
- Spanish-speaking students enter kindergarten with a gap in language and math skills compared to **English-only** students. In some states, this gap widens as students progress to fifth grade (Rumberger, 2007); in others, it narrows, but non-English speakers do not come close to catching up (Reardon & Galindo, 2009).
- Since the No Child Left Behind (NCLB) Act was implemented in 2001, there has been an increase in the number of high school English learners *not* receiving a diploma.
 - ◆ Some failed high-stakes tests despite fulfilling all other graduation requirements (Alliance for Excellent Education, 2010; Human Resources Research Organization, 2010, reported in Dietz, 2010; McNeil et al., 2008).
 - ◆ English learners are more likely to drop out than other student groups (Dianda, 2008; New York City Department of Education, 2011; Rumberger, 2011).

It is suspected that some state policies play a role in the achievement gap as well. Massachusetts, Arizona, and California, for example, limit the number of years that students have access to language support services; the goal is to move students into regular classrooms after one year, even though research strongly demonstrates that students need more time with specialized language support (Saunders & Goldenberg, 2010).

We know that conversational fluency (also known as **social language** or **basic interpersonal communicative skills, BICS**) 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 (or **cognitive/academic language proficiency, CALP**) (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; Cook, Boals, & Lundberg, 2011; Hakuta, Butler, & Witt, 2000; Lindholm-Leary & Borsato, 2006; Thomas & Collier, 2002). So programs that do not accommodate the time needed for acquisition of academic language do the students a disservice.

In contrast, 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 (DeLeeuw, 2008; New York City Department of Education, 2004; State of New Jersey Department of Education, 2006; Sullivan et al., 2005). The results of these studies 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.



Watch this video to hear Dr. Jim Cummins discuss second language development and explain BICS and CALP. Where are your students on the continuum between social language and academic language development?

■ Academic Language and Literacy

One area where we know that English learners need support is in developing academic language and literacy skills in English. These skills serve as the foundation for school success because we learn primarily through language and use language to express our understanding. Age-appropriate knowledge of the English language is a prerequisite in the attainment of **content standards** because as the grade levels rise, language use becomes more complex and more content area-specific. The skills students need to be college and career ready are more extensive than knowledge of vocabulary words and paragraph formation. They include analytical reading and writing, effective communication and interaction, critical thinking, and creativity. These are the goals of the Common Core State Standards for English language arts/literacy and for mathematics, and of the Next Generation Science Standards. We also find these skills in the standards of states like Texas and Virginia that did not adopt the Common Core.

We argue that academic language is a second language for *all* students. Even native-English speaking students do not enter kindergarten or first grade classrooms using embedded clauses and long, modified noun phrases in their conversations, nor do they analyze text for an author's use of imagery or write problem-solution essays about local issues. They learn these ways of using language for specific purposes over time in school. And school is where children and young adults mostly use academic language.

In *Developing Academic Language with the SIOP Model* (Short & Echevarría, 2016, p. 2), we explain that

Academic language involves the use of higher-level vocabulary, more complex sentence structures, and more sophisticated forms of expression than is generally found in everyday conversation. It is the type of language students need to discuss complex ideas, articulate a position, summarize material, and contrast

points of view. . . . [W]hile there is no singular definition, there is consensus that academic language includes the application of reading, writing, listening, and speaking skills to knowledge of vocabulary, language structures, language functions, genres, discourse patterns, and strategic competencies that students need to be successful in school with spoken and written academic text. There is also agreement that academic language demands and linguistic elements vary, at least partially, by subject area.

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 (August & Shanahan, 2006) analyzed and synthesized the research on these learners with regard to English literacy attainment. The review conducted by researchers from the former National Center for Research on Education, Diversity & Excellence (CREDE) focused on oral language development, literacy development (from instructional and cross-linguistic perspectives), and academic achievement (Genesee et al., 2006). Both syntheses led to similar findings:

- 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 language [**L1**] literacy, second language [**L2**] oracy, socioeconomic status, and more).
- Certain L1 skills and abilities transfer to English literacy: phonemic awareness, comprehension and language **learning strategies**, and L1 and L2 oral knowledge.
- Teaching the five major components of reading (National Institute of Child Health and Human Development [NICHD], 2000) to English learners is necessary but not sufficient for developing academic literacy. English learners need to develop oral language proficiency as well.
- Oracy and literacy can develop simultaneously.
- Academic literacy in the native language facilitates the development of academic literacy in English.
- High-quality instruction for English learners is similar to high-quality instruction for other, English-speaking students, but English learners need instructional accommodations and support to fully develop their English skills.
- English learners need enhanced, explicit vocabulary development.

(More information on these findings and their implications for developing academic literacy can be found in California Department of Education, 2010; Cloud, Genesee, and Hamayan, 2009; Freeman and Freeman, 2009; Goldenberg, 2006; and Short and Fitzsimmons, 2007.)

Role in Schooling

Academic language is used in school settings by all students—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. 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 integrate their emerging knowledge of the English language with the content information 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). Brown and Ryoo (2008) found that elementary students who learn science content through everyday vernacular before learning the scientific language assimilate the content better. Researchers such as Bailey and Butler (2007) found that there is content-specific language (e.g., technical terms like *latitude* and *longitude*, 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., explain steps to the solution of a math word problem). 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 2015, 36 states, the District of Columbia, and the Northern Mariana Islands had adopted **English language proficiency standards** (ELP) similar to TESOL’s, known as the WIDA standards (WIDA, 2012). Almost all 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).



Reflect and Apply

Click here to reflect on out-of-school factors that affect language acquisition and developing academic literacy for all learners.

■ Effective Instructional Practice for English Learners: The SIOP[®] Model

One positive outcome of the student performance measures put into place in response to the NCLB legislation is that schools have focused 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.⁴

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, such as the Common Core and NGSS, and the students may be all English learners or mixed with native English speakers. The teachers have elementary or secondary 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 an upper elementary

⁴ Recent policy reports and federal guidance accentuate the need for better programming and attention to academic language and literacy development. See, for example, Baker et al., 2014; Council of Great City Schools, 2009; and U.S. Department of Justice, Civil Rights Division, & U.S. Department of Education, Office of Civil Rights, 2015.

FIGURE 1.3 Content-based ESL/ELD and Sheltered Content Instruction

	Content-based ESL/ELD	Sheltered Content Instruction
Main focus	Academic English language development (and social language for beginners)	Subject-area knowledge (typically for the grade level unless students have significant limited schooling)
Standards	English language proficiency and English language arts	State content standards (all subjects)
Additional instructional goal(s)	Integration of subject-area topics, vocabulary and classroom tasks; filling gaps in educational backgrounds	Integration of academic language as used in the specific subject area
Student population	English learners	English learners, or English learners with native English speakers and/or former English learners
Teacher population	ESL or bilingual certified or endorsed; sometimes English language arts certified plus specialized training in content ESL/sheltered instruction)	Content certified with ESL or bilingual certification or endorsement; sometimes content certified plus specialized training in sheltered instruction)
Other information	The numbers of hours for instruction per week may be reduced as student proficiency levels rise.	These courses are often a bridge to general education content courses while students are still developing academic English skills. Sometimes known as structured English immersion

classroom, one theme might be “The Marketplace,” and lessons could include objectives drawn from economics, science, geography, social studies, and mathematics. Students might create maps showing how goods move from farms and manufacturing plants to city markets; design a brochure to sell a good or service; use online reference materials to learn about the supply and demand of certain goods; or develop a business plan for a good or service they would like to sell. They might study persuasive language to advertise their good or service. English learners may contribute valuable insights to this topic because some have lived in places where their parents or neighbors moved goods to market. Some may have experienced the effects of adverse weather on the production of foodstuffs or the effects of poor infrastructure on the transportation of goods.

In a secondary classroom, the theme might be “The Impact of the Transcontinental Railroad.” Students might read authentic documents, such as letters written by Chinese immigrants who worked on the railroad (in translation) and diary entries by Americans who migrated west; create online 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.

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 regular, grade-level classes (Short, 2002).

In sheltered content classes, teachers deliver grade-level objectives for the different subject areas to English learners through modified instruction that makes the information comprehensible to the students while promoting their academic English development. In elementary schools, sheltered instruction is generally taught by classroom teachers rather than ESL specialists and can be offered to students with any level of English proficiency. A goal is to teach content to students learning English through a developmental language approach.

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 & Echevarría, 2004).

In the 1990s, there was a great deal of variability in 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 sheltered courses in only 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, along with the underachievement of English learners, 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



Watch this video and listen to Dr. Jana Echevarría and Dr. Deborah Short describe findings from several SIOP research studies. Consider how you might research SIOP implementation in your setting. <https://www.youtube.com/watch?v=JbbGklFLw0>

of this book and in Short, Echevarría, 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, integrated 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 (Echevarría, 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” and “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).

The SIOP is composed of 30 features grouped into eight main components. (See the overview in Figure 1.4.) You will read about each component and its features in subsequent chapters of this book. We are gratified that the original model has stood the test of time; it has not needed to be revised. The model also has been shown to be effective in numerous districts and schools across the United States.

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 (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 (the IPT [Idea Proficiency Tests]), 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 at the SIOP Model first in middle school science classrooms (Himmel, Short, Richards, & Echevarría, 2009) and later as the professional development framework

FIGURE 1.4 Overview of the SIOP's Eight 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.

for a school-wide intervention (Echevarría & Short, 2011). In this set of studies, we used an experimental design and English learners, former English learners, and native English speakers were part of the student population. The results from the studies showed that students who had teachers who implemented the SIOP Model with greater fidelity performed better on criterion-referenced assessments than those who did not implement the SIOP Model to a high degree (Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011). So, the level of implementation mattered. Further, students in SIOP curriculum groups outperformed control students on criterion-referenced vocabulary, science, and social studies measures (Echevarría, Richards-Tutor, Canges, & Francis, 2011; Short & Himmel, 2013). 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.

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; Friend, Most, & McCrary, 2009; Honigsfeld & Cohan, 2008; McIntyre et al., 2010).

A note about terminology is helpful before you read further. SIOP® is the term for this empirically validated model of sheltered instruction designed to make grade-level academic content understandable for English learners while at the same time developing their academic English language proficiency. Formerly spelled out as the Sheltered Instruction Observation Protocol, the authors recently decided to stop using the full acronym definition because the acronym SIOP is more commonly used in schools and in the professional literature. SIOP refers to 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. It is often used as an adjective too, as in SIOP teachers, SIOP lessons, and SIOP classrooms.

Effective SIOP® Model Instruction

This book, *Making Content Comprehensible for English Learners: The SIOP® Model*, introduces the research-based model of sheltered instruction (that is also used for content-based ESL), 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.



Watch this video to see Dr. Mary Ellen Vogt explain the value of sheltered instruction for English learners. Look at Appendix A. Which SIOP features do you already include in your lessons?

In effective SIOP lessons, language and content objectives are systematically woven into the curriculum of one particular subject area, such as fourth-grade language arts, U.S. history, algebra, or life science, or in one ESL level, such as beginner, intermediate, or advanced. Teachers 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).

In subsequent chapters, 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!

- Classroom 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.
- Classroom teachers identify how language is used in the different subjects and give students explicit instruction and practice with it.
- ESL teachers advance students' English language development with curricula addressing language proficiency standards, but also 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, NGSS, 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.
- SIOP teachers modulate the level of English they use and the texts and other materials used with and among students.
- SIOP teachers 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 solving a two-step math problem 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, compare, and persuade.
- 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 (Gay, 2010).
- 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).
- SIOP teachers reach out to the families of English learners and orient them to the expectations of schooling in the United States; they also seek to determine the funds of knowledge in the children's households (Gonzalez, Moll, & Amanti, 2005).

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 texts (e.g., trade books, leveled readers), graphics and illustrations, models, multimedia and computer-based resources, adapted text, and the like.
- SIOP teachers use supplementary materials to make information accessible to learners with mixed proficiency levels of English. For example, some students in a mixed class may 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 images, podcasts, educational apps, and more offer a wealth of resources to support English learners' acquisition of new information and of academic English.
- 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.

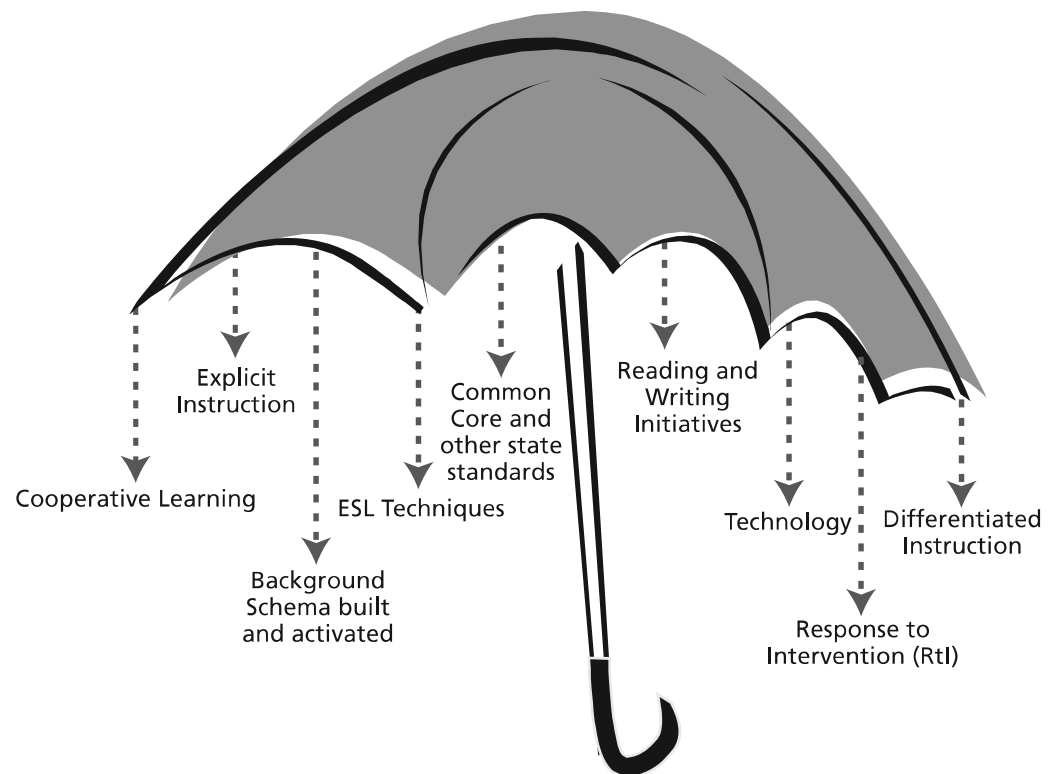
Depending on the students' proficiency levels, SIOP teachers offer multiple pathways for students to demonstrate their understanding of the content. In this way, teachers can receive a more accurate picture of most English learners' content knowledge and skills through an assortment of assessment measures 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 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).

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). It reminds teachers to pay attention to the language development needs of their students and to select and organize techniques that facilitate the integration of district- or state-level standards for ESL and for specific content areas.

FIGURE 1.5 The SIOP® Model Framework for Organizing Best Practices



■ Implementing the SIOP® Model

The goal of this book is to prepare teachers to teach content and academic language and literacy skills effectively to English learners. The SIOP Model may be used as part of a program for preservice and inservice professional development, as a lesson planner for sheltered content and content-based ESL 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 (Darling-Hammond & Richardson, 2009; Short, 2013).

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 (with **pull-out** or **self-contained** classes), 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.



Reflect and Apply

Click here to reflect on general concepts of the SIOP® Model.



Check Your Understanding

Click here to check your understanding of Chapter 1, Introducing the SIOP® Model.

■ Summary

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

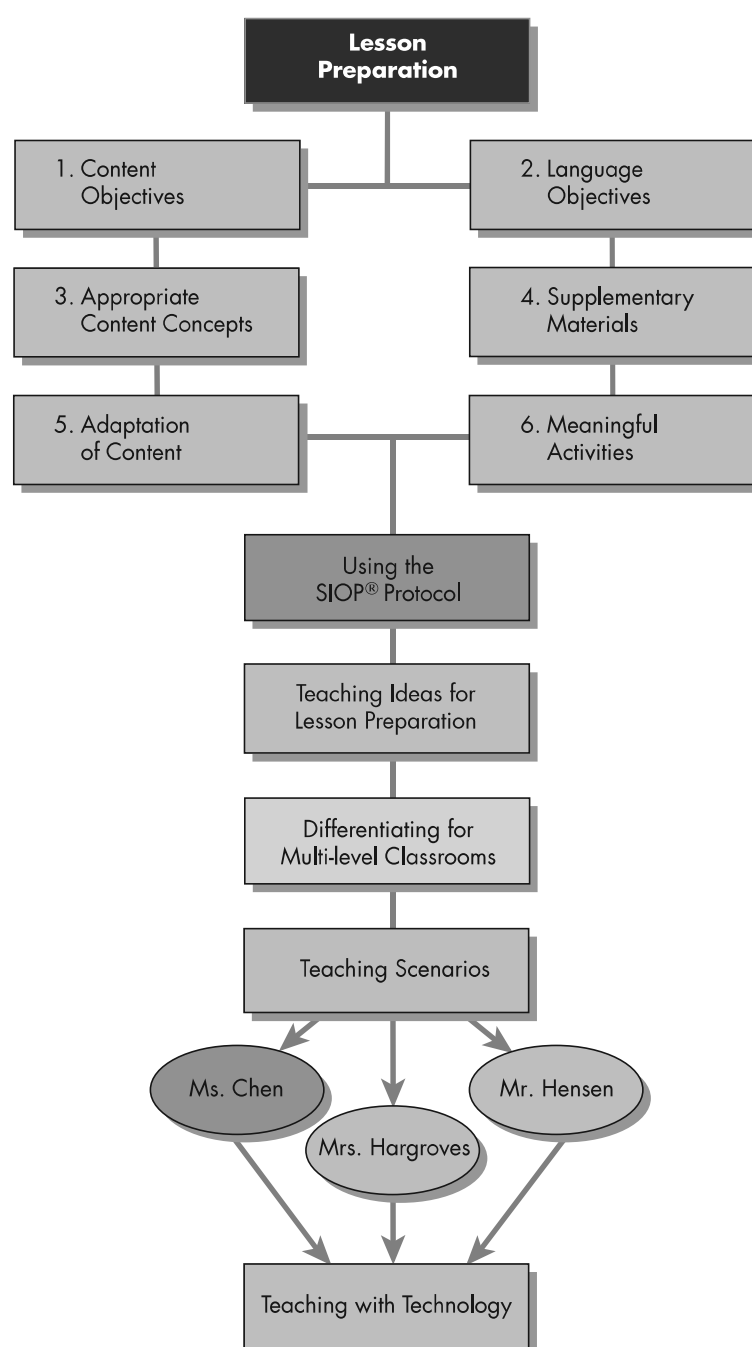
- Students who are learning English as an additional language are the fastest-growing segment of the school-age population in the United States, and almost all candidates in teacher education programs will have linguistically and culturally diverse students in their classes during their teaching careers. 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 and NGSS standards and to 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; instead, it provides a framework for well-prepared and well-delivered lessons in 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 and sheltered content classes that are part of a program of studies for English learners, and for English-medium classrooms with English learners and struggling readers. Together, these classes can be a promising combination when implemented school-wide.
- We need students like Graciela and Jocelyn 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 class of English learners. Identify the individual and sociocultural factors that might 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 in schools you know: traditional ESL, content-based ESL, sheltered content, bilingual content, traditional content, dual language? Provide evidence of your characterization in terms of curricula and instruction. Are the English Learners successful when they exit English language support programs and are placed in regular classrooms without support? Explain.
 4. Many sheltered content teachers fail to take advantage of the language learning opportunities for students in their 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.

Lesson Preparation



Learning Outcomes:

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

Identify **content objectives** for **English learners** that are aligned to state, local, or national **standards**.

Incorporate supplementary materials suitable for English learners into a lesson plan.

Select from a variety of techniques for adapting content to the students' proficiency and cognitive levels.

Language Objectives

Write language and content objectives.

Discuss advantages for writing both language and content objectives for a lesson and sharing the objectives with students.

Explain the importance of meaningful academic activities for English learners.

In this and subsequent chapters, we explain each **SIOP** Model component and its features. Each chapter begins with an explanation of the component, offers classroom activities, and then describes how three teachers approach the same lesson. The lesson scenarios throughout the book are about varied topics and represent different grade levels.

This chapter introduces the first component of the SIOP Model, Lesson Preparation. We present background information and the rationale for each of the six features in this component, list some teaching ideas for this component and for differentiating instruction in multi-level classrooms, demonstrate through the teaching scenarios how the model can be implemented, and offer technology enhancements. As you read the scenarios, we encourage you to check your understanding of the SIOP features that have been explained in the chapter by rating the lessons according to best practice. Reflect on how effectively each teacher is meeting the needs of English learners in relation to each feature. At the conclusion of the teaching scenarios, we discuss our assessment of the teachers' efforts to provide SIOP instruction, and we invite you to compare your appraisal to ours. ●



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■ Background

As we all know, lesson planning is critical to both a student's and a teacher's success. For maximum learning to occur, planning must produce lessons that target specific learning goals, enable students to make connections between their own knowledge and experiences and the new information being taught, give students practice using and applying the new information, and assess student learning to determine whether to move on or reteach the material. With careful planning, we make learning meaningful and relevant by including appropriate motivating materials and activities that foster real-life application of concepts studied.

We have learned that if students' exposure to content concepts is limited by vocabulary-controlled materials or watered-down curricula, the amount of information they learn over time is considerably less than that of their peers who use grade-level texts and curricula. The result is that the learning gap between **native English speakers** and English learners widens instead of closes, and eventually it becomes nearly impossible for English learners to catch up. Therefore, it is imperative that we plan lessons that are not negatively biased against students acquiring English and that include age-appropriate content and materials. However, our lessons must provide appropriate scaffolds so our students can meet the rigor of new standards, such as the **Common Core** and **Next Generation Science**, over time and be prepared for college and careers.

This component, Lesson Preparation, is therefore very important to the SIOP Model. If properly prepared, a lesson will include most of the SIOP features in advance. It is then up to the teachers and class to accomplish them as the lesson unfolds. However, when planning, teachers have asked how they can meet all 30 features in a given period. We explain that a SIOP lesson may be a single day or multiple days in length. Over the course of several days, all 30 features should be met. See Vogt and Echevarría (2008, pp. 18–19) for a SIOP lesson planning flow chart.

SIOP Lesson Planning. As you first learn the model, we strongly encourage you to write out lessons in detail. We suggest you use the SIOP protocol as a checklist to ensure all of the features are incorporated. You may want to try one or more of the lesson plan templates we have included in Appendix B or the templates in Chapter 7 of *Implementing the SIOP® Model Through Effective Professional Development and Coaching* (Echevarría, Short, & Vogt, 2008). All of these templates have been used successfully in classrooms. In addition, sample lesson plans and units can be found in the SIOP content books for English-language arts, mathematics, science, and history and social studies (Echevarría, Vogt, & Short, 2010c; Short, Vogt, & Echevarría, 2011a, 2011b; Vogt, Echevarría, & Short, 2010).

“How do I start implementing SIOP lessons?” is a frequent question from teachers new to the SIOP Model. We suggest that

- elementary school teachers begin with one subject area, and
- secondary school teachers begin with one course.

It is better to begin on a small scale so you do not have to write multiple SIOP lessons each day while you are learning the model. In some cases, teachers learn the SIOP Model over time, component by component, and they build their lesson planning skills in the same way. Once you have internalized the model, you may write less detailed lesson plans, and you will probably find that writing SIOP lessons across subject areas or courses is easier.

To guide your SIOP lesson planning, let's now explore each feature in the SIOP component of Lesson Preparation.



SIOP® FEATURE 1:

Content Objectives Clearly Defined, Displayed, and Reviewed with Students

In effective instruction, concrete content objectives that identify what students should know and be able to do must guide teaching and learning. They are often easier for teachers to write because they typically come directly from the curricular frameworks of the subject areas. When planning content objectives, keep the following guidelines in mind:

- Plan objectives that support **content standards** and learning outcomes. The Common Core State Standards for English language arts and mathematics (NGA 2010a, 2010b), the Next Generation Science Standards (NGSS Lead States, 2013), and individual state standards are sources of content objectives, and well-implemented SIOP instruction can help students meet them.
- Write lesson-level objectives (something that can be taught and learned in one lesson or two) and use student-friendly language that suits the age and proficiency levels in the class. Content objectives and state standards are frequently complex and not written in a manner that is accessible to English learners or students in primary grades. Often standards are too generic or broad—such as “Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.” (NGA, 2010b, p. 65)—to be useful as a single lesson’s learning goal.
- Write objectives in terms of student learning, not as an agenda item or an activity. See Figure 2.1 for several ways that teachers in our research studies have started their objectives. You will note that all focus on the student.
- Limit the number of content objectives to only one or two per lesson to reduce the complexity of the learning **task** and to ensure that instruction can meet the objectives.
- Share objectives with the students, orally and in writing. Typically teachers do not consistently present objectives to students. As a result, students do not know what they are supposed to learn each day. SIOP teachers tell students the objectives for every lesson, and in this way students share the responsibility for learning.
- Plan lessons so you provide some explicit instruction and practice opportunities related to each objective.
- Review the objectives at the end of the lesson to determine if students have mastered them. Use that assessment when deciding whether to move to the next topic or spend some time reteaching.

 Watch this video to learn how Magali Williams, a bilingual resource teacher, introduces the lesson objectives to her students. What techniques does she use to ensure the students understand what they will be learning in this lesson?

We know from our research studies and professional development experiences that presenting objectives each day can be challenging for teachers. But the effort is worth it. One of the sheltered teachers who was learning the SIOP Model reported

FIGURE 2.1 How to Start an Objective

Students will be able to (SWBAT) _____

Students will (SW) _____

We will _____

Today I will _____

The learner will _____

Our job is to _____

her growing awareness of the importance of clearly stated content objectives that are displayed for English learners:

The objectives are still going on in my class. They're on the board every day and the students are getting used to seeing them, reading them out loud, and evaluating whether or not we achieved them at the end of each class. I still have questions about the wording and what's a good objective ... but that will come with time and more discussion and study. I just wanted to say that defining the objectives each day definitely brings more focus to my planning and thinking, and it helps bring order to my classroom procedures. So far, it has not been too burdensome and the habit is definitely forming.

Content-based ESL teachers sometimes need assistance in identifying appropriate content objectives to add to their lessons. They may feel unprepared for in-depth instruction on a content topic, they may not know the key concepts that should be taught, and they may not know what types of activities usually support the topic. For these reasons, we strongly advocate that content and language teachers collaborate closely as they prepare lessons and help their students meet language and content goals.

By writing content objectives related to the lessons English learners receive in subject-area classes, content-based ESL teachers address the students' academic needs better. Some teachers might draw from one content area, focus on one subject per quarter, or concentrate on academic tasks needed to work in those subjects (e.g., reading a novel, writing an essay, explaining steps in an experiment).

The bottom line for English learners is that content objectives need to be written in terms of what students will learn or do; they should be stated simply, orally and in writing, use active verbs, and be tied to specific grade-level content standards.

Examples of content objectives and language objectives, discussed below, can be found throughout each chapter in this book, in *99 Ideas and Activities for Teaching English Learners with the SIOP® Model* (Vogt & Echevarría, 2008), in *99 MORE Ideas and Activities for Teaching English Learners with the SIOP® Model* (Vogt, Echevarría, & Washam, 2015), in *Helping English Language Learners Succeed in Pre-K-Elementary Schools* (Lacina, Levine, & Sowa, 2006), in lesson plans presented in *Science for English Language Learners* (Fathman & Crowther, 2006), and in the SIOP content books mentioned above.



SIOP® FEATURE 2:

Language Objectives Clearly Defined, Displayed, and Reviewed with Students

While carefully planning and delivering content objectives, SIOP teachers must also incorporate into their lesson plans objectives that support students' **academic language** development, and **ESL** teachers may have to build social language skills too (Gersten et al., 2007; Saunders & Goldenberg, 2010). The same guidelines we discussed above for content objectives also should apply to planning language objectives: Language objectives should be written clearly and simply with active verbs, and students should be informed of them, both orally and in writing. They should be limited in number for a given lesson and reviewed at the end. The objectives should be drawn from the state **English language proficiency standards** and English language arts standards. Most importantly, the objectives should represent an aspect of academic English that students need to learn or master.

Both types of objectives are equally essential in SIOP lessons. When planning, remember the following:



Watch this video to hear Professor Cynthia Lundgren explain why teachers need to include language objectives in their lessons and how objectives help students meet standards. What role does language play in your content area? <https://www.youtube.com/watch?v=del47uaZMJs>

- Content objectives are the **what**—what students need to learn about the content topic
- Language objectives are the **what** too—what students need to learn about English in order to
 - ◆ learn, express, practice, and apply new information
 - ◆ demonstrate knowledge
 - ◆ perform academic tasks

Although incorporating language objectives in all content lessons is a hallmark of the SIOP Model, we recognize that many content teachers are not used to thinking about the language demands of their subject. What we propose in the SIOP Model calls for a new perspective on your subject area. It is not sufficient to only have a deep understanding of topics in your content area; rather, an effective teacher also needs to know how language is used in the content area in order to convey information (orally or in text) and to use and apply that information (through class reading, writing, and discussion activities). It also requires you to know your students' proficiency levels so the language objectives can be targeted to what students need to learn about the academic language of history, science, mathematics, or other subjects, but not be at a level too high for their current understanding.

Because it may be a new way of thinking for you, here are guidelines to keep in mind from research on second language acquisition:

- Remember that acquiring a second language is a process. When considering which language objectives to include in a lesson and how to write them, be sure to reflect a range from process-oriented to performance-oriented statements over time so that students have a chance to explore, and then practice before demonstrating mastery of an objective. The following objectives from a SIOP language

arts class show the progression of objectives that might be taught over several days:

Students will be able to

1. Recognize similes in text (Day 1)
2. Discuss the functions of similes (Days 1–2)
3. Write three similes (Day 2)
4. Write a paragraph that describes a setting using similes (Days 3–4)

For the first lesson (Day 1), students learn to recognize similes in text, perhaps by focusing on the key words *like* and *as*, and the class discusses the purpose of similes. After that (Day 2), they might discuss reasons why authors use similes and then generate their own similes in decontextualized sentences. On Day 3 they describe a setting using similes and turn that description into a paragraph, an authentic purpose. On Day 4 the teacher might have students edit their paragraphs and then share some aloud.

Figure 2.2 displays possible verbs for objective statements that reflect this process-to-performance continuum.

- Distinguish between receptive and productive language skills. English learners tend to develop receptive skills (listening and reading) faster than productive skills (speaking and writing), but all the skills should be worked on in a unified manner. Students don't have to learn to speak, for instance, before they learn to read and write (August & Shanahan, 2006; Saunders & Goldenberg, 2010).
- Recognize the importance of oral language practice; be sure you do not focus your objectives solely on reading and writing. We know from research (Goldenberg, 2008; Guthrie & Ozgungor, 2002) that the absence of planned speaking practice—be it formal or informal—by English learners in content classrooms is detrimental to their development of academic English. Gibbons (2006) argues that skillful teachers should take advantage of oral interaction to move learners from informal, everyday explanations of a content topic (e.g., a scientific process) to the more specialized academic register of the formal written and spoken code.
- Focus on function *and* form to move students to advanced levels of academic English and full proficiency, and consequently to set them up to be college and career ready. ESL and English-language arts teachers play important roles in

FIGURE 2.2 Process-to-Performance Verbs

Process-Oriented	----->----->----->	Performance-Oriented
Explore		Define
Listen to		Draft
Recognize		Write
Discuss in small groups		Give an oral presentation
		Edit

making this happen, but content teachers should not let students coast in class. If some English learners are ready to produce more sophisticated language (e.g., during an oral presentation, in a science fair project), they should be challenged to do so. Schleppegrell and colleagues (Schleppegrell, 2004; Schleppegrell, Achugar, & Orteiza, 2004) have conducted linguistic analyses of the lexical and grammatical forms that construe meaning in written and spoken school discourse and have identified implications for instruction. SIOP teachers might make the development of specialized grammar and lexical forms part of their scope and sequence of language objectives (Dutro & Kinsella, 2010; Ellis, 2006; Hinkel, 2006).

- Recognize that the more exposure students have to academic language and the more time they spend using it, the faster they will develop **language proficiency** (Echevarría & Graves, 2010; Saunders & Goldenberg, 2010). If the ESL teacher is the only educator who works on language development with an English learner during the school day, less progress will be made than if all the teachers on the English learner's schedule attend to language development and practice (Snow & Katz, 2010).
- Assess the language objectives to determine if students are making progress toward mastery. You can plan for multi-level responses from the students according to their proficiency in English. For example, use group response techniques (e.g., thumbs-up/thumbs-down) for students who are in the early stages of **English language development**. For students who are more proficient, incorporate activities that involve partner work and small group assignments so that English learners can practice their English in a less threatening setting. Accept approximations and multiple-word responses rather than complete sentences from students at early stages of English development, but expect English learners with greater proficiency to give answers in one or two complete sentences. This practice develops language skills because it requires students to move beyond what may be their comfort zone in using English. You will find this topic discussed in more detail in Chapter 9.

Sources of Language Objectives. You also need to know about sources of language objectives. The first place to start is the state English language proficiency (ELP) standards. Second, as we mentioned in Chapter 1, look at the WIDA standards. The WIDA consortium has compiled a list of “Can Do” descriptors that can help teachers identify the kind of language tasks students should be able to perform according to five differing levels of English proficiency and different grade-level clusters. (To view these descriptors, navigate to the “Can Do” page at www.wida.us.)

Individual state and Common Core English language arts standards are other resources. Some states also have content area standards that include a strand focused on communication. Ideas for objectives will be found in all of these official documents as well as in local district curricula and instructional materials. By reviewing the course textbook and other materials, you can see if there are language skills and academic vocabulary that students need to develop in order to comprehend the information.

 Watch this video to learn how the WIDA standards can be used as a source for planning language objectives across subject areas. What other sources do you have access to?

One critically important source for successful SIOP lesson implementation is your colleagues. If you are a content or grade-level classroom teacher, pair up with an ESL or bilingual teacher. Tap his or her expertise for language topics and knowledge of the English learners' academic language needs. If you are an ESL teacher, you have a plethora of language objectives at your disposal. You need to partner with one or more content teachers to identify content objectives and lesson tasks that the English learners need assistance with and align them to your language objectives. You may want to focus on thematic units to cover a variety of content topics or focus on one subject area per quarter. (See Lacina, Levine, & Sowa, 2006, and TESOL, 2013 for examples of collaboration.)

■ Selecting and Writing Content and Language Objectives

All the content and language objectives should evolve from the lesson topic and be part of the instructional plan. After a teacher writes content and language objectives, posts them, and discusses them with the students at the start of class, at some point in the lesson explicit instruction must be provided on these objectives. Students would then have practice opportunities aligned to the objectives and be assessed on their progress toward meeting them at the close of the lesson. In other words, each objective is what we want the students to learn, and each needs explicit attention. (See *Developing Academic Language with the SIOP Model* [Short & Echevarría, 2016] for detailed information on selecting and writing language objectives for SIOP lessons and for activities to help you apply the guidelines to your own classes.)

 Watch this video of Deborah Short explaining why content and language objectives are necessary in lessons with English learners. Why are they needed? How do they benefit the students and the teachers?

When students practice objectives that are explicit learning targets, they advance their knowledge base. Objectives, it is critical to understand, are not activities; they are not the agenda on the board nor the tasks the students do during the lesson. Objectives are the learning targets related to the content and language knowledge students must acquire, and they are necessary for students to accomplish the activities and master the curriculum.

Remember: Writing an agenda or list of activities on the board is not the same as writing the content and language objectives!

Content objectives, as mentioned earlier, are usually drawn from the state subject area standards. Consider this life science standard of learning from Virginia: “The student will investigate and understand the basic physical and chemical processes of photosynthesis and its importance to plant and animal life.” This standard is too broad to be addressed in one lesson, but it is written in a straightforward manner. Posting it as an objective word for word in a middle school science classroom would not be helpful for your students, and you would need several lessons to address this standard well. Suppose you have newcomers or students with interrupted educational backgrounds. You might have to begin with the basics and write a content objective like “Identify parts of a plant and their functions.” When you explain it, you might elaborate, “*Today you will learn about parts of a plant (show a picture or drawing). You will be able to identify the parts (point to the different parts) and tell what the parts do (e.g., Leaves make food for the plant.).*”

After you have rewritten the state standard as an appropriate content objective for the newcomers, you will need to plan the lesson and determine a language objective. One teacher we worked with decided to augment the science lesson with a walking field trip. In a park near the school, she and the middle school newcomers each found one living plant and sketched it. Then they collected plants and plant parts, such as fallen leaves, twigs, stems, roots, and so forth. Back in the classroom, triads were given one part to become familiar with. They would prepare a poster including a close-up illustration of the plant part and a caption telling what function the part plays for the plant. The teacher had bookmarked some Web sites for the groups on the class computer and also had some photographic picture books on plants in her classroom library. She then taught them the definition of “function.” Because her language objective was “Students will represent a plant part visually and write a sentence about its function,” she provided a sentence stem for students to use in writing their caption: “This _____ helps the plant because it _____.”

Categories of Language Objectives. Language objectives should be planned to meet learning goals and prepare students for the type of academic language they need to understand the content and perform the activities in the lesson. But the activities alone are not language objectives, although they could provide language practice. In some lessons, language objectives may focus on developing students’ vocabulary, introducing new words and concepts, or teaching word structure to help English learners discern the meaning of new words. Other lessons may lend themselves to practice with reading comprehension skills or the writing process. Sometimes objectives will highlight functional language use, such as how to request information, justify opinions, negotiate meaning, provide detailed explanations, and so forth. Higher-order thinking skills, such as articulating predictions or hypotheses, stating conclusions, summarizing information, and analyzing an author’s purpose can be tied to language objectives, too. Sometimes specific grammar points can be taught as well; for example, learning about capitalization when studying famous historical events and persons.

We suggest you draw from the following four categories when generating language objectives.

- **Academic Vocabulary.** Key words needed to discuss, read, or write about the topic of the lesson (e.g., names of important people, places, and events; scientific and mathematical terms; social studies or health concepts) can be the focus of language objectives. Vocabulary for a lesson can be drawn from three subcategories, which are described in detail in Chapter 3:
 - ◆ *Content vocabulary:* These key words and technical terms are subject specific. They are often the highlighted words in textbooks. Students need them to understand lesson concepts, but they are generally low-frequency words (i.e., not regularly used outside of the classroom), particularly those in secondary school courses. (Ask yourself: When was the last time you used *magma* in conversation?)
 - ◆ *General academic vocabulary:* These words include cross-curricular academic terms (e.g., *circumstances*, *impact*, *observe*), transition words and logical

connectors (e.g., *however*, *because*, *next*), and language function words (e.g., *compare*, *persuade*). This category includes medium- and high-frequency words that are used in academic and social conversations.

- ◆ *Word parts*: This category refers to roots, prefixes, and suffixes. Attention to the structure of words can help expand a student's vocabulary knowledge considerably. For example, if a student knows that *vis* is the root meaning "to see," she can begin to guess the meaning of words like *vision*, *visual*, *invisible*, and *visualize*.
- **Language Skills and Functions**. This category reflects the ways students use language in the lesson.
 - ◆ Students are expected to read, write, listen, and speak, but how well they do so varies. English learners need some direct instruction in these language skills, along with opportunities to practice. The skills taught need to link to the topic of the lesson. In a language arts class, for example, will students need to read and find key details in the text to cite as evidence? In social studies, will they need to listen to an audio recording of a speech by an historical figure? In science class, will they have to record their observations during an experiment?
 - ◆ Any lesson may also call for students to use language for a specific purpose—to *describe*, *compare*, or *predict*, for example. English learners need instruction here as well, particularly in ways to articulate their descriptions or comparisons or predictions.
- **Language Structures or Grammar**. Teachers can pay attention to the language structures in the written or spoken discourse of their class and teach students the structures that are widely used. For example, students might be struggling with a text that includes the passive voice, imperatives, or if-then sentences. If so, the teacher may teach students how to interpret these sentences. If you are a content teacher, we are not asking you to become a grammar expert, but we do want you to be aware of the syntax used in your subject area. If you are an ESL teacher, this category might offer the opportunity to teach some grammar that will really advance the students' language proficiency.
- **Language Learning Strategies**. This category provides a way for teachers to give students resources to learn on their own. **Learning strategies** to be taught may include
 - ◆ corrective strategies (e.g., reread confusing text),
 - ◆ self-monitoring strategies (e.g., make and confirm predictions),
 - ◆ prereading strategies (e.g., preview headings, relate to personal experience),
 - ◆ language practice strategies (e.g., repeat or rehearse phrases, imitate a native speaker), or
 - ◆ cognate strategies (e.g., teach students with Latin-based **native languages** to consider cognates when they see new academic terms).

More discussion on strategies is found in Chapter 5.

Selecting Potential Language Objectives. One of the difficulties teachers face is narrowing down the wide range of possible language objectives. English learners

FIGURE 2.3 Categories and Examples for Developing Language Objectives

Type of Language Objective	Grade 1 Social Studies Example	Grade 3 Math Example	Middle School Language Arts Example	High School Chemistry Example
Academic Vocabulary ↓ <i>What it means instructionally</i>	We will use key words (e.g., <i>park, library, school, apartment building, house</i>) and prepositions (e.g., <i>next to, beside, across</i>) to describe locations in the neighborhood.	Students will be able to define the terms <i>square, rectangle, rhombus, trapezoid</i> , and <i>parallelogram</i> orally and in writing.	Students will be able to state the figurative and literal meanings of expressions of hyperbole.	Students will be able to define the terms <i>chemical reaction, chemical change</i> , and <i>physical change</i> orally and in writing.
Language Skills and Functions ↓ <i>What it means instructionally</i>	Teacher teaches students key terms and prepositions and models how to use them to describe the locations of different buildings in the neighborhood.	Teacher teaches (or reminds) students how to define a term: state attributes, give an example, draw a picture, or use it in a sentence.	Using examples (e.g., “my feet are killing me”), the teacher explains what hyperbole is and the difference between figurative and literal language. Students evaluate sample statements as hyperbolic or not and explain why.	Teacher teaches (or reminds) students how to define a term: state attributes, draw an illustration, use in a sentence, give an analogy, provide an antonym, or identify group membership and distinguishing characteristics.
	We will compare features of neighborhood locations using comparative phrases.	Students will be able to listen to teacher descriptions in order to draw different types of parallelograms.	Students will be able to express an opinion orally in a formal and an informal manner.	Students will be able to formulate questions and generate hypotheses before conducting an experiment.
	Teacher teaches comparative language frames, such as “Both ___ and ___ have.” and “___ and ___ are alike/different because ___.”	Teacher teaches a listening comprehension skill—paying attention to key words—and asks students to draw the shapes or construct them on a geoboard.	Teacher demonstrates an oral book review as she might tell it to a friend and as she might tell it to a teacher. She calls attention to word choice, intonation, and rhetorical style. She asks students to prepare a similar report on a book, song, or movie.	Teacher teaches or reminds students of the way to form these language functions: formulate a question and then state a hypothesis, perhaps with sentence starters like “Will the ___?” and “We predict that ___.”

Language Structures or Grammar 	What it means instructionally	We will use singular and plural nouns with past tense irregular verbs.	Students will be able to use comparative phrases, such as <i>greater than</i> , <i>larger than</i> , <i>smaller than</i> , <i>less than</i> , and <i>equal to</i> orally and in writing when comparing geometric figures and angles.	Students will be able to use conjunctions and dependent clauses to join ideas in compound and complex sentences.	Students will be able to use adverbs of time in their lab report to describe their observations.
		Teacher introduces (or reviews) the difference between singular and plural nouns (using neighborhood examples) and models sentences with past tense irregular verb forms (e.g., <i>I went to two stores on Ash Street</i>).	Teacher introduces (or reviews) these comparative phrases and also shows the corresponding mathematical symbols (i.e., $>$, $<$, and $=$).	Teacher introduces (or reviews) conjunctions and dependent clauses and how their use can create a variety of sentences with two or more related ideas. Students practice writing such sentences.	Teacher teaches (or reviews) adverbs of time (e.g., <i>first</i> , <i>next</i> , <i>later</i> , <i>after three minutes</i> , <i>for several hours</i>) and shows models of usage in a lab report.
Language Learning Strategies 	What it means instructionally	We will visually represent directions stated or given on a map.	Students will be able to visualize and relate the geometric shapes to their lives.	Students will be able to rehearse an oral presentation with a peer.	Students will be able to monitor subject-verb agreement in written lab reports.
		Teacher models how to listen to information (in this case, walking directions) and record the route on a map.	Teacher explains how to visualize and make a personal connection and how to articulate the mental image, perhaps through a think-aloud.	Teacher teaches class how to listen and give feedback to an oral presentation based on certain criteria (e.g., word choice, intonation) and provides class time for rehearsing.	Teacher discusses subject-verb agreement and points out examples in a model lab report. He or she shows students how to check a sentence for subject-verb agreement, particularly for noun phrases (e.g., <i>potassium and sodium</i> combine to form salt).

need lots of academic language development, so how should a teacher select one or two language targets for a lesson? We suggest that you think about how language will be used in your lesson: in texts (reading passages and instructions), in talk (your speech and student discussions), in tasks (activities and assignments), and in tests. While doing this, also consider the four categories of language objectives. Where might your students need assistance? Given the content topic and your knowledge of the students' level of academic language acquisition, what objective(s) might be written that complements the topic and that you will explicitly address in the lesson?

A colleague of ours, Amy Washam (personal communication), who is a very experienced SIOP professional developer, uses some effective techniques to help teachers conceptualize academic language in their lesson planning process:

First, I ask teachers what they would need in order to learn another language fluently enough to attend a graduate course in a country where that language is spoken. Teachers brainstorm ideas, which often include a tutor, a specialized glossary of key terms in the course, extra time spent in the country before the class starts practicing the language, and language learning programs on tape that they can listen to over and over.

I tell them that what they listed—modeling, repetition, feedback, practice speaking the language—are all good language activities for their English learners. But they also need to have a language target for each activity.

So next I ask teachers to think of an English learner they have worked with recently and write down all of the reasons this student is not considered English proficient in their class. Common reasons cited are poor reading comprehension, technical difficulties in writing, problems with English pronunciation, and limited background knowledge which results in limited academic vocabulary.

My response at this point is, “The reasons you listed for your student not being classified as English proficient are your language objectives. You can have language objectives for reading comprehension, academic vocabulary development, grammar, and even pronunciation.” I then push them to think about their planning and ask, “Is it more important for this student to work on the content standards in their classes or the list of skills that you say this student does not possess yet in English?”

Now they typically say both are important. So we move to the next step: I ask them to respond to these questions:

1. What language will students need to know and use to accomplish this lesson's content objectives?
2. How can I move my students' English language knowledge forward in this lesson?

Writing Language Objectives. In Figure 2.3, we show how language objectives might be written for these four categories. One column shows language objectives for a first-grade social studies class. The next column shows language objectives for a third-grade math lesson on geometric shapes. The third column shows language objectives for a middle school language arts class, and the final column shows

language objectives for a high school chemistry class. These objectives are illustrative and would not all be addressed in one lesson; instead, they could be used over a series of lessons. Note that it is important to include a variety of language objectives over the course of one week. Many teachers feel comfortable teaching vocabulary as their language objective. This is a good first step, but it is not the complete picture of the language development our English learners need to be successful in school and beyond.

As you write your objectives, keep the verbs in Figure 2.4 in mind. You'll see that they are all active verbs. In SIOP lessons, you want to avoid using verbs like *learn*, *know*, and *understand* because the processes are not observable. Although the verbs in the chart are not exclusive to one category or another, they are more common to the category presented. Over time, add to this list to further distinguish between the content and language goals of your lesson.

For those of you who are new to writing language objectives, we want to offer the following language frames as scaffolds (Short & Echevarría, 2016). To complete them, follow the suggestions we made earlier: Think about which category of academic language your students need to learn and where in the lesson (e.g., the text, talk) the language will be needed or practiced. Use this analysis to determine a language target or two.

- A: Students will (function: active verb phrase) using/with (language target).
- B: Students will [use] (language target) to (function: active verb phrase).
- C: Students will (language target as active verb) [with ____].

Here are some examples of these objectives from the charts above:

- A: Students will write a marketing advertisement using elements of persuasive language.

FIGURE 2.4 Sample Verbs for Writing Content and Language Objectives

Verbs for Content Objectives	Verbs for Language Objectives
Identify	Listen for
Solve	Retell
Investigate	Define
Distinguish	Find the main idea
Hypothesize	Compare
Create	Summarize
Select	Rehearse
Draw conclusions about	Persuade
Determine	Write
Find	Draft
Calculate	Defend a position on
Observe	Describe

- B: Students will use cognates to determine word meaning.
- C: Students will read to find the main idea.

Note that even if you have students with mixed levels of English proficiency in class, we do not suggest you write different language objectives for each proficiency level. Instead, write an objective that all students should attain based on the content concepts in the lesson, but adjust the intended outcomes to match the students' ability levels. Some students may master the objective by the end of the lesson; others will be at some point on a path toward mastery.

Connecting Content and Language Objectives. Sometimes the language and content objectives may be closely linked as in the following upper elementary math lesson:

- Students will solve word problems using a two-step process.
- Students will write a word problem requiring a two-step process for a classmate to solve.

The first statement is the content objective. It focuses on a mathematical procedure. The second is the language objective, wherein students practice mathematical writing skills.

At other times, the language objective might extend the content knowledge, as in this European History lesson:

- Students will explain the causes of the economic recovery of Europe after World War II.
- Students will write and present a radio broadcast summarizing Europe's economic growth over five years since the end of WWII.

In this lesson, students may use the text and other sources to determine how the economy in Europe improved over time, finding events that occurred or steps governments took. The teacher may have to explain the Marshall Plan and other initiatives. The teacher may then have to guide students in creating a radio broadcast: how to organize the ideas, write a script, and rehearse the broadcast. Besides helping students articulate their information orally, the teacher may also encourage them to focus on non- and paralinguistic aspects of the presentation such as eye contact and intonation.

For language arts and reading teachers, distinguishing language and content objectives can be tricky. Certain curriculum concepts like *plot* and *setting* are clearly candidates for content objectives because they are specific to the language arts subject, but other possibilities like “produce writing that conveys a clear point of view” could be either a language or a content objective. It could even be a language objective in a history class.

Despite possible overlap, we advise language arts and reading teachers to consistently identify both a content and a language objective for each lesson, even if some might be placed in either category. Some teachers choose reading and writing-related

objectives as content objectives and speaking and listening targets for language objectives. Because we are aiming for whole-school implementation of the SIOP Model, having students recognize and expect both types of objectives in all their classes is a valuable goal.

Checking Your Objectives. After you have written your content and language objectives, we suggest you refer to this checklist to evaluate them:

- _____ The objectives are aligned to state or district standards.
- _____ The objectives are observable.
- _____ The objectives are written and will be stated simply in language the students can understand.
- _____ The objectives are written in terms of student learning.
- _____ The content objective is related to the key concept of the lesson.
- _____ The language objective promotes student academic language growth (i.e., it is not something most students already do well).
- _____ The language objective connects clearly with the lesson topic or lesson activities.
- _____ The objectives are measurable. I have a plan for assessing student progress on meeting these objectives during the lesson.



SIOP® FEATURE 3:

Content Concepts Appropriate for Age and Educational Background Level of Students

SIOP teachers must carefully consider the content concepts they wish to teach, and use district curriculum guidelines and grade-level content standards as guides. In SIOP classrooms, this entails ensuring that although materials may be adapted to meet the needs of English learners, the content is not diminished. When planning lessons around content concepts, consider the following:

- the students' first language literacy,
- their English language proficiency,
- their schooling backgrounds and academic preparation for grade-level work,
- their background knowledge of the topic,
- the cultural and age appropriateness of instructional materials, and
- the difficulty level of any text or other material to be read.

Our goal as SIOP teachers is to provide the grade-level curriculum to our English learners. By employing the type of techniques we propose in the SIOP

Model, teachers skillfully make that content comprehensible to them. Sometimes we adapt the materials being read or the materials used to accomplish a task. The following considerations are worth keeping in mind.

- In general, it is inappropriate to use the curriculum materials and books from much earlier grades. Students in high school who are developing literacy for the first time should not be reading about “doggies and birdies,” for example, but beginners might use a middle school textbook. Students also deserve books with age-appropriate illustrations. If necessary, the teacher should provide the **scaffolding** that English learners need to understand the content concepts and complex text of the materials used in the lesson.
- In some cases, students with major gaps in their educational backgrounds may be placed in newcomer programs or specialized classes that pull objectives and content concepts from earlier grades in order to provide the foundational knowledge the students need to perform grade-level work successfully and catch up to their classmates (Short & Boyson, 2012). Ideally, specialized courses would be developed to accelerate the learning of students with limited formal schooling; for example, FAST Math was developed by Fairfax County (VA) Public Schools (Helman & Buchanan, 1993) to help students gain several years’ worth of mathematics instruction in six months or one year.
- We should also be mindful of concepts our English learners may have already learned through their life experiences or prior schooling. Sometimes, an illustration or demonstration can help students recall a concept and then the teacher can help them learn new English words to describe the concept and add to their understanding of it. As Torgesen and colleagues (2007) point out, “ELLs who already know and understand a concept in their first language have a far simpler task to develop language for the concept in English than do students who lack knowledge of the concept in either language” (p. 92).
- To help students make connections to the content topics, reflect on the amount of background knowledge needed to learn and apply the concepts, and plan ways to build or activate students’ prior knowledge related to them. For example, fourth-grade students typically learn about magnetism, yet some adolescent English learners may not have studied this concept. Rather than diminish the content, use what prior knowledge students do have, perhaps about attraction, and then explicitly build background on magnetism as a foundation for the lesson.
- Another way to build background for a small group of learners is through a minilesson that precedes the regular whole-class lesson (Rance-Roney, 2010; Vogt, 2000). This minilesson provides a “jump-start” by reviewing key background concepts, introducing vocabulary, leading a picture or text “walk” through the reading material, engaging students in simulations or role-plays, or having them participate in hands-on experiential activities. The jump-start minilesson develops context and gives access to students who may lack appropriate background knowledge or experience with the grade-level content concepts. In heterogeneous classes in which English learners study with native English

speakers, peer tutors can be used to teach some of the requisite background information as well. Another option, where available, is to provide the minilesson in the students' native language.

- In schools where an ESL teacher and a classroom teacher work collaboratively with the same group of students, the ESL teacher can offer lessons that build background and vocabulary before the English learners study the topic in their regular class.



SIOP® FEATURE 4:

Supplementary Materials Used to a High Degree, Making the Lesson Clear and Meaningful



Watch this eighth-grade history lesson and notice how the teacher incorporates supplementary materials in the lesson. How do these items help students understand the content? What does the teacher do to support the English learners in this class?

Information that is embedded in context allows English learners to understand and complete more cognitively demanding tasks. Effective SIOP instruction involves the use of many supplementary materials that support the core curriculum and contextualize learning. This is especially important for students who do not have grade-level academic backgrounds and/or who have language and learning difficulties. Because lectures and pencil-and-paper activities centered on a text are often difficult for these students, remember to plan for supplementary materials that will enhance meaning and clarify confusing concepts, making lessons more relevant.

A variety of supplementary materials also support different learning styles and multiple intelligences because information and concepts are presented in a multifaceted manner. Students can see, hear, feel, perform, create, and participate in order to make connections and construct relevant meanings. The use of technology (e.g., interactive whiteboards) and multimedia can enhance student understanding and engagement with the content topics and related language practice opportunities. Supplementary materials provide a real-life context and enable students to bridge prior experiences with new learning. To the extent possible, choose materials that are **culturally responsive** to student backgrounds (Nieto & Bode, 2008).

Examples of supplementary materials and resources that can be used to create context and support content concepts include the following:

- **Hands-on Manipulatives:** These can include anything from counter chips for math to microscopes for science to interactive maps for social studies. Manipulating objects physically can reduce the language load of an activity; beginning-level students in particular can still participate and demonstrate their understanding.
- **Realia:** These are real-life objects that enable students to make connections to their own lives. Examples include play money (coins and bills) for a unit on money; historical **realia** such as photos, recordings, and artifacts from the Great Depression; or nutrition labels on food products for a health unit.
- **Pictures and Visuals:** Photographs and illustrations are available that depict nearly any object, process, or setting. Web sites, magazines, commercial photos, and hand drawings can provide visual support for a wide variety of content and vocabulary concepts and can build background knowledge. Models, graphs,

charts, timelines, maps, and bulletin board displays also convey information. Many teachers now have electronic document viewers that they use to display book pages, photos, and more to the class. Many teachers also use PowerPoint slides and interactive whiteboards. Students with diverse abilities often have difficulty processing an inordinate amount of auditory information, and so instruction that is supported with visual clues is more beneficial to them.

- **Multimedia:** A wide variety of multimedia materials are available to enhance teaching and learning. These range from simple tape recordings to videos, DVDs, interactive CD-ROMs, podcasts, and an increasing number of resources available on the Internet. Brief video clips at www.discoveryeducation.com, www.pbs.com, and www.nationalgeographic.com are effective tools. For some students and tasks, media in the students' native language may be a valuable source of information, with audio links as well as written text. It is important to preview Web sites for appropriateness and readability, especially when using them with beginning and intermediate-level students.
- **Demonstrations:** Demonstrations provide visual support and modeling for English learners. If you have a lesson task that includes supplementary materials, then you can scaffold information by carefully planning demonstrations that model how to use the materials and follow directions. Students can then practice these steps in groups or alone, with you or other experienced individuals nearby to assist as needed.
- **Related Literature:** A wide variety of fiction and nonfiction texts can be included to support content teaching, including material written in the students' native languages or with accompanying audio versions. Many teachers create class libraries with trade books and leveled readers on key topics. Some teachers ask librarians to set aside books on related topics as well.¹ Students can read these as supplements to the textbook. They offer a motivating way to look at a topic in more depth. Class libraries can promote more independent reading among students, which is valuable for vocabulary development and reading comprehension practice.
- **Hi-lo Readers and Thematic Sets:** Some publishers offer classic literature as well as fiction and nonfiction selections in a hi-lo format. The stories are of high interest but lower readability levels and tend to include many visuals and a glossary. Some books are grouped into thematic sets (e.g., *Civil Rights Leaders Around the World*) and can accompany different content area courses. The books in each set are written at different reading levels (e.g., one below-level book, two on-level books, one above-level book). Other book sets may have several versions available, each written at a different reading level. These resources are useful for classes that have students with multiple proficiency levels in English.
- **Chapter Summaries:** Some textbook publishers provide one-page summaries of each chapter, which present the key ideas. The summaries are often available in

¹ See Short, Cloud, Morris, and Motta (2012) to learn about a project organizing library books by lesson topic and English proficiency level and creating bookmarks for book sets.

Spanish and sometimes in other languages as well. They can be used to preview the topic or to review it afterward.

- **Adapted Text:** A type of supplementary reading material that can be very effective for English learners as well as struggling readers is adapted text. Without significantly diminishing the content concepts, a piece of text (usually from a grade-level textbook or a primary source document) is adapted to reduce the reading level demands. Complicated, lengthy sentences with specialized terminology are rewritten in smaller chunks. Definitions are given for difficult vocabulary in context. Please note that we are not advocating “dumbing down” the textbook, an approach that in the past yielded easy-to-read materials with few content concepts left intact. Rather, we suggest that the major concepts be retained, but the reading level demands of the text be aligned to the learners’ abilities.



SIOP® FEATURE 5:

Adaptation of Content to All Levels of Student Proficiency

In many schools, teachers are required to use textbooks that are too difficult for English learners to read. We discussed above the problem of “watering down” text to the point where all students can read it; content concepts are frequently lost when the text is adapted in this way. However, we also know English learners cannot be expected to learn all content information by listening to lectures.

Therefore, we must find ways to make the text and other resource materials accessible for all students, adapting them so that the content concepts are left intact. Several ways of doing this have been recommended for students who have reading difficulties (Readance, Bean, & Baldwin, 2012; Ruddell, 2007; Vacca, Vacca, & Mraz, 2010), and they work equally well for English learners. These approaches can be used throughout a lesson, as a prereading instructional strategy, as an aid during reading, and as a postreading method for organizing newly learned information.

Native language supports can help with adapting the content, too. If some students are literate in their native language, texts written in that language may be used to supplement a textbook or clarify key concepts. Students may conduct research using native language materials and share the information with classmates in English. Increasingly, the Internet offers native language Web sites, especially for the more commonly taught languages, and authentic materials such as newspapers can be found online. For students who are not literate in their native language but have oral skills, native language broadcasts, podcasts, and audio books, along with access to knowledgeable adults who speak their language may be additional sources of information.

Suggestions for adapting text to make it more accessible include the following:

- **Summarizing the text to focus on the key points of information:** This approach can help focus the learning on key historical events, steps for solving a math

problem, or understanding the plot in a story. The new text might be written as an outline, a list of bulleted points, or a graphic organizer like a flow chart.

- **Elaborating the text to add information:** This approach may make a text longer, but the adapter can embed definitions of difficult words or provide more background information.

Although it is time consuming, rewriting text is an effective modification of curricular materials because information can be organized either in small sequential steps or in other logical chunks of information. Short, simpler sentences are rewritten from long, complex, dense ones. An example of a complex sentence from a science text follows: “Electrons have negative electric charges and orbit around the core, nucleus, of an atom.” A simple adaptation of this sentence is, “Electrons have negative charges. They orbit around the core of the atom. The core is called the nucleus.”

Ideally, rewritten paragraphs should include a topic sentence with several sentences providing supporting details. Maintaining a consistent format promotes easier reading for information-seeking purposes. All sentences included in the rewritten text should be direct and relevant to the subject. In the following example, a paragraph of original text is taken from an anthology theme in a reading series (Cooper et al., 2003). This passage was excerpted from a piece of nonfiction literature, *Into the Mummy's Tomb*, written by Nicholas Reeves.

Original text: “Tutankhamen’s mummy bore a magnificent mask of burnished gold, which covered its face and shoulders. Its head cloth was inlaid with blue glass. The vulture and cobra on its forehead, ready to spit fire at the pharaoh’s enemies, were of solid gold” (p. 237).

We have rewritten the original text as follows:

Adapted text: “King Tutankhamen’s mummy wore a magnificent mask, made of very shiny gold. It covered the face and shoulders of the body. The part of the mask over the forehead looked like a gold head cloth. Blue glass was sewn into the head cloth. Shapes of a vulture (a type of bird) and a cobra (a type of snake) were above the eyes on the mask. They were made of solid gold. They looked like they could attack King Tut’s enemies.”

As you compare the texts, you will see some thought was involved in the rewrite. Some words, like “magnificent,” are Latin cognates and should be retained if you have students who speak a language such as Spanish or Portuguese. Some patterns and expressions are repeated, such as “made of,” because once students figure them out, they can read more fluently the next time they encounter them. Here are some guiding principles to keep in mind when rewriting text:

- Decide what students need to learn from the text.
- Focus on concrete concepts first, then abstract.
- Reduce nonessential details.

- Relate new information to students' experiences (e.g., include a familiar analogy).
- Use visual representations—maps, charts, timelines, outlines.
- Simplify vocabulary, but keep key concepts and technical terms.
- Elaborate to explain concepts if necessary.
- Check word choice and sentence order (e.g., for a question, begin with the question word; for an if-then statement, begin with the if clause).

Obviously, adapting text like this takes time, and it is not easy to do. Note here that the adapted version is slightly longer than the original, which often happens when definitions are embedded. If you have a large number of English learners in your classroom, adapted text can be very beneficial, and it is worth the time and effort to be able to provide students with more accessible material. Be sure to have a colleague read the adapted text to make sure it clarifies rather than confuses the content.



SIOP® FEATURE 6:

Meaningful Activities That Integrate Lesson Concepts with Language Practice Opportunities for Reading, Writing, Listening, and/or Speaking



Watch this video, in which two teachers co-plan a joint first-grade lesson for English speakers and English learners. Listen for the ways they make accommodations for the English learners so they can participate in the lesson. How do they prepare the students for the content and ensure language practice will occur?

To the extent possible, lesson activities should be planned to promote language development in all skills while English learners are mastering content objectives. We want to provide oral and written language practice that is relevant to the lesson concepts, but remember: Activities that generate language practice are not language objectives. Language objectives require explicit instruction, for example, about a language skill or structure needed to accomplish the activities.

English learners are more successful when they are able to make connections between what they know and what they are learning by relating classroom experiences to their own lives. These meaningful experiences are often described as “authentic,” because they represent a reality for students. That is, classroom experiences mirror what actually occurs in the learner’s world. Authentic, meaningful experiences are especially important for English learners because they are learning to attach labels and terms to things already familiar to them. Their learning becomes situated rather than abstract when they are provided with the opportunity to actually experience what they are being taught.

Too often, however, English learners have been assigned activities that are not meaningful and are unrelated to the content and activities pursued by the other English proficient students in their classes. It is essential that content standards that apply to students with English proficiency also apply to English learners, and that the planned activities reflect and support these standards.

Consider a class of middle school students studying insects—butterflies in particular. While the rest of the class learns the scientific names and habitats of various kinds of butterflies, the teacher has the English learners color and cut out pictures of butterflies to make a mobile. This activity is neither authentic nor relevant for these

students. In this instance, the teacher obviously has not provided meaningful activities that support the grade-level science content standards.

As you continue to read this chapter and the remaining ones, you will find a host of teaching ideas for meaningful activities that integrate the concepts with language practice. The resources listed in Appendix D provide many more as well.



Teaching Ideas for Lesson Preparation



Watch this video to see Amy Collinge, a first-grade teacher, discuss the value of presenting objectives to the students. How do the posted objectives help her, and how do they help her students? <https://www.youtube.com/watch?v=TMgeoXk0Viw>

- **Presenting Objectives to the Class.** Effective SIOP teachers do more than just go through the motions by writing the objectives on the board and reading them quickly to the class. Getting the students involved in thinking about the objectives provides a teaching opportunity that should not be squandered. Here are some ways to make the presentation of objectives more productive. Other ideas can be found in Echevarría, Vogt, and Short (2010c, p. 21).
 - ◆ Ask students to pick out important words from the objective and highlight them—for example, the verbs and nouns.
 - ◆ Ask students to paraphrase the objectives with a partner, each taking a turn, using the frame: “We are going to learn.”
 - ◆ Present the objective and then do a Think-Pair-Share, asking students to predict some of the things they think they will be doing for the lesson that day.
- **Number 1, 2, 3 for Self-Assessment of Objectives** (Short, Vogt, & Echevarría, 2011a, p. 71; Vogt & Echevarría, 2008, p. 179). In this activity, students are asked to diagnose their knowledge about a topic and then take some responsibility for learning new information during the lesson. At the beginning of the lesson, display the objectives and ask students to rate themselves on how well they understand each one. You may read each aloud and have students show with their fingers which of the following ratings fit:
 1. I understand this concept.
 2. It looks familiar, or I have studied something like this before.
 3. I don’t know this.
 At the end of the lesson, return to the objectives and ask students to rate again, “How well did you meet the objective today?”
 1. I can teach the concept to someone else.
 2. I understand most of it, but not everything.
 3. I don’t understand completely. I need more time/practice/examples.
- **Jigsaw Text Reading** (Aronson et al., 1977). Originally designed as a cooperative learning activity for all students, Jigsaw works well with English learners when there is a difficult-to-read text.
 1. Form cooperative learning “home” groups and then have one or two members from each group come together to form a new group of “experts.”
 2. Assign each new “expert” group a different section of the text to read. This group can read the text orally taking turns, have partners read to each other, or have group members read the text silently.

3. Following the reading, each “expert” group reviews and discusses what was read, determining the essential information and key vocabulary. You may have a worksheet for them to complete to record key information.
4. Check carefully with each “expert” group to make sure all members understand the material they have read.
5. After you are confident that the “experts” know their assigned information, they return to their “home” groups and teach fellow group members what they learned.

This process scaffolds the learning of English learners because in both groups they are working with others to understand the text. Some classmates may have more background information on the topic. Text can be read with other students, reducing the demands of tackling lengthy sections alone. Depending on English proficiency, English learners may join an “expert” group individually or with a partner. It is important that you form the “expert” groups rather than letting the students choose their own group members.

- **Graphic Organizers.** These schematic diagrams are ubiquitous in today’s classrooms, but that does not reduce their value. When preparing a lesson, teachers should think about possible graphic organizers that can provide conceptual clarity for information that is difficult to grasp. Graphic organizers help students identify key content concepts and make relationships among them (McLaughlin & Allen, 2009). They also provide students with visual clues they can use to supplement written or spoken words that may be hard to understand.
 - ◆ When used *before reading*, graphic organizers can build background for complex or dense text.
 - ◆ When used *concurrently with reading*, they focus students’ attention and act as a guide to the information. They help students make connections (e.g., a Venn diagram can elicit comparisons), take notes, and understand the text structure (e.g., a timeline informs students the text will be organized chronologically).
 - ◆ When used *after reading*, graphic organizers can be employed to record key content information or personal understandings and responses (Buehl, 2009).

Graphic organizers include story or text structure charts, Venn diagrams, story or text maps, timelines, discussion webs, word webs, thinking maps, and flow charts. Vogt and Echevarría (2008) include a number of templates for these graphic organizers.

- **Outlines.** Teacher-prepared outlines equip students with a form they can use for note-taking while reading dense portions of text, thus providing scaffolded support. These are especially helpful if major concepts, such as the Roman numeral level of the outline, are already filled in. The students can then add other information to the outline as they read. For some students, an outline that is entirely completed may be helpful to use as a guide to reading and understanding the text. Figure 2.5 shows an example of a scaffolded outline for a reading on the circulatory system.
- **Audio Supported Text.** Technology tools have the promise of making teaching more meaningful and rewarding. Through audio supports, teachers can help

FIGURE 2.5 Scaffolded Outline**The Circulatory System****I. Major Organs****A. Heart**

1. Pumps blood throughout the body
2. _____

B.

1. _____
2. _____

II. Major Vessels**A. Artery**

1. Takes blood away from heart
2. _____

B. Vein

1. _____
2. _____

C.

1. Connects arteries and veins
2. _____

III. Types of Blood Cells**A. Red blood cells**

1. _____

B.

1. Fights disease

C. Platelets

1. _____

convey new information to students, scaffolding their understanding of the main concepts. Translation and interpretation tools have improved considerably in the past decade. Teachers can now type a sentence or paragraph about a concept to be studied into a Web site that provides translation services and have the concept rewritten in a student's native language. Many sites offer an audio version students can listen to. Several textbook publishers provide their texts on CDs or a Web site, too, and some have audio options in English or Spanish. Students are encouraged to listen to the audio text while they follow along in the book. For some students, multiple exposures to the audio version of the text may result in a more thorough understanding. Ideally, audio support should be available for both home and school use.

Our goal is to help students understand text and information presented orally in English, and our job is to teach the vocabulary, sentence structure, connections between sentences and paragraphs, and other necessary information to the students so they can increase their independence. If we can give them the gist of what they will be learning beforehand through their native language, we can then build on that (new) prior knowledge, and, with careful lesson planning, advance their English language skills and strengthen their content knowledge.

■ Differentiating Ideas for Multi-level Classes

The Lesson Preparation component offers teachers multiple opportunities to meet the needs of students with different abilities or language proficiency levels in their classrooms. Although it takes time to prepare a lesson for different groups of students, the investment pays off when all of your students learn the material and you do not have to reteach.

- The first step is knowing your students: their literacy skills both in English and in their native language, their schooling backgrounds (including the number of full years they have had in school), their learning styles, and their multiple intelligences. With this knowledge you can have realistic expectations about what they can accomplish and plan activities accordingly.
- The second step is to consider where in your lesson students will need some **differentiated instruction**.
 - ◆ Is it when you introduce new content? If so, should you use different materials or a different presentation style? Should you modulate your speech? Preteach vocabulary?
 - ◆ Is it when the learners must perform a task to practice or apply the new information or language goal? If so, you may have to consider how you will group the students. Or you may assign different tasks to different groups (based on language proficiency or learning style, for example). You may prepare different handouts or other materials.
 - ◆ Is it when you are checking for comprehension? Then you might plan leveled questions so you can address students in ways that they will be able to comprehend the question and have a chance to respond. Or you may prorate the assignment students complete (e.g., a one-page report versus a three-page report).

A few specific examples of differentiated activities follow.

- **Differentiated Sentence Starters** (Short, Vogt, & Echevarría, 2011a, pp. 30–31). This technique converts the practice of using teacher-developed leveled questions into sentence starters that the students might use orally or in writing.
 1. Begin with the essential question of a lesson.
For example: How do animals change as they grow?
 2. Write questions at a variety of levels of difficulty.
For example: (a) How does a caterpillar change as it grows up? (b) Do all animals look different when they grow up? Explain. (c) Why do animals change as they grow?
 3. Convert the questions into sentence starters.
For example: (a) When a caterpillar grows up, it. . . (b) Yes, all animals look different because. . . [or] No, not all animals look different. For example, . . . (c) Animals change as they grow for several reasons. For one, . . .
 4. Post the questions and have the students respond, either by self-selecting a sentence starter or by being assigned one.

- **Leveled Study Guides.** Study guides to accompany assigned text or a unit's topics can be specifically written for diverse students' needs and their stages of language and literacy development. All students are expected to master the key concepts in the text or unit; however, some need support for comprehension while others can delve more deeply into the material on their own. For students who can easily read the text material, write a study guide so they can extend and enrich their knowledge of the topic, and be sure to include challenging questions or tasks. For those who need a little support, write a study guide with definitions and "hints" for unlocking the meaning to lead them through the text. Include fewer challenging questions and tasks. For some English learners and struggling readers, create a study guide with brief summaries of the text or topic along with more manageable questions and tasks. Questions, tasks, and statements on the leveled study guides can be marked with asterisks as follows (from most manageable to most challenging):

- * All students are to respond to these questions/statements/tasks.
- ** Group 1 students are required to complete these questions/statements/tasks.
- *** Group 2 students are required to complete these questions/statements/tasks.

Of course, the option to try the more challenging questions or statements should be open to all students.

- **Highlighted Text.** A few literature anthologies or content textbooks may be marked and reserved for students acquiring English and/or for those struggling with academic literacy. Major ideas, key concepts, topic sentences, important vocabulary, and summary statements are highlighted (by the teacher or another knowledgeable person, using a highlight pen or highlight tape) prior to the students using the books. Students are encouraged to first read only the highlighted sections. As confidence and reading ability improve, more of the unmarked text can be attempted. The purpose of highlighted text is to reduce the reading demands of the text while still maintaining key concepts and information.

■ Rating Lessons with the SIOP[®] Protocol

As we mentioned at the start of this chapter, we want to give you the opportunity to check your understanding of the SIOP features and learn to use the SIOP protocol, both for your own teaching and for coaching other teachers. So, we present scenarios of three teachers who teach the same concepts at the same grade level. After we describe each teacher's lesson, we will ask you to score the SIOP features for this component on a scale of 4–0, with 4 meaning the feature was well implemented in the lesson and 0 meaning it was not present. You will probably notice that some ratings for the features will seem quite obvious to you (usually those that merit 0, 1, or 4 on the scale), while others will be more challenging.

It is important that you rate each feature as reliably as possible. That is, you need to develop consistency in your rating by having a clear understanding of each feature and how it "looks" during a SIOP lesson. Therefore, it is very important that you discuss with other teachers, coaches, or supervisors how you determined your ratings

on the various SIOP features for the lessons depicted in this book. Some teachers work with a partner to establish **inter-rater reliability**. A number of schools have SIOP teacher groups that meet to read the scenarios and discuss the ratings. After these groups deepen their understanding of how the features should be implemented, they may watch video clips of teachers delivering instruction and rate those lessons, too. With practice in multiple classes and subject areas and discussion about the ratings you give, you will develop consistency in your ratings. Chapter 11 provides more explanation on scoring and interpreting the SIOP protocol.

Although we organized this book so that you can score the lessons as you read, in real life, you may not want to give numerical scores on each feature, especially as teachers are learning to implement the model. You can record comments and note if a feature is present or absent, and then use the protocol to offer targeted feedback. You will also notice that five of the thirty features have an NA option (see Appendix A). After years of research, we determined that those five (such as Adaptation of Content, in Lesson Preparation) might not be needed in every SIOP lesson. Adaptation of Content, for example, may not be necessary in a class with advanced English learners.

■ The Lesson

The lesson described below is intended to teach fourth-grade children about the Gold Rush, in particular, about the trails taken by the pioneers to get from the eastern and midwestern parts of the United States to California.

The Gold Rush (Fourth Grade)

The classrooms described in the teaching scenarios in this chapter are in a suburban elementary school with heterogeneously mixed students. English learners represent approximately 30% of the student population, and the children speak a variety of languages. In the fourth-grade classrooms of teachers Ms. Chen, Mrs. Hargroves, and Mr. Hensen, the majority of the English learners are at the intermediate stage of English fluency.

As part of the state's fourth-grade social studies curriculum, Ms. Chen, Mrs. Hargroves, and Mr. Hensen have planned a unit on the California Gold Rush. The school district requires the use of the adopted social studies series, although teachers are encouraged to supplement the text with primary source materials, literature, illustrations, and realia. The content topics for the Gold Rush unit include westward expansion, routes and trails to the West, the people who sought their fortunes, hardships, settlements, the discovery of gold, the life of miners, methods for extracting gold, and the impact of the Gold Rush.

Each of the teachers has created several lessons for this unit. The first is presented here, a 55–60 minute lesson on routes and trails to the West. Specifically, the content of this lesson covers the Oregon Trail, the Overland Trail, and the route around Cape Horn. To address the Common Core standards for literacy in history, the teachers plan various ways to help students access the textbook.

■ Teaching Scenarios

To demonstrate how Ms. Chen, Mrs. Hargroves, and Mr. Hensen prepared their first lesson on the trails west, we visit them in their fourth-grade classrooms. As you read, consider the SIOP Model features for Lesson Preparation: content objectives, language objectives, appropriate content concepts, supplementary materials, adaptation of content, and meaningful activities.

Ms. Chen

As Ms. Chen began the first lesson on the Gold Rush, which would take two days to complete, she referred students to the content objectives written on the board:

- (1) Students will use map skills to find and label the three main routes to the West;
- (2) Students will identify one or two facts about each of the three trails.

After reading the content objectives aloud, Ms. Chen then explained the language objectives:

- (1) Students will take notes to distinguish among the trails;
- (2) Students will categorize vocabulary terms.

Next, Ms. Chen asked the students to brainstorm why people would leave their homes and travel great distances to seek their fortunes. She listed students' responses on the board and then asked them to categorize the words or phrases, using a List-Group-Label activity. The students determined the following categories: For Adventure, To Get Rich, For a Better Life. Examples of phrases they placed under the first category included *riding in a wagon train*, *seeing new places*, and *climbing mountains*.

Ms. Chen then assigned her students a quick-write about the Gold Rush. She distributed two picture books on the topic for each of the table groups (four or five children per group) and directed students to use their background knowledge, the List-Group-Label categories and phrases, and the books to generate a few sentences or a brief paragraph on the Gold Rush. Students were encouraged to work quietly with a partner, and each pair was expected to have a written text for later whole-class discussion.

While the rest of the class were preparing their quick-writes, Ms. Chen asked the five English learners with very limited English proficiency to meet with her. For six minutes, she provided the small group of students with a jump-start for the Gold Rush unit they were about to begin. She introduced key vocabulary with illustrations and simple definitions, led the students through a picture walk of a picture book and the textbook chapter, showed them the trails on the U.S. map, and talked about where the pioneers began their journey and where they headed in California. She showed the students some samples of fool's gold (iron pyrite) and asked them how they thought the gold miners were able to get the gold from the earth.

After the jump-start minilesson, Ms. Chen convened the entire class for a brief discussion of the quick-writes and a whole-class introduction to the unit. Several of the pairs volunteered to share their quick-writes with the entire class.

Ms. Chen then referred to the key vocabulary she had previously written on the board: Oregon Trail, Overland Trail, Route around Cape Horn. She asked

students to think about the names of the trails they were going to be reading about. She explained that often we learn about places and surrounding areas by examining their names.

Ms. Chen asked the students to examine maps of the United States and the Western Hemisphere on the interactive whiteboard and try to determine where the three main trails were located, given their names. The students volunteered appropriate ideas for the first one, the Oregon Trail. Ms. Chen drew it on the whiteboard. She then wrote “Over + land = Overland.” One child said, “I get it! They went over the land!” The teacher reinforced this by highlighting the “over the land” route on the whiteboard map too. She then wrote “Route around Cape Horn” and asked students to think about the name’s meaning while directing them to look at the map. One child said, “See, the land looks like a horn. And they had to sail around it!” That student came up to the board and drew the route on the interactive map.

Next, Ms. Chen distributed paper copies of a map of the Western Hemisphere and directed the students to work together as a team to complete their groups’ maps. To check understanding, Ms. Chen asked each student to tell a partner a fact or two about one of three western routes.

Ms. Chen distributed and explained a scaffolded outline of the chapter that students would complete individually. The outline had subheadings labeled for each of the trails: “Location,” “Characteristics,” “Challenges,” and “Advantages.” Following a shared reading of the Oregon Trail section of the social studies text, she elicited ideas from the students to write as notes on the outline for the first trail. She told the students they would have about 10 minutes to keep working on the outline, using their maps and their text chapter and that they would finish the next day. Ms. Chen completed the lesson by reviewing the content and language objectives and by having student partners share a number of facts about each of the trails using complete sentences and then report out to the class.

Check your understanding: On the SIOP form in Figure 2.6 on the following page, rate Ms. Chen’s lesson on each of the Lesson Preparation features.

Mrs. Hargroves

Mrs. Hargroves began her lesson on the trails west by stating, “Today you’ll learn about the Oregon Trail, the Overland Trail, and the Route around Cape Horn. We’ll also be working on maps, and I want you to color the Overland Trail a different color from the color you use for the Cape Horn route. When you learn about the Oregon Trail, you’ll complete the map with a third color. By the time you’re finished, you should have all three routes drawn on the map using different colors.” She held up a completed map for the students to see as an example.

Mrs. Hargroves then presented a brief lecture on the trails west. Using an electronic document reader, she pointed out where the pioneers traveled on the map in the textbook. She referred students to pictures in the book and answered questions. She read the chapter title and the first few paragraphs about the trails west and then assigned the remainder of the chapter as independent reading. She suggested that

FIGURE 2.6 Lesson Preparation Component of the SIOP® Model: Ms. Chen's Lesson

4	3	2	1	0	
1. Content objectives clearly defined, displayed and reviewed with students		Content objectives for students implied		No clearly defined content objectives for students	
4	3	2	1	0	
2. Language objectives clearly defined, displayed and reviewed with students		Language objectives for students implied		No clearly defined language objectives for students	
4	3	2	1	0	
3. Content concepts appropriate for age and educational background level of students		Content concepts somewhat appropriate for age and educational background level of students		Content concepts inappropriate for age and educational background level of students	
4	3	2	1	0	
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (e.g., computer programs, graphs, models, visuals)		Some use of supplementary materials		No use of supplementary materials	
4	3	2	1	0	N/A
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency		Some adaptation of content to all levels of student proficiency		No significant adaptation of content to all levels of student proficiency	
4	3	2	1	0	
6. Meaningful activities that integrate lesson concepts (e.g., interviews, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking		Meaningful activities that integrate lesson concepts but provide few language practice opportunities for reading, writing, listening, and/or speaking		No meaningful activities that integrate lesson concepts with language practice	



Reflect and Apply

Click here to explain your ratings for Ms. Chen's lesson on each of the Lesson Preparation features.

if students had difficulty with any words, they should hold up their hands and she would circulate to give assistance.

About half the class (mostly the native English speakers) finished reading in 10 to 15 minutes. Some chatted quietly. After about 20 minutes, Mrs. Hargroves asked the class to stop reading. She distributed the U.S. maps and colored pencils and asked the students to work with a partner to complete their maps by locating and coloring in the three trails. When most were finished, Mrs. Hargroves asked three of the students to show and explain their maps to the other students. All maps were then submitted for a grade. At the conclusion of the lesson, students were given the following writing assignment for homework: “If you had been a pioneer, which trail would you have chosen? Why?”

Check your understanding: On the SIOP form in Figure 2.7 on the following page, rate Mrs. Hargroves’s lesson on each of the Lesson Preparation features.

Mr. Hensen

Mr. Hensen began his lesson on westward expansion by introducing the topic and asking how many children had been to California. He then asked, “How did you get to California? Did you go by car? By plane? By boat? Or did you go by wagon train? Today you’re going to learn how the pioneers made their voyages to California.”

Mr. Hensen then showed a brief video on the westward expansion. At the end of the video, he introduced the terms Oregon Trail, Overland Trail, and Route around Cape Horn, and then read aloud two paragraphs from the textbook that described the routes.

Next he numbered off the students to form six new groups and quickly moved students into the groups. With their team members, students did a Jigsaw activity for the remainder of the chapter, and when they had finished reading, everyone returned to their original home groups to report on what they had read. The English learners with limited English proficiency were partnered with other students during the Jigsaw reading activity.

Mr. Hensen then wrote the names of the three trails on the board, and on his wall map he pointed out where the pioneers had traveled along the three routes. He directed the groups to divide the three trails, with one or two students in each group drawing the Oregon Trail and the other students drawing either the Overland or Cape Horn trails. Their next task was to tell the other students in their group how to draw and color their maps, using the map in the text and the language on the board as a guide. Mr. Hensen circulated through the room while the students completed the mapping activity, assisting as necessary. At the lesson’s conclusion, students were directed to pass in their maps. If they had not finished, their maps were assigned as homework.

Check your understanding: On the SIOP form in Figure 2.8 on page 61, rate Mr. Hensen’s lesson on each of the Lesson Preparation features.

FIGURE 2.7 Lesson Preparation Component of the SIOP® Model: Mrs. Hargroves's Lesson

4	3	2	1	0	
1. Content objectives clearly defined, displayed and reviewed with students		Content objectives for students implied		No clearly defined content objectives for students	
4	3	2	1	0	
2. Language objectives clearly defined, displayed and reviewed with students		Language objectives for students implied		No clearly defined language objectives for students	
4	3	2	1	0	
3. Content concepts appropriate for age and educational background level of students		Content concepts somewhat appropriate for age and educational background level of students		Content concepts inappropriate for age and educational background level of students	
4	3	2	1	0	
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (e.g., computer programs, graphs, models, visuals)		Some use of supplementary materials		No use of supplementary materials	
4	3	2	1	0	N/A
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency		Some adaptation of content to all levels of student proficiency		No significant adaptation of content to all levels of student proficiency	
4	3	2	1	0	
6. Meaningful activities that integrate lesson concepts (e.g., interviews, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking		Meaningful activities that integrate lesson concepts but provide few language practice opportunities for reading, writing, listening, and/or speaking		No meaningful activities that integrate lesson concepts with language practice	



Reflect and Apply

Click here to explain your ratings for Mrs. Hargroves's lesson on each of the Lesson Preparation features.

FIGURE 2.8 Lesson Preparation Component of the SIOP® Model: Mr. Hensen's Lesson

4	3	2	1	0	
1. Content objectives clearly defined, displayed and reviewed with students		Content objectives for students implied		No clearly defined content objectives for students	
4	3	2	1	0	
2. Language objectives clearly defined, displayed and reviewed with students		Language objectives for students implied		No clearly defined language objectives for students	
4	3	2	1	0	
3. Content concepts appropriate for age and educational background level of students		Content concepts somewhat appropriate for age and educational background level of students		Content concepts inappropriate for age and educational background level of students	
4	3	2	1	0	
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (e.g., computer programs, graphs, models, visuals)		Some use of supplementary materials		No use of supplementary materials	
4	3	2	1	0	N/A
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency		Some adaptation of content to all levels of student proficiency		No significant adaptation of content to all levels of student proficiency	
4	3	2	1	0	
6. Meaningful activities that integrate lesson concepts (e.g., interviews, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking		Meaningful activities that integrate lesson concepts but provide few language practice opportunities for reading, writing, listening, and/or speaking		No meaningful activities that integrate lesson concepts with language practice	



Reflect and Apply

Click here to explain your ratings for Mr. Hensen's lesson on each of the Lesson Preparation features.

■ Discussion of Lessons

1. *Content Objectives Clearly Defined, Displayed, and Reviewed with Students*

Ms. Chen: 4

Mrs. Hargroves: 2

Mr. Hensen: 1

During their planning, Ms. Chen, Mrs. Hargroves, and Mr. Hensen approached the task of writing and delivering content objectives in different ways.

- A review of **Ms. Chen's** lesson plan book indicated the following objectives for her first lessons on the Gold Rush: (1) Students will use map skills to find and label the three main routes to the West; (2) Students will identify one or two facts about each of the three trails. She wrote the content objectives on the whiteboard and she clearly, explicitly, and simply stated them in a manner that was comprehensible to her students (See Figure 2.9 for Ms. Chen's lesson plan.) She used the interactive map to have students discover information about the trails and encouraged them to identify facts about them. Her lesson received a "4."
- **Mrs. Hargroves** wrote a content objective in her plan book, but not on the board, and she orally stated what she wanted her students to learn and do in simple terms. However, her English learners might have had difficulty understanding the purpose of the activities they were asked to do. Some students may have inferred that the purpose for the lesson was the coloring activity rather than learning where the trails and routes were. Further, the content objectives were not written on the board or overhead for the students to see. Her lesson was rated "2" for this feature.
- A review of Mr. Hensen's lesson plan book revealed no content objectives for the Gold Rush lesson on routes and trails. He did not state any content objectives for the students, but just began the lesson with a brief discussion and the video. Some students may have been able to infer the purpose of the map work, but English learners may have been unaware of the purpose of these assignments. His lesson received a "1."

2. *Language Objectives Clearly Defined, Displayed, and Reviewed with Students*

Ms. Chen: 4

Mrs. Hargroves: 0

Mr. Hensen: 2

The three teachers incorporated language objectives into their lesson planning and delivery to varying degrees.

- **Ms. Chen** wrote the following language objectives on the board and read them orally to her students: (1) Students will take notes to distinguish among the trails; (2) Students will categorize vocabulary terms. Ms. Chen planned opportunities for students to meet the objectives by helping students generate and categorize key terms, encouraging class and small group discussion, and providing an outline for taking notes. She scaffolded students' understanding of the names of the trails and modeled how to take notes based on the shared

FIGURE 2.9 Ms. Chen's SIOP® Lesson Plan

Date: Feb. 10-11 Grade/Class/Subject: 4 - Social Studies

Unit/Theme: Gold Rush Standards: History—Social Studies 4.3

Content Objective(s): Students will use map skills to find and label the three main routes to the West; Students will identify one or two facts about each of the three trails

Language Objective(s): Students will take notes to distinguish among the trails;
Students will categorize vocabulary terms

Key Vocabulary	Supplementary Materials
Oregon Trail Overland Trail Route around Cape Horn	Picture books Outlines Iron Pyrite U.S. map (PowerPoint slide)

SIOP Features

Preparation ☒ Adaptation of Content ☒ Links to Background ☒ Links to Past Learning ☒ Strategies incorporated <i>List / Group / Label</i> Integration of Processes ☒ Reading ☒ Writing ☒ Speaking ☒ Listening	Scaffolding ☒ Modeling ☒ Guided practice ☐ Independent practice ☒ Comprehensible input Application ☒ Hands-on <i>maps</i> ☒ Meaningful ☒ Linked to objectives ☒ Promotes engagement	Grouping Options ☒ Whole class ☒ Small groups ☐ Partners ☒ Independent Assessment ☒ Individual ☒ Group ☒ Written ☐ Oral
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Min. **Lesson Sequence**

2	1. Content/language objectives
5	2. Brainstorm — Why would people leave their homes to seek fortunes?
	3. List-Group-Label brainstormed words and phrases
10	4a. Quick-write on Gold Rush
	4b. Jump-start minilesson — vocabulary, pictures, text, pyrite
	5. Quick-write share out
10	6. Map skills — interactive whiteboard, names of trails, group maps, check comprehension
20	7. Note-taking — scaffolded outline, shared reading (pp. 214-15), modeling
	8. Group/individual note-taking
5	9. Wrap-up — review objs., state facts

Reflections:
 Busy lesson, perhaps a bit rushed for English learners. They loved the fool's gold! Review tomorrow and do a jump-start on notetaking.

reading of the textbook. At the end of the lesson, she orally reviewed the language objectives for the students. Her lesson was rated a “4.”

- **Mrs. Hargroves** did not include any language objectives in her lesson plan and she did not suggest any to the students. She did not discuss the meanings of the names or terms used in her demonstration and explanations, nor did she encourage her students to use the terminology and concepts during discussion. Further, Mrs. Hargroves expected students to read the textbook with very little support. She mostly conveyed information orally, and she expected students to complete the writing assignment as homework with no modeling or assistance. Her lesson received a “0.”
- Although **Mr. Hensen** had no stated language objectives, he did write key vocabulary on the board. He scaffolded the mapping activity and the text reading by having the children work in groups and by having each group member explain the map and key words to the others. This activity was appropriate for beginning English learners because they were supported by each other, and their oral explanations were not “public” for the entire class. The lesson would have been more effective had Mr. Hensen explained his language objectives to the students, emphasizing the importance of listening carefully and of giving clear directions. Although one purpose of the lesson was to build listening and speaking skills, the class was not informed of these objectives either orally or in writing. His lesson was rated a “2.”

3. *Content Concepts Appropriate for Age and Educational Background Level of Students*

Ms. Chen: 4

Mrs. Hargroves: 4

Mr. Hensen: 4

Each of the teaching scenarios indicates that the three fourth-grade teachers, **Ms. Chen**, **Mrs. Hargroves**, and **Mr. Hensen**, were teaching a unit on the Gold Rush. The content concepts were appropriate because they are congruent with the fourth-grade state and district standards for the social studies curriculum. Each lesson was rated a “4.”

4. *Supplementary Materials Used to a High Degree, Making the Lesson Clear and Meaningful*

Ms. Chen: 4

Mrs. Hargroves: 1

Mr. Hensen: 3

- **Ms. Chen** used a number of supplementary materials to make the content more accessible to the learners: picture books on the Gold Rush, a sample rock of fool’s gold, and the maps of the United States and the Western Hemisphere, as well as technology (interactive whiteboard) to model how students might label the trails on their maps. Her lesson received a “4” on this feature.

- **Mrs. Hargroves** used only the electronic document reader and the textbook during her lecture and when the students were coloring their maps. She did not demonstrate, model, or show visuals or other resources to support student learning other than the illustrations in the textbooks. Because Mrs. Hargroves delivered the content orally, some English learners may have had difficulty making connections between the lecture and the text illustrations and maps. Her lesson received a “1.”
- **Mr. Hensen’s** video enabled his English learners and other students to connect with the pioneers in the Gold Rush, and his use of the wall map enhanced student learning about the location of the three trails. His lesson was rated “3.”

5. *Adaptation of Content to All Levels of Student Proficiency*

Ms. Chen: 4

Mrs. Hargroves: 0

Mr. Hensen: 3

- **Ms. Chen** adapted the grade-level content for her English learners and struggling readers in a number of ways. First, she had students brainstorm, categorize, and then quick-write information about the Gold Rush. She then differentiated instruction by providing a “jump-start” for her lowest level English learners by preteaching the lesson concepts and key vocabulary. She also had a variety of picture books that were easier to read and more comprehensible than the textbook. In addition, she used a scaffolded outline that included some key information. The students used this outline to organize their understanding of the content concepts. Her lesson was rated “4.”
- **Mrs. Hargroves** did not adapt the content for her English learners, other than by lecturing on the topic. Without any supplementary support except the pictures in the textbook and her oral reading of the first few paragraphs, the English learners may have had difficulty learning key concepts just by listening and reading independently. Further, Mrs. Hargroves did not paraphrase or clarify important points during her lecture, nor did she explain or define key language or vocabulary before or during reading. Her lesson plans made no mention of other ways to adapt the content or text. Her lesson received a “0.”
- **Mr. Hensen** provided access to the textbook content through the Jigsaw activity and the video. He grouped the students for their reading so that they read with the support of others and then later conveyed what they had learned to another group of students. However he did not preteach vocabulary they might need to know in order to fully understand the reading. He also had the students complete their work on the maps in small groups, and he encouraged them to help each other with the assignment. His lesson was rated “3.”

6. *Meaningful Activities That Integrate Lesson Concepts with Language Practice Opportunities for Reading, Writing, Listening, and/or Speaking*

Ms. Chen: 4

Mrs. Hargroves: 2

Mr. Hensen: 4

 Watch this video of Sarah Russell, an English 9/10 teacher, and her class of English learners in the first part of a lesson on Edgar Allan Poe's *The Cask of Amontillado*. Notice how she presents the content and language objectives to the students, which supplementary and adapted materials she uses, and what meaningful activities she has planned.

- Recall that **Ms. Chen** asked students to brainstorm what they knew about the Gold Rush in order to activate and build background. They then worked on a vocabulary categorization activity. Her jump-start minilesson for the English learners included picture walks and discussion of key vocabulary, and the students were able to see and hold iron pyrite, which simulated the feel and look of gold. The picture books supported their learning, and the scaffolded outline provided a meaningful way to take notes on the key concepts. Students practiced map skills to locate and label the trails after Ms. Chen's modeling on the interactive whiteboard. Her lesson received a "4."
- **Mrs. Hargroves's** lesson plan included her lecture, the mapping activity, and the independent reading. Locating the trails by coloring the map was meaningful for students if they understood what they were doing; however, if they were unable to access the text or the lecture, the mapping activity may have been irrelevant. Mrs. Hargroves's lesson received a "2." It was teacher centered, with lecture and independent seatwork as the predominant activities. She expected students to complete the homework assignment based only on the information they could gather from the lecture and text. If students did not understand the lecture or comprehend the chapter, it is unlikely that they would be able to write a meaningful essay on what they learned.
- **Mr. Hensen** activated prior knowledge and background when he asked which students had traveled to California. He also showed the video on the westward expansion, incorporated a Jigsaw reading activity, and had the students complete and explain their maps in triads. All of these activities helped make the content concepts more comprehensible for his English learners, and were considered to be meaningful and appropriate. His lesson was rated a "4."

(For more examples of lesson and unit plans in social studies and history for grades K–12, see Short, Vogt, and Echevarría, 2011a.)

Teaching with Technology

After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Differentiated Reading: One of the most challenging parts of teaching units such as the Gold Rush is finding diverse materials at various reading levels. For the first part of the unit, Ms. Chen, Mrs. Hargroves, and Mr. Hensen spent hours searching the Internet for such differentiated texts. When their searches ended in frustration, they resorted to rewriting articles and stories themselves, simplifying the vocabulary, shortening sentences, and adding images to better support students with different **levels of language proficiency**. While it was time consuming, this was one way that the teachers were able to guarantee access to the material and help students engage in class discussions and complete assignments.

Feeling overwhelmed by the searching and simplifying, Ms. Chen, Mrs. Hargroves, and Mr. Hensen reached out to Ms. Palacios to try to find adapted resources more efficiently. They wondered, “Is there a tool that can simplify text easily and appropriately? “Can a Web site do this task for us? In her e-mail back to the team, Ms. Palacios explained that there are some online tools that will convert text, but they have limits. Like translation tools, the text converters provide accurate output only to a certain degree. The programs do not pick up on some nuances of language as a human would. In turn, these issues could further complicate the text.

As an alternative, Ms. Palacios shared a number of Web sites that offer multiple versions of the same article at different reading levels. While preparing for an upcoming lesson in the Gold Rush unit, Mr. Hensen used the Web site *Newsela* to find an article about migrant farm workers at two different Lexile levels. Ms. Chen used *News in Levels* to find a short article with three different levels and video about migrants from North Africa attempting travel to Malta. Mrs. Hargroves found a number of books on both gold and migration on the site *Reading A–Z*. The teachers then shared these articles with each other and used them to help the students explore the motivations of those who were part of the Gold Rush. By incorporating relevant texts at varied reading levels, the teachers facilitated collaborative discussions among students who were able to connect the Gold Rushers’ experiences with their own, particularly for the students who were born abroad or who had family in other countries.

Other terms for this type of tool: differentiated articles, same text—different levels

Related products: *News in Levels*, *For the Teachers*, *CommonLit*, *Books that Grow*, *Reading A–Z*, *Newsela*

Videos: In hopes of adding more supplementary resources beyond print, Ms. Chen, Mrs. Hargroves, and Mr. Hensen checked in with Ms. Palacios again. Ms. Palacios quickly recommended two sites for quality videos and animations: *BrainPOP* and *TED-Ed*. The teachers visited the sites during a grade-level team meeting and found that both sites had a large collection of videos related to a variety of topics. *BrainPOP* offers a wide range of material for students in grades K–12. Additionally, there are lesson ideas, quizzes, and searchable standards, among other features.

TED-Ed, a platform created by the TED organization known for its popular talks, offers a wealth of options for teachers interested in integrating video into their lessons. The site offers hundreds of lessons that educators can use or adapt. The site also enables teachers to develop original lessons by linking videos from *YouTube* with its lesson template. Using another online service named *Amara*, the teachers were able to find many of the *TED-Ed* videos with subtitles and transcripts in numerous languages.

Other terms for this type of tool: Video sites for the classroom, best video sites for educators/students

Related products: *TeacherTube*, *LearnZillion*, *WatchKnowLearn*, *PBS*

Worth Visiting: Sites for Videos to Support Teacher Development: *Edutopia* and *The Teaching Channel*

Note: Due to the constantly evolving nature of the Internet, it is a challenge to ensure that all of the links and Web services listed here are updated and functional when you read the technology sections. While specific tools or services may appear in the narrative, we have also included the general search term for each tool. If a specific service does not work or is no longer available, search with the general term for the tool and you should be able to find a comparable Web site.



Check Your Understanding

Click here to check your understanding of Chapter 2, Lesson Preparation.

■ Summary

As you reflect on this chapter and the benefits of lesson planning with clear content and language objectives in mind, consider the following main points:

- Lesson Preparation is a critical foundation for delivering a high-quality SIOP lesson. Thoughtful planning leads to effective teaching—but a great plan does not always guarantee a great lesson for English learners. They require sensitive teachers who realize that curriculum must be grade-level appropriate, based on content standards and learning outcomes.
- All SIOP lessons need attention to language with at least one objective devoted to furthering the English learners' academic English development. This should be a learning objective—an achievement target, not an activity—and teachers must teach to it during the lesson.
- If students lack background knowledge and experience with content concepts, effective sheltered teachers provide it through explicit instruction, and they enhance student learning with appropriate supplementary materials. They provide scaffolded support by adapting dense and difficult text.
- SIOP teachers situate lessons in meaningful, real-life activities and experiences that involve students in reading, writing, and discussing important concepts and ideas.
- The principles of effective **sheltered instruction** and content-based ESL instruction should be reflected in teachers' lesson plans. As we explore the other features of the SIOP Model and see how teachers apply other important principles in their classrooms, remember that the first step in the instructional process is comprehensive lesson design.

In sum, teachers must learn to identify and then teach the academic language of their subject explicitly in their lessons and use a variety of techniques to build background, convey new information to English learners in accessible ways, plan for meaningful tasks that practice and apply the content and language knowledge, and then review what has been learned.

■ Discussion Questions

1. In reflecting on the learning outcomes in the content and language objectives at the beginning of the chapter, are you able to:
 - a. Identify content objectives for English learners that are aligned to state, local, or national standards?
 - b. Incorporate supplementary materials suitable for English learners into a lesson plan?
 - c. Select from a variety of techniques for adapting content to the students' proficiency and cognitive levels?
 - d. Write language and content objectives?

- e. Discuss advantages for writing both language and content objectives for a lesson and sharing the objectives with students?
 - f. Explain the importance of meaningful academic activities for English learners?
2. What are some advantages to writing both content objectives and language objectives for students to hear and see? How might written objectives affect teacher and student performance in the classroom?
 3. Think of a lesson you have recently taught or one you might teach. What would be an appropriate content objective and language objective for that lesson?
 4. In many elementary schools, one ESL teacher supports English learners from several classrooms, sometimes across different grade levels. How can the ESL and grade-level classroom teachers collaborate to share the responsibility for teaching both language and content objectives to these students? Co-plan a mini-unit in which some lessons will be taught by the ESL teacher and others by the grade-level classroom teacher.
 5. Many teachers in sheltered settings rely on paper-and-pencil tasks or lectures for teaching concepts. Think of a curricular area (e.g., science, language arts, math, social studies) and discuss some meaningful activities that could be used to teach a concept in that area. What makes each of these activities “meaningful,” and how would they provide language practice?
 6. Begin writing a SIOP lesson. Identify the topic and your content and language objectives. Find or create supplementary materials and adapt content as needed. Determine at least one meaningful activity the students can engage in during the lesson. Decide how many class periods will be needed to complete the lesson. When you finish, share your initial lesson plan with a colleague and garner feedback. Revise your lesson.

Building Background

Learning Outcomes

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

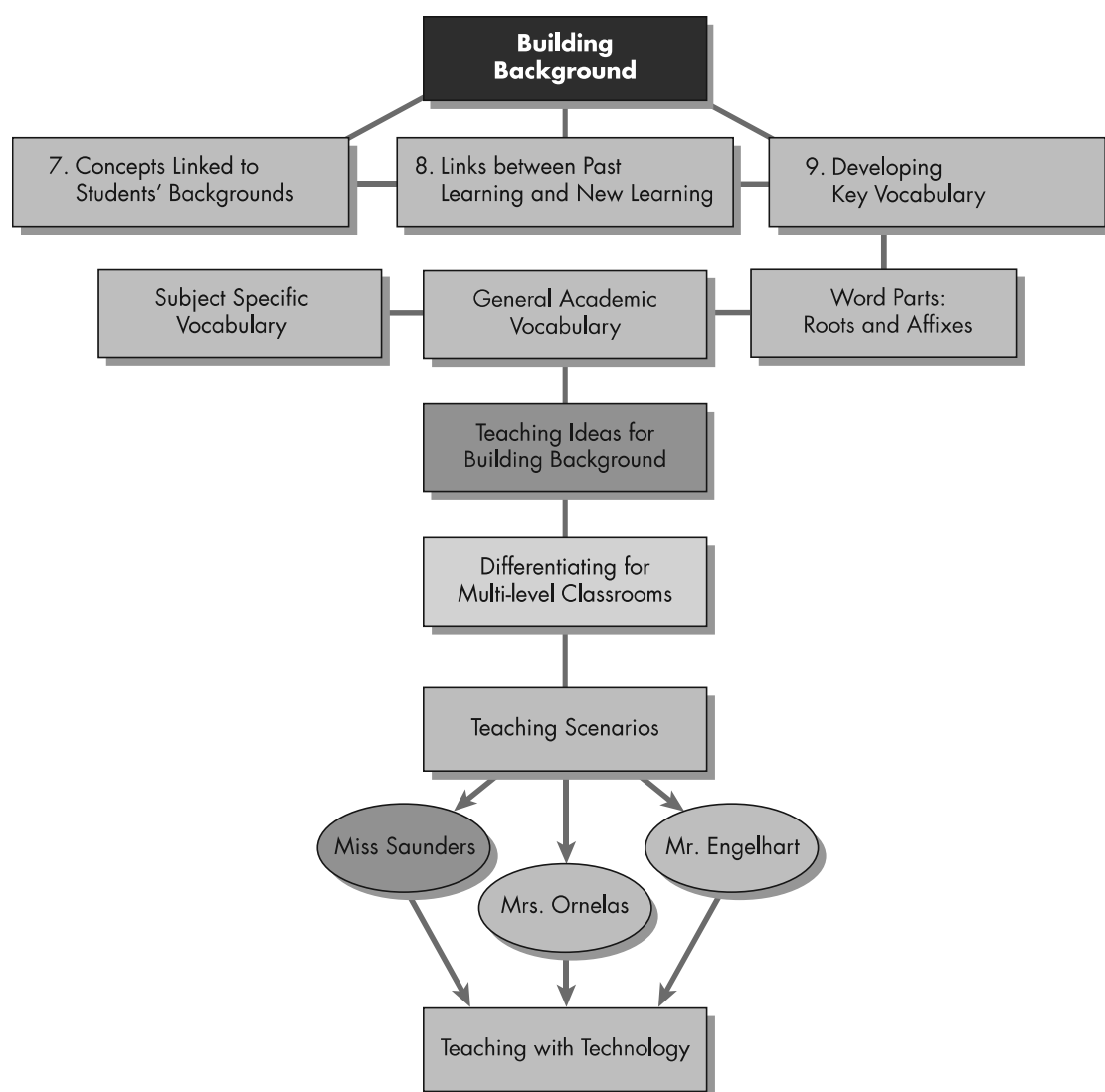
Identify techniques for connecting students' personal experiences and past learning to lesson concepts.

Determine ways to develop background knowledge for students for whom there is a mismatch between what they know and have experienced and what is being taught.

Language Objectives

Select key vocabulary for a **SIOP** lesson using words from these three groups: content vocabulary, general academic vocabulary, and word parts—roots and affixes.

Write a lesson plan incorporating activities that build background and provide explicit links to students' backgrounds, experiences, and past learning.



Reflect on two instances when you attended workshops for professional development. During one workshop, you were highly engaged, and you came away from the training renewed and eager to try a new idea or activity. What aspects of this particular workshop clicked for you? Now, recall a workshop during which you were disengaged, bored, and basically unconnected to what the facilitator was talking about. Why was this particular workshop such an unsatisfying experience?



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There might be several reasons why there were such differences in your reactions, including the effectiveness of the trainer, the time of day, your physical comfort, and so forth. But consider another possibility: There was a mismatch between what you know and have experienced with your own students and the concepts and information that were being presented. Because of your background knowledge and personal experiences, (1) you didn't understand what was being presented; or (2) you didn't care about what was being presented because of the mismatch; and/or (3) you couldn't connect with what was being taught, so you turned off and became disengaged. Now ponder what these two workshops would be like if the facilitator were speaking in a language that you do not understand. ●

■ Background

English learners, particularly recent immigrants, are frequently disadvantaged because their schooling experiences (whether they have had little schooling or excellent schooling) may be considerably different from U.S. educational contexts. For example, the K–12 curriculum can be quite different from country to country, and depending on circumstances, some students may have experienced interrupted schooling, especially if they have been refugees or lived in remote areas. Further, English learners, including both immigrants and students born in the United States, may lack the academic language and key vocabulary necessary to understand content

 Watch this video to hear Dr. Mary Ellen Vogt's explanation of the Building Background component. Think of two or three students in your own classroom who are struggling, and reflect on lessons that you're currently teaching. What might you do to better develop background knowledge for these students and others?

information (August & Shanahan, 2010; Donnelly & Roe, 2010). However, not all English learners lack background experiences and academic language; some students may have rich experiential backgrounds and sufficient academic language in their **native language**, but they do not know the equivalent English terms and thus are unable to connect with the concepts being taught.

Effective teaching takes students from where they are and leads them to a higher level of understanding (Vygotsky, 1978). Effective SIOP teachers present information in a way that students can understand, bearing in mind their language development needs and possible gaps in their educational experiences. In SIOP lessons, new information is explicitly linked to students' backgrounds and experiences, and instructional **scaffolding** provides students with access to grade-level content concepts. This chapter focuses on Building Background, which is closely tied to Lesson Preparation and the teacher's **assessment** of students' knowledge of and experience with the topic at hand.



SIOP® FEATURE 7:

Concepts Explicitly Linked to Students' Background Experiences

During the past four decades, researchers have investigated how highly proficient readers and writers process new information (Baumann, 2005; Carrell, 1987; Dole, Duffy, Roehler, & Pearson, 1991). It is a widely accepted notion among experts that a learner's "schemata"—knowledge of the world—provides a basis for understanding, learning, and remembering facts and ideas found in texts. Individuals with knowledge of a topic have better recall and are better able to elaborate on aspects of that topic than those who have limited knowledge of the subject (Chiesi, Spilich, & Voss, 1979).

Connecting students' experiences to a text, developing background knowledge, and teaching key vocabulary are all effective ways to increase comprehension and achievement (Biemiller, 2005; Neuman, Kaefer, & Pinkham, 2014; Vogt, 2014). Teachers can assist students in developing background knowledge by:

- Including techniques in lessons such as chapter previews or anticipation guides. As students begin to develop a conceptual framework for their own learning and understanding, they build a repertoire of background experiences from which to draw.
- Recognizing that students from culturally diverse backgrounds may struggle with comprehending a text or concept presented in class because their schemata do not match those of the culture for which the text was written (Anderson, 1984; Zwiers, O'Hara, & Pritchard, 2014). In the United States, most school reading materials, such as content area texts, rely on assumptions about students' prior knowledge, especially related to curriculum. When introducing a new concept, SIOP teachers often use visuals (pictures, photos, and so forth) to provide context and a reference point for English learners. It's interesting to have students occasionally share in their home languages the name for what a picture represents. Then, the English word can be introduced and explained.

FIGURE 3.1 An Example of a Mismatched Schema

A teacher was participating in a research study using instructional conversations, an approach that explicitly links students' background to text (Echevarría, 1995a). He read a passage from a grade-level novel about a young man, Mike, who was reading a magazine (his favorite subscription) while riding a public bus home. He left the magazine on the bus and as he exited, he spoke a quick Russian greeting to some passengers whom he had overheard speaking Russian. The story explains that Mike had learned a few phrases from his brother-in-law who is Russian. After Mike got off the bus, he noticed the bus make its next stop with quite a commotion. He turned to see the Russians running toward him with guns! After taking a circuitous route home, he got to his second-floor apartment, breathing a sigh of relief. He had no idea why the Russians were so angry with him, but he was relieved that he had lost them. A half-hour later he heard a noise outside, looked out the window, and saw the Russians coming into his building.

At this point, the teacher paused and asked the students how the Russians could possibly have found where Mike lived when the story made it clear that he had lost them. She expected that the students would remember that Mike had left the magazine, with his address label on it, on the bus. However, one student volunteered that the Russians found Mike by asking his brother-in-law. The teacher admitted that she found the answer to be "out in left field" and would ordinarily have tactfully asked someone else for the answer. But the nature of instructional conversations is to discuss ideas, drawing out students' thoughts and linking them to the text. So the teacher asked the student to elaborate. He explained that in their community, which was 99 percent Latino with a small population of Samoans, if he needed to know where a certain Samoan person lived, he'd simply ask someone from the Samoan neighborhood.

The teacher admitted that she had learned an important lesson: The students' schemata were different from hers, yet just as valid. Moreover, she had nearly dismissed the student's excellent contribution because she was looking for a specific answer that matched her schemata. In reality, none of the students in her group had any idea about magazine subscriptions and address labels. In that student's experience, if one wanted a magazine, one merely walked to the store and bought it.

This example clearly demonstrates that the student and teacher had very different ideas and assumptions about the characters and events in the story and a different "magazine" schema. Some of the differences might be attributed to cultural variation and a difference in home environments.

- Acknowledging that many English learners emigrate from other countries and bring an array of experiences that are quite different from those of the majority culture in the United States. Even for those students born in the United States, culture may have an impact on reading comprehension. Therefore, **culturally responsive teaching** is especially important. Consider this example: As a teacher reads, "The barking dog ran toward the boy on the bike," do all students get a sense of fear or danger? Anderson (1994), a pioneer in schema theory research, questioned whether we can assume that students from every subculture will have the same experience with, or emotional reaction to a story or article, or whether we should expect the same outcomes from them. For an actual example of cultural mismatch of schemata that occurred in a middle school's self-contained special education class with a small group of English learners, see Figure 3.1.

Teachers of English learners need to be aware that what may appear to be poor comprehension and weak memory skills may in fact be students' lack of experience or background knowledge associated with or assumed by a message or a text. Further, what might look like a lack of prior knowledge actually may be a lack of



Watch the video and listen to SLOP author Dr. Jana Echevarría tell a story as depicted in Figure 3.1. Think of a time in your own classroom when a misunderstanding may have been caused by students' varied background experiences. What could you have done in advance to better situate the lesson topic so confusion could have been avoided?

accessibility in prior lessons that were taught. Background material may have been “covered,” but it was not learned meaningfully. Through the SIOP Model, we urge teachers to activate students’ background knowledge explicitly and provide links from their experiences to the key concepts. The interactive emphasis of the SIOP Model (see Chapter 6 for specific features) enables teachers to elicit students’ prior knowledge and discuss ideas, issues, concepts, or vocabulary that are unfamiliar to them, in order to develop necessary background information.

Something to Think About

As you begin to write SIOP lessons with techniques to develop students’ background knowledge, reflect on the following questions:

- What is meant by activating prior knowledge?
- What is meant by building background?
- How do they differ instructionally?

In the past, we have used the terms “activating prior knowledge” and “building background” somewhat synonymously. However, we now know there are some instructional differences that need to be considered when teaching English learners. All students have prior knowledge gained from schooling and life experiences, and teachers can informally assess what students know and can do, as well as determine any mismatches in schemata through brainstorming, structured discussion, quick-writes, and techniques such as the familiar KWL (Ogle, 1986).

However, if some English learners have little or no prior knowledge about a content topic (e.g., The American Revolution), brainstorming about it may not be helpful because the brainstormed terms, names, and places may be unfamiliar to these students. For example, if students are from countries where there have been revolutions, they may know something about them, but not about the American Revolutionary War. Therefore, it is of critical importance that teachers build background using techniques that fill in the gaps, and help students connect what they do know with what is being taught. And when teachers’ explanations are made more concrete with supplementary materials (e.g., photos, models, illustrations, etc.), students are more likely to make the appropriate connections. Essential questions, found in many textbooks and required in some districts, can be developed from a lesson’s content and language objectives. They may assist students in making connections to a lesson’s topic and also thinking about the wider range of background knowledge and experiences they have.



SIOP® FEATURE 8:

Links Explicitly Made between Past Learning and New Concepts

In addition to building background for students, it is also important for teachers to make explicit connections between new learning and the material, vocabulary, and concepts previously covered in class. Decades of research clearly shows that in order

 This third-grade lesson focuses on building background of the students, including predictions, connecting to background experiences and previous lessons, and building the vocabulary of sound waves and pitch. How did the teacher, Kendra Moreno, help her students make multiple connections between concepts they have studied previously and the material they are learning in today's lesson?

for learning to occur, new information must be integrated with knowledge students have previously acquired (Rumelhart, 1980). The teacher must build a bridge between previous lessons and concepts, and the material in the current lesson. Many students do not automatically make such connections, and they benefit from having the teacher explicitly point out how past learning is related to the information at hand.

Explicit links between past learning and new learning can be encouraged through questioning, such as, “Think for a minute about the graphic organizer we used yesterday that helped us differentiate between acids and bases. Who can remember and share one difference between them? Do you all agree? Share with your partner two more differences. You may look at your notes and graphic organizer if you need some help remembering.” You can also refer to a previous lesson’s PowerPoint slides, a text that was read, or other visuals that are related to the topic. By preserving and referring to photos, word banks, illustrations, charts, maps, and graphic organizers, teachers have tools for helping students make critical connections. This is particularly important for English learners who receive so much input through the new language. An explicit, if brief, review of prior lessons focuses on the key information that students should remember.



SIOP® FEATURE 9:

Key Vocabulary Emphasized (e.g., introduced, written, repeated, and highlighted for students to see)

Vocabulary development, critical for English learners, is strongly related to academic achievement (August & Shanahan, 2006; Hart & Risley, 2003; Lesaux, Kieffer, Faller, & Kelley, 2010; Zwiers, 2008). In addition, for over 80 years, we have known of the powerful relationship between vocabulary knowledge and comprehension (Baumann, 2005; Fisher & Frey, 2014; Gillis, 2014; Stahl & Nagy, 2006). Therefore, it may not be surprising that the word *vocabulary* is found more than 150 times in the **Common Core State Standards** document (Manyak et al., 2014).

Systematic and comprehensive vocabulary instruction is particularly necessary for English learners (Graves & Fitzgerald, 2006). The Common Core and other rigorous state standards require that students be able to read texts of increasing complexity that include very sophisticated vocabulary. Accompanying content and literacy assessments rely on wide-ranging vocabulary knowledge, so English learners’ vocabulary instruction must be accelerated in order to meet the high **standards**. Yet, achieving deep understandings of word meanings is very challenging, especially for English learners.

Vocabulary experts recommend a combination of plentiful and wide-ranging language experiences that include learning individual words, employing word-learning strategies, and developing word consciousness, loosely defined as an appreciation and interest in words. All are needed in a comprehensive vocabulary program (Graves, 2011). Students must learn tens of thousands of words, so they also need meaningful language practice opportunities, a variety of instructional approaches, motivation, and encouragement.

Some studies suggest that a limited number of words should be taught per lesson or per week, and those words should be key words in the text (Beck, Perfetti, & McKeown, 1982). Others recommend teaching English learners the meanings of basic words, such as those that **native English speakers** know already (Diamond & Gutlohn, 2006; Stahl & Nagy, 2006). Beck, McKeown, and Kucan (2002), have developed a three-tier scheme for teaching vocabulary words that is widely used in U.S. schools. It is clear that students must know many more words than teachers can possibly teach. Therefore, in SIOP lessons, teachers purposefully select words that are critical for understanding texts and content concepts, and provide a variety of ways for students to learn, remember, and use those words. In that way, students develop a core vocabulary over time (Blachowicz & Fisher, 2000; Graves & Fitzgerald, 2006).

Academic Vocabulary

Academic language (as described in Chapter 1), involves the use of more sophisticated sentence structures and forms of expression than are found in everyday conversation. An important aspect of academic language is academic vocabulary, words and phrases that are used widely in the academic disciplines. Deep knowledge of the academic vocabulary of the content subjects taught in schools is necessary for students' overall academic success (Nagy & Townsend, 2012; Townsend, 2015).

The Common Core State Standards for vocabulary development suggest that students must develop proficiency with subject-specific vocabulary, as well as other types of academic vocabulary:

Grades K–5: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., *however*, *although*, *nevertheless*, *similarly*, *moreover*, *in addition*).

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For better understanding of the varied types of academic vocabulary that teachers need to focus on, especially for English learners, we have classified them into three groups. Each should be considered when planning SIOP lessons—when deciding on academic vocabulary to teach, and when writing **language objectives**.

1. **Content Vocabulary—Subject-Specific and Technical Terms:** These are the key words and terms associated with a particular topic being taught (e.g., for a lesson on the American Revolutionary War: *Redcoats*, *democracy*, *Patriots*, *freedom of religion*, *Shot Heard 'Round the World*, *Paul Revere*; for a language arts lesson on parts of speech: *nouns*, *verbs*, *adjectives*, *adverbs*). These words and phrases are found primarily in the informational and expository texts that students read, and frequently they are highlighted or in bold in the students' textbooks. In English language arts, they may be terms like *characterization*, *setting*, and *metaphor*; and while they are not in the fiction passages themselves, they are used to talk about the passages, author's craft, and so on. More important than listing

words for students to learn is conveying the importance of knowing particular words related to a given topic, and determining whether a certain word represents a key concept that is being taught (Graves, 2011).

2. General Academic Vocabulary—Cross-Curricular Terms/Process & Function:

These are academic words and phrases students must learn because they are used in all academic disciplines. Often, these words are not explicitly taught; yet, they are the ones that frequently trip up English learners and struggling readers. This category also includes words with multiple meanings. These words may have both a **social language** and an academic language use, such as *table* and *chair* versus *data table*. Or the word's meanings may differ according to academic subject, such as the distinction among legislative *power*, electrical *power*, and logarithmic *power*.

- a. Cross-curricular terms: Most of the general academic vocabulary terms can be used across the curriculum. They describe relationships (*friendship, conflict, encounter*) and actions (*describe, argue, measure*). They help illustrate information (*chart, model, structure, symbol*), and are used to speculate (*predict, infer*) and conclude (*effect, result, conclusion, drawback*). They are expressions we usually only see in academic text (*In addition to ..., Moreover ..., Subsequently ...*), and terms we might use in casual conversation as well as academic discussions (*situation, circumstances, source, evidence, modify*).
- b. Language processes and functions: Another subset of the general academic terms indicates what we want to do with language—the kind of information we convey or receive, and the tasks we engage in that require language to accomplish. Some English learners may know the terms in their **home languages**, but they may not know the English equivalents. Examples of some of these language process and function words and phrases that are common in classroom discourse are *discuss, skim, scan, question, argue, describe, compare, explain, list, debate, classify, support your answer, provide examples, summarize, outline, give an opinion*, and so forth. Additional examples are words and phrases that indicate transitions and connections between thoughts, such as *therefore, in conclusion, whereas, moreover, and furthermore*, and words that indicate sequence such as *first, then, next, finally, and at last*. This category also includes the verbs that students encounter in state tests and during other **assessments**, such as *determine, identify, select, critique, define, match, estimate, and contrast*.

3. **Word Parts: Roots and Affixes:** These include word parts that enable students to learn new vocabulary, primarily based upon English morphology. By grade 6, students have acquired thousands of words that include roots and affixes. There is no way that English learners can realistically learn all these words through instruction and memorization. Therefore, all teachers must help students understand that many English words are formed with roots, to which are attached prefixes and suffixes (affixes).

For example, if a science teacher is teaching photosynthesis, he can help students learn the meaning of *photosynthesis* by introducing the meaning of the root, *photo-* (light). By comparing the words *photosynthesis, photocopy, photograph, photography, photoelectron, photo-finish, and photogenic*, students can see

 In this video, you will hear language expert, Dr. Jim Cummins, explain how teachers help students acquire English by using morphology (word structure: roots, prefixes, suffixes). Review the list of Common Word Roots (Figure 3.2). How can you use this list to increase your own understanding of morphology, as well as that of your students?

how these English words are related by both structure (prefix + root + suffix), and meaning. The root *photo* means “light,” thus providing a clue to a word’s meaning if it has this root. In fact, in English, words that are related by structure are usually also related by meaning (Bear, Invernizzi, Templeton, & Johnston, 2012; Helman, Bear, Templeton, & Invernizzi, 2011).

To assist with teaching English word structure, we include in Figure 3.2 some of the most common Latin roots that are found in thousands of English words. The 14 roots with asterisks provide the meaning of over 100,000 words! By adding prefixes and suffixes to many of the words that are included with each root (e.g., *disrespectful*, *extraction*, *informed*), you can increase further the number of words on this list.

We urge caution about sharing the Common Word Roots list, or others like it, with students. It is not included here as a list for students to memorize the roots, words, and their meanings. Instead, use what students already know about words.

FIGURE 3.2 Word Root List

There are hundreds of Latin word roots that are used frequently with prefixes and suffixes. This is only a partial list of the most frequently used roots; you can find many more with a search of “words with (root).” The roots with asterisks (*) are the 14 roots that provide clues to the meaning of over 100,000 words!

Aud: to hear

Auditory, audible, inaudible, audience, audiobook, audiotape, audiovisual, audition, auditorium, audacity, audacious, applaud, gaudy, audit, auditor, unaudited, laudatory

Capit or capt: head, chief, leader

Capital, decapitate, capitol, capitalize, capitalist, overcapitalize, capitalism, anticapitalism, captivate, captain, capitulate, recapitulate

***Cept, cap, ciev, or ceit:** to take to seize, receive

Capable, capsule, captive, captivity, captor, capture, accept, deception, exception, intercept, conception, susceptible, perceptive, precept, receive, receipt, deceive, deceit

Cred: to believe

Credit, credential, credence, credible, incredible, credibility, creditable, creditor, accredit, credulity, incredulity

Dic or dict: to say, tell

Dictate, dictator, dictatorial, diction, dictation, dictum, didactic, contradict, contradictory, edict, indicate, indict, indictment, predict

***Duc, duce, or duct:** to lead

Conduct, deduct, educate, induce, introduction, reduce, reduction, reducible, production, abduction, aquaduct

***Fac, fact, fic, or fect:** to make

Fact, manufacture, faculty, facilitate, satisfaction, factor, beneficiary, benefactor, amplification, certificate, confection, affect, defective, disinfect, efficacy, proficient, sufficient, facade

***Fer:** to bring, bear, yield

Refer, reference, confer, conference, inference, suffer, transfer, defer, difference, fertilize, fertility, circumference, odoriferous, aquafer, confer, conference

Flect or flex: to bend

Flex, flexible, flexibility, inflexible, deflect, inflection, reflect, reflexive, reflective, reflector, circumflexion

Form: to shape

Reform, deform, deformity, inform, information, transform, conform, conformable, conformist, cuneiform, formula, formal, informal, formality, informative

Jac or jec or ject: to throw, lie

Abject, dejected, rejection, adjective, conjecture, eject, ejection, inject, injection, interjection, object, objective, objectify, objectionable, project, rejection, adjacent

***Mit or miss:** to send

Mission, missile, missive, admit, admission, commit, dismissed, emissary, intermission, intermittent, remiss, remit, remittance, submit, submission, transmit, transmission, permit, permission, permissive

(continued)

FIGURE 3.2 (continued)

Ped or pod: foot (*ped* is Latin; *pod* is Greek)

Pedestrian, pedestal, podium, pedometer, centipede, pedal, expedition, impede, podiatry, podiatrist, peddler, centipede

Pel or puls: to drive, push, throw

Impulse, compel, compulsion, expel, expelled, propel, dispel, dispelling, impulsive, pulsate, compulsive, repel, repellent, pelleted

Pend or pens: to hang

Pendant, suspend, suspense, pendulum, pending, dependent, perpendicular, appendix, appendage, appendix, dependents, impending, interdependent

***Plie or ply:** to fold

Implicit, implicitness, explicit, explicate, implication, replicate, complicated, application, ply, apply, imply, reply

Port: to carry

Import, export, portable, transport, porter, deport, report, support, portal, important, importantly, unimportant

***Pos, pon, or pose:** to put, place, set

Compose, composite, dispose, disposable, oppose, component, postpone, proponent, deposit, compound, depose, proposal, preposition, disposal, exposition, exponent, expose, impose, suppose, opponent, proposition, position

Rupt: to break

Rupture, disrupt, disruptive, disruption, abrupt, abruptly, bankrupt, bankruptcy, corrupt, corruptors, corruption, erupted, eruption, interrupt; erupt, incorruptible

***Scrib or script:** to write

Scribble, ascribe, describe, description, conscript, inscribe, inscription, superscription, prescribe, prescriptive, scripture, transcribe, transcript, transcription, manuscript, nondescript, script, scripted, unscripted

***Sist, sta, or stat:** to stand, endure

Persist, persistence, persistent, consist, consistent, desist, assist, assistant, insist, stamina, constant, circumstance, distant, obstacle, standard, substance, adversity, resist, resistance

***Spec or spect:** to see, watch, observe

Spectator, spectacular, spectacle, respect, disrespect, spectrum, specter, inspect, inspector, retrospective, species, special, specimen, bespectacled, respectable, disrespectfulness

Stru or struct: to build

Structure, structural, construct, construction, destruction, destructive, reconstruct, instruct, instructor, obstruct, instrument, construe, infrastructure, instructive, macrostructure

***Ten, tent, or tain:** to have, hold

Tenant, tenable, tenacity, tenacious, contents, contented, discontented, contentment, intent, maintain, retain, retentive, attention, attentiveness, contentious, détente, competent, incompetent

***Tend or tens or tent:** to stretch, strain

Intend, intention, intently, extended, tense, intense, pretense, tension, intensity, attention, inattention, unintentionally, distend, detention, détente

Tract: to draw or pull

Tractor, attract, abstract, contract, retract, contractual, detract, distract, distracted, extract, subtract, tractable, intractable, traction, protract, protractor, attractive, contract

Vis: to see

Visual, visa, visor, vision, visible, visitor, visitation, visualize, invisible, visibility, improvise, improvisation, supervise, supervision, televise, television, visionary

Vet or vers: to turn

Convert, convertible, converter, revert, reversible, extrovert, introvert, divert, avert, aversion, aversive, vertigo, advertise, advertisement, overt, overtly, subvert

Greek Combining Forms:

Beginning: *auto, phono, photo, biblio, hydro, hyper, hypo, tele, chrom, arch, phys, psych, micro, peri, bi, semi, hemi, mono, metro, demo*

Examples: *automobile, phonograph, bibliography, hydroelectric, hyperactive, telephone, telegraphy, chromosome, physical, periodontal, semicircle, demonstration*

Ending: **graph, gram, meter, *ology, sphere, scope, crat, cracy, polis*

Examples: *photograph, microscope, hemisphere, telegram, chronometer, physiology, metropolis, perimeter, archeology, bibliography, democracy, autocrat*

For example, if they know how the words *import*, *export*, *portable*, *transport*, and *porter* are all related (they all have to do with carrying something), they can transfer that knowledge to learning the meanings of *important* (carrying value) and *unimportant* (not carrying value). These roots and words should be used for your reference and for helping students understand how roots and affixes work in the English language. (For more information about word parts (morphemes) and English structure, see Bear, Helman, Invernizzi, Templeton, and Johnston, 2011; Bear, Invernizzi, Templeton, and Johnson, 2015; Helman et al., 2011).

Word Consciousness

In many classrooms, word study is interesting, active, and fun, and teachers in these classrooms create environments in which words are discovered, examined, and appreciated (Kucan, 2012). Stahl and Nagy (2006) suggest the importance of developing students' *word consciousness*, a phrase used to describe the interest in and awareness of words, which should be a goal of vocabulary instruction. As with any type of learning, word consciousness is developed, in part, by the tone set by the teacher when it's time for word study. Activities in which students manipulate words, sort words, laugh and giggle about funny words, and choose words they want to know about are as important for vocabulary growth as the more academic aspects of vocabulary teaching and word learning.

Teaching Academic Vocabulary

From 20 years of research on vocabulary instruction, we have learned what makes it effective (Blachowicz & Fisher, 2000; Fisher & Frey, 2014). When you are planning vocabulary lessons, regardless of your content area, remember to:

1. *Involve students in actively developing their understanding of words and ways to learn them.* Such ways include use of semantic mapping, word sorts (see Figures 3.3 and 3.4), Four Corners Vocabulary Charts (see Figure 3.5), and Concept Definition Maps (see Figure 3.6), and also developing strategies for independent word learning.
2. *Encourage students to personalize their word learning* through such practices as Vocabulary Self-Collection Strategy (VSS) (Ruddell, 2007) (see Teaching Ideas section, p. 133), mnemonic strategies, and personal dictionaries.
3. *Immerse students in rich language environments that draw their attention to learning words.* Word walls, and comparing/contrasting words with the same morphemic element (e.g., *import*, *export*, *portable*, *transport*), aid students in recognizing and using the words around them.
4. *Provide students with multiple sources of information to learn words through repeated exposures.* Letting students see and hear new words more than once and drawing on multiple sources of meaning are important for vocabulary development. Students also should be encouraged to use the words in speech and writing.

Following a three-year research study with English learners and native English speakers in high-poverty schools, Manyak (2010) recommended vocabulary instruction

that provides rich and varied language experiences that develop word consciousness and focus on the teaching of individual words and word-learning strategies. For example, depending on the age of your students, provide them with:

1. Student-friendly definitions: “*Disruptive* means to disturb others. Another meaning is *unruly*.”
2. Examples of use: “Alex was *disruptive* when he made three trips to the waste can while the teacher was reading the story.”
3. Opportunities to create their own examples using the word: “What is an example of something that is *disruptive* to you?”

Clearly, there is little benefit in selecting 25 to 30 isolated vocabulary terms and asking English learners (and other students) to copy them from the board and look up their definitions in the dictionary (Allen, 2007; Fisher & Frey, 2008b). Many of the words in the definitions are unfamiliar to these students, which renders the activity meaningless. Although using the dictionary is an important school skill to learn, the task must fit the students’ learning and language needs. The number of terms should be tailored to the students’ English and literacy levels, and they should be presented in context, not in isolation. Picture dictionaries (definitions enhanced with pictorial representations) are excellent resources for contextualizing terms. For students with minimal literacy skills, using the dictionary to find words can serve to reinforce the concept of alphabetizing, and it familiarizes them with the parts of a dictionary; however, defining words should not be the only activity used. Effective **SIOP** teachers support the understanding of dictionary definitions so that the task is meaningful for students. In fact, many effective teachers introduce dictionary skills to students by using words that are already familiar to them.



Teaching Ideas for Building Background

Additional activities that activate prior knowledge, build students’ background knowledge, and develop academic vocabulary include the following:

- **Read aloud** a Big Book, story, article, play, or picture book about the topic to build students’ background knowledge, or view a DVD or Internet video on the topic.
- **Pair-Share-Chart** (Vogt, Echevarría, & Washam, 2015). This activity begins with a structured partner-share about a familiar topic. After 2–3 minutes, students share their conversation with the whole class. As students share what they know or think they know about the topic, the teacher records their thoughts on chart paper. Using the information that is charted, the teacher introduces a new concept and helps students make connections between what they already know and the new topic. The charted information is saved and added to during the lesson or unit, and the teacher continues to help forge connections with new information.
- **Digital Jump-starts (DJs)** (Rance-Roney, 2010). Elsewhere in this book (see Chapter 2, Lesson Preparation), we have referred to the powerful effect of jump-starting (also referred to as “front-loading”), where teachers preteach a

small group of students the concepts, vocabulary, and processes prior to beginning a lesson for the whole class. The purpose is to build background and vocabulary knowledge for students who need extra time and support. Rance-Roney (2010) points out that as effective as jump-starting is, it can cause some management issues for those students who are not working with the teacher in the jump-start group. Therefore, she created “digital jump-starts” that allow students who need the extra time and support to work on a computer to play and replay a reading preview, practice new vocabulary words, and so forth. The DJs can be put on DVDs for home viewing or they can be uploaded to free-access Web sites, such as YouTube.

- **The Insert Method** (Vogt & Echevarría, 2008). This activity is appropriate for grades 3–12 and all subject areas. The teacher provides a copy of a nonfiction article on the topic being taught. In partners, students read the article. During their reading, they insert the following codes directly into the text:

- ✓ A check mark indicates a concept or fact that is already known by the students.
- ? A question mark indicates a concept or fact that is confusing or not understood.
- ! An exclamation mark indicates something that is unusual or a surprise.
- + A plus sign indicates an idea or concept that is new to the reader.

When the partners finish reading and marking the text, they share their markings with another pair of students. If any misconceptions or misunderstandings are cleared up, then the question mark is replaced with an asterisk (*). When groups finish working, the whole class discusses with the teacher what they have learned and read.

- **Pretest with a Partner.** This activity is helpful for students in grades 2–12 and is appropriate for any subject area. The purpose of Pretest with a Partner is to allow students the opportunity at the beginning of a lesson or unit to preview the concepts and vocabulary that will be assessed at the conclusion of that lesson or unit. One pretest and pencil is distributed to each pair of students. The pretest should be similar or identical to the posttest that will be administered later. The partners pass the pretest and pencil back and forth to one another. They read a question aloud, discuss possible answers, come to consensus, and write an answer on the pretest. This activity provides an opportunity for students to activate prior knowledge and share background information, while the teacher circulates to assess what students know, noting gaps and misinformation.
- **Word Clouds.** A word cloud is created based on the frequency of words in a text. There are numerous Web sites that students can use to make word clouds, and some provide support in several different languages, which, depending on the languages, might be especially helpful for English learners. The teacher selects some interesting text that students have read, and copies and pastes it into the text box on the word cloud Web site. The display can be manipulated by selecting a background color, layout, and font. Word clouds enable students to see key words and headings, and they provide prompts for discussion and writing. When students create their own designs, they integrate visual and verbal information,

while practicing important digital skills (Dalton & Grisham, 2011). Note that on the word cloud, the larger the word, the more frequently it appears in the text selected for the cloud. To see an example of a word cloud, see Figure 3.8, p. 94 in Miss Saunders's lesson.

- **Word Sorts** (Bear et al., 2015; Helman et al., 2011). During a Word Sort, students categorize previously introduced words or phrases into groups predetermined by the teacher. Words or phrases can be typed on a sheet of paper (46-point type on the computer works well), they can be duplicated from blackline masters in the books by Bear et al. (2012) or Bear et al. (2011), or they can be downloaded from several Web sites by doing a search for “words for word sorts.” The teacher or students cut the paper into word strips and then sort the words according to meaning or similarities in structure.

For example, a variety of words related to the American Revolution are listed in mixed order on a sheet of paper. After the teacher has orally read the words and students have chorally read them, the students sort them according to structure (endings: *-tion*, *-sion*, *-tation*) (see Figure 3.3). This activity can be differentiated by having some students also determine the verb forms for words (e.g., *revolt*, *tax*, *participate*, *solve*, *frustrate*, *represent*). Then they can compare those words to the other words that are nouns (e.g., *nation*, *passion*, *mission*, *vision*, *plantation*). The teacher can show students that some verbs become nouns (nominalizing) by adding the endings (e.g., *revolt* to *revolution*; *solve* to *solution*; *frustrate* to *frustration*). Students can also do a “word hunt” (Bear et al., 2015; Bear, Helman, Invernizzi, Templeton, & Johnston, 2011) to search for additional words that fit the varied patterns they have identified.

Other examples of Word Sorts involve words and phrases related to the content concepts being taught (see Figure 3.4). Consider the ways this activity could be differentiated: (1) students who may be unfamiliar or shaky with English words for concepts being reviewed can be given labels to use; (2) students for whom this content sort is quick and easy can be directed to a free online encyclopedia to investigate other topics that could be added to the topic of the American Revolution; (3) students can add more columns to the sort and fill them in with appropriate information, using books or other resources. Adding the “oddball” column in sorts encourages students to think about both examples and non-examples during the classification activity.

- **Contextualizing Key Vocabulary.** SIOP teachers peruse the material to be learned and select several key terms that are critical to understanding the lesson's most important concepts. The teacher introduces the terms at the outset of the lesson, systematically defining or demonstrating each and showing how that term is used within the context of the lesson. Experienced SIOP teachers know that having students understand completely the meaning of several key terms is more effective than their having a cursory understanding of a dozen terms. One way of contextualizing words is to read with students in small groups and, as they come across a term they do not understand, pause and explain it to them, using as many examples, synonyms, or cognates as necessary to convey the meaning. Another way is to embed a definition within a sentence when introducing and reviewing a new word or concept, e.g., *The migratory birds, those that flew in a*

FIGURE 3.3 Word Sorts (American Revolution—Example 1)

-tion	-sion	-tation
revolution	tension	representation
taxation	passion	plantation
frustration	mission	
participation	vision	
solution		
transition		
nation		

group from one place to another in autumn, stayed near our lake for several days before flying on.

- **Vocabulary Self-Collection Strategy (VSS)** (Ruddell, 2007). Following the reading of a content text, students self-select several words that are essential to understanding content concepts. Words may be selected by individuals, partners, or small groups, and they are eventually shared and discussed by the entire class. The teacher and students mutually agree on a class list of vocabulary self-collection words for a particular lesson or unit, and these words are reviewed and studied throughout. They also may be entered into a word study notebook,

FIGURE 3.4 Word Sorts: American Revolution—Example 2

People	Weapons	Issues
George Washington	muskets	right to bear arms
Thomas Jefferson	rifles	taxation
Thomas Paine	knives	self-governance
King George	bayonets	freedom of religion
Paul Revere	cannons	democracy

and students may be asked to demonstrate their knowledge of these words through written or oral activities. Ruddell (2007) has found that when students are shown how to identify key content vocabulary, they become adept at selecting and learning words they need to know, and, given opportunities to practice VSS, comprehension of the text improves (Ruddell & Shearer, 2002; Shearer, Ruddell, & Vogt, 2001; Stahl & Nagy, 2006). The VSS is an effective method for teaching and reviewing content vocabulary because students learn to trust their own judgments about which content words are the most important to learn. This approach is most appropriate for students with high-intermediate and advanced English proficiency and for those in the upper elementary grades.

- **Word Wall.** During a lesson, key vocabulary is reviewed with a word wall where relevant content vocabulary words are listed alphabetically, usually on a large poster, sheet of butcher paper, or pocket chart (Cunningham, 2004). Originally designed as a method for teaching and reinforcing sight words for emergent readers, word walls are also effective for displaying content words related to a particular unit or theme. The words are revisited frequently throughout the lesson or unit, and students are encouraged to use them in their writing and

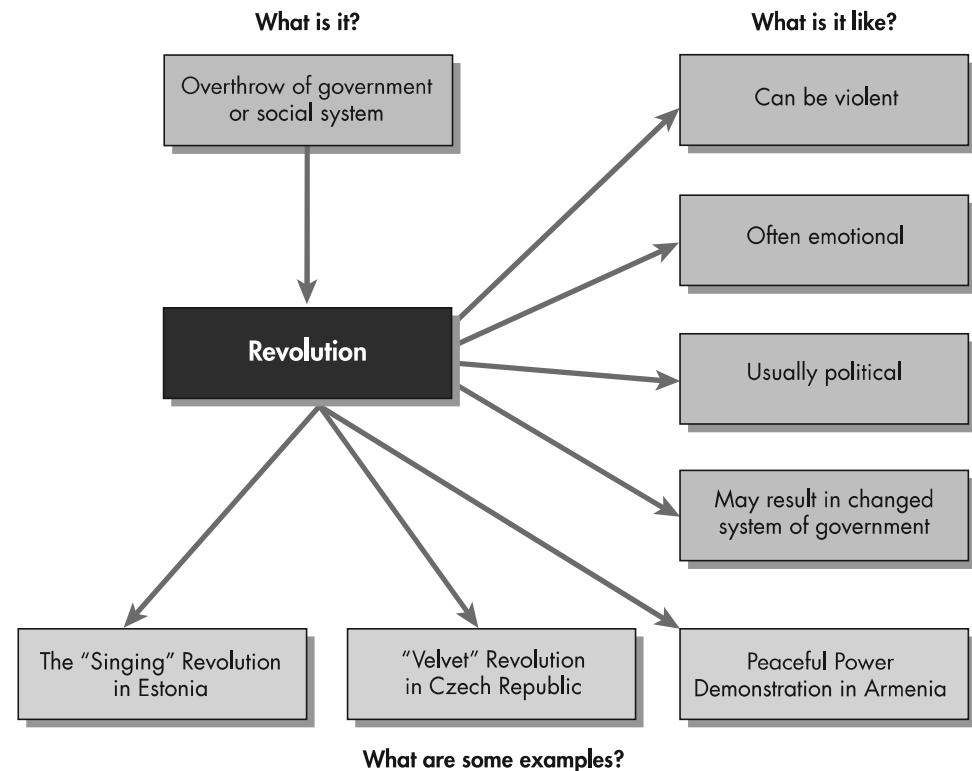
discussions. Cunningham (2004) recommends that teachers judiciously select words for a word wall and that the number be limited to those of greatest importance. We would add that teachers should resist the temptation to have multiple word walls in one classroom because the walls quickly become cluttered with words that are difficult to sort through, especially for English learners. One word wall, carefully maintained and changed as needed, is what we recommend.

- **Four Corners Vocabulary Charts** (Vogt & Echevarría, 2008). These charts provide more context and “clues” than typical word walls, because they include an illustration, definition, and sentence for each vocabulary word (see Figure 3.5). For academic words that are challenging or impossible to illustrate (e.g., *discuss* or *summarize*), simply take a photo of your students during a discussion or when summarizing, and insert the photo on the chart as a reminder of the word’s meaning.
- **Concept Definition Map.** The Concept Definition Map is a great way to learn and remember content vocabulary and concepts (Buchl, 2009). Even though it is a simple graphic organizer, it can be used to discuss complex concepts such as *freedom*, *democracy*, or *revolution*, and literary terminology, such as *symbolism* or *irony*. For example, in a social studies class, students were comparing how several of the countries in the former Soviet Union earned their independence through revolution. To clarify the meaning of *revolution*, the class completed a Concept Definition Map, as shown In Figure 3.6. The Concept Definition Map is also an excellent prewriting activity for teaching summarizing. Students begin the summarizing process by organizing content concepts in the graphic organizer. Then sentences can be created from the information in the Concept Definition Map and subsequently written into paragraph form.

FIGURE 3.5 Four Corners Vocabulary Chart

Illustration (1) 	Sentence (3) A fire is an example of an exothermic reaction because it releases heat and gives off light.
Definition (2) A chemical reaction that releases energy in the form of heat, light, or both	Word (4) Exothermic Reaction

FIGURE 3.6 Concept Definition Map



- **Cloze Sentences.** Cloze sentences can be used to teach and review content vocabulary. Students read a sentence that has strong contextual support for the vocabulary word that has been omitted from the sentence. Once the meaning of the word is determined and possible replacement words are brainstormed, the teacher (or a student) provides the correct word. For example, "During a _____, which can be violent or peaceful, a group of people tries to overthrow an existing government or social system." (*revolution*)
- **Word Generation.** This activity helps English learners and others learn and/or review new content vocabulary through analogy. For example, the teacher writes *-port* on the board and invites students to brainstorm all the words they can think of that contain *port*. Examples might include *report*, *import*, *export*, *important*, *portfolio*, *Port-a-Potty*, *Portland*, *deport*, *transport*, *transportation*, *support*, *airport*, and so on. The meaning of each brainstormed word is discussed and students are asked what they think the root *port* means ("to carry"). Each brainstormed word is revisited to see if the definition "to carry" has something to do with the word's meaning. Note that the teacher does not define *port* first; rather, we recommend that students generalize meanings of content words from words that they already know that contain the same syllable or word part. Many of the roots found in Figure 3.2 can be used for Word Generation.

- **Word Study Books.** A Word Study Book is a student-made personal notebook containing frequently used words and concepts. The Word Study Book can be organized by English language structure, such as listing together all the words studied so far that end in *-tion*, *-sion*, and *-tation*. Word Study Books can also be used for content study where words are grouped by topic.
- **Vocabulary Games.** Playing games like *Pictionary* and *Scrabble* can help students recall vocabulary terms. Word searches for beginning students and crossword puzzles for more proficient students are additional vocabulary development tools. Word searches and templates for crossword puzzles are readily available online.
- **Self-Assessment of Levels of Word Knowledge** (Diamond & Gutlohn, 2006). As English learners are acquiring vocabulary, it may be helpful for them to self-assess their knowledge of new words. Four levels of word knowledge that can be used to describe the extent of a person's understanding of words are:
 1. I've never heard or seen the word before.
 2. I've seen or heard the word before, but I don't know what it means.
 3. I vaguely know the meaning of the word, and I can associate it with a concept or context.
 4. I know the word well.

With effective vocabulary instruction and repeated exposures to unfamiliar vocabulary, students' knowledge of the words increases and they move up the levels from 1 to 4. When teachers introduce the four Levels of Word Knowledge, students can self-assess their knowledge as words are introduced and studied.

■ Differentiating Ideas for Multi-level Classes

Nearly all of the teaching ideas in the previous section provide ways to **differentiate instruction** while developing students' background and vocabulary knowledge. The following idea is geared specifically to differentiating according to English learners' levels of English proficiency. (If you need to refresh your memory of these stages, please see the Glossary, p. 326, where they are described.)

- **Differentiated Signal Words.** Signal Words (see Vogt and Echevarría, 2008) are an effective way to provide English learners (and other students) with words related to particular language functions, such as comparing/contrasting, determining cause/effect, sequencing events, summarizing, drawing conclusions, making generalizations, etc. Rothenberg and Fisher (2007) suggest that signal words can be differentiated for varied **levels of language proficiency**. For example, for sequencing events, beginning speakers are encouraged to use in their writing and speaking words such as *first*, *second*, *next*, *later*, *then*. In addition to these signal words, intermediate speakers are encouraged to use words and phrases such as *while*, *before*, *now*, *after*, *finally*, *in the past* Advanced speakers and older elementary students add the following to their repertoire while writing and speaking about sequential events: *prior to*, *previously*, *since*, *eventually*, *subsequently*.

■ The Lesson

Short Story: *Two Were Left* by Hugh B. Cave (Sixth Grade)

Three teachers in an urban middle school with a large population of English learners are teaching a well-known and suspenseful short story by the author Hugh B. Cave. Although it was written in 1942, it remains an exciting, suspenseful, and intriguing story for upper elementary students. Each of the teachers' self-contained classes includes English learners with a variety of levels of English proficiency. The classes are heterogeneously mixed with native English speakers and English learners, and all students are reading at a variety of reading levels. This story is part of a larger literature unit focusing on stories and poetry, with the theme of "Decisions and Their Consequences."

The short story, *Two Were Left*, begins with a description of a boy named Noni and his devoted husky, Nimuk, stranded on a floating ice island in the sea. It is not evident from the text exactly how they got there, but it is implied that the boy and dog had been with village hunters, and the ice they were on had broken away from the others. Noni and Nimuk had been there for an undetermined time, and both were exhausted, hungry, and increasingly wary of each other. Noni's leg had been hurt at a previous time, and he was wearing a simple brace made of a harness and iron strips. The boy decided to make a weapon in case the starving Nimuk decided to attack him. In Noni's village, it was not uncommon to use dogs for food in times of hunger. The story continues as Noni works on making a knife, and boy and dog become increasingly weak. The suspense builds as Noni considers the consequences of attacking his dog. Eventually, he decides he can't possibly kill his beloved dog, and he flings the crude knife away from both of them. It lands point first in the ice some distance away. Nimuk growls in a frightening way, but eventually licks Noni's face and falls, exhausted, by his owner. Sadly, boy and dog cuddle together, unable to save themselves any longer. Not much later, an airplane pilot sees two figures on the ice island and swoops in for a closer look. He settles his plane on the ice and saves an unconscious Noni and his dog, Nimuk. What had caught the pilot's attention was the reflection of a quivering knife stuck in the ice.

In their state, the language arts teachers in grade 6 are expected to address the Common Core State Standards (CCSS, 2010). The following standards guided the development of the following lessons.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

(continued)

Short Story: *Two Were Left* by Hugh B. Cave (Sixth Grade) (*continued*)

2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

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Note: The story, *Two Were Left*, can be found on the Internet by searching the title and author.

■ Teaching Scenarios

The teachers have prepared their own lesson plans for teaching the short story, *Two Were Left* by Hugh B. Cave. Their individual instructional approaches and SIOP ratings follow.

Miss Saunders

Miss Saunders began her lesson by reviewing with her students the lesson's content objectives (connecting the day's story to the theme of "Decisions and Consequences") and language objectives (reading a story; locating and defining vocabulary words) that were written on chart paper. Next, she asked the table groups to turn over the four photos that were face down on their tables. Each was a photo of Alaska: One was of a glacier, another was of the tundra, the third was of the sea with large, broken pieces of ice floating in it, and the fourth was of an Inuit village. Miss Saunders asked her students to do a Think-Pair-Share and consider what they observed in the photos, what they had questions about, and what they thought life must be like for the people living in the village. She then described her experiences on a vacation to Alaska and showed some of her photos.

Miss Saunders next introduced several vocabulary words that were taken from the story. She mentioned that understanding these words would help students better understand the story. She wrote the following on the board: *Noni, Nimuk, ice island, momentarily, intentions, suspiciously, unconscious*. She explained the first two words were the characters' names in the story. Miss Saunders then distributed copies of the two-page story and asked students to find the remaining vocabulary words in the story. Once they found the words, students were asked to highlight them, and, with a partner, try to define the words using contextual clues. Then, the students, in pairs, were expected to match their informal definitions with those found in the dictionary and make corrections, as needed.

When everyone was finished with the vocabulary assignment, Miss Saunders and the class went over the vocabulary words' definitions. She then asked the students to read the story silently. The evening's homework assignment was to create a "storyboard" of *Two Were Left*. Miss Saunders reminded the class of what the word *sequence* means and noted that events in a story generally follow in particular order or sequence. She said, "You remember when we talked about this, right?" Her students nodded affirmatively. She then asked the students what the first event was

FIGURE 3.7 Building Background Component of the SIOP® Model: Miss Saunders's Lesson

4	3	2	1	0	N/A
7. Concepts explicitly linked to students' background experiences		Concepts loosely linked to students' background experiences		Concepts not explicitly linked to students' background experiences	
4	3	2	1	0	
8. Links explicitly made between past learning and new concepts		Few links made between past learning and new concepts		No links made between past learning and new concepts	
4	3	2	1	0	
9. Key vocabulary emphasized (e.g., introduced, written, repeated, and highlighted for students to see)		Key vocabulary introduced, but not emphasized		Key vocabulary not introduced or emphasized	



Reflect and Apply

Click here to explain your ratings for Miss Saunders's lesson on each of the Building Background features.

in *Two Were Left*. A student responded that Noni and Nimuk were on a piece of ice that broke off from a larger piece. "That's right, Louis!" She then distributed a large piece of white construction paper to each student with the instructions to fold it into eighths, and draw the first event in the first box in the upper left hand corner. After a few moments, Miss Saunders asked the class to take the construction paper home and to continue making the storyboard sequence by drawing pictures that depicted seven other important events in the story. She quickly went over the day's objectives, with mixed feelings about her students' progress toward meeting them, and the bell rang shortly thereafter.

Check your understanding: On the SIOP form in Figure 3.7, rate Miss Saunders's lesson for each of the Building Background features.

Mrs. Ornelas

Mrs. Ornelas began the story, *Two Were Left*, by asking her students to close their eyes for a moment and put their heads down on their desks. She then turned down the lights and turned on a recording of heavy winds blowing. Then, she said in a slow and careful cadence: "Imagine for a moment ... you are in the Arctic, farther north than Alaska, where the winds blow almost continuously. You live here with your family in a small village. During the winter, it snows every day until there are so many feet of snow piled high that all walking paths are solid ice. The only time there

is any natural light is around lunch time and it's only a glimmer; then it becomes black as night once again. In the summer, the sun never sets so you have to put heavy cloth or tarps on window openings so you can sleep. This is your home, and you share it with your parents and best friend, your dog. You are happy that you have family, good friends, and enough food. However, one day, everything changes. You and your dog become separated from the other hunters in your village and you end up alone on a chunk of ice, floating with only your dog. Think about what you might do in this situation to save yourself."

Mrs. Ornelas then turned off the recording and raised the lights. She turned on the document reader so the students could see the brief paragraph that she had just read to them. She read aloud the directions that followed the paragraph: "With your group members, jot down the ways that your lives are different from this boy's life. Think of as many different things as you can. Now, how are your lives like this boy's life?" Mrs. Ornelas asked each student to draw a Venn diagram graphic organizer (this was familiar to them) on a piece of paper, and as they talked among themselves, they filled out the organizer. The class then briefly reported out what they had discussed.

Mrs. Ornelas then explained the lesson's content objectives (comparing and contrasting their lives with the main character's life; predicting events in the story) and language objectives (finding examples of foreshadowing in the story; reading the story while confirming or disconfirming predictions). Next, she displayed on the interactive whiteboard a map of the Arctic area, so all students had an idea of the setting for the story they were going to read. Mrs. Ornelas pointed to Alaska and northern Canada, and asked students if they had ever read, seen, or heard anything (other than what she had just read) about this part of the world. One girl said, "I remember when we were studying climate change in Science and we looked at photos of melting glaciers. That's what I thought of when you started telling us your story." Mrs. Ornelas displayed on the white board several large photos of glaciers and said, "You mean these pictures, Esmeralda? You're right. The setting for today's story is very much like what we talked about in science, so think about these photos as you begin reading about the setting in today's story."

Mrs. Ornelas next displayed on the whiteboard the following academic vocabulary words: *predicting* and *foreshadowing*, because these words are critical to understanding the story deeply. She reviewed the meaning of *predicting* because this was a familiar process while reading stories. She then introduced *foreshadowing* by pointing to the word on the board and asking what *fore* made them think of. Someone said "Before?" Another said, "Doesn't it have something to do with golf?" She wrote on the board *foreground* and *forethought*, and asked students to try to figure out the words' meanings, with *fore* meaning "before or in front of"; then she asked them to have a partner conversation about whether the three words might be related because of the prefix *fore*. Mrs. Ornelas walked around the room listening while her students grappled with their task. She then asked the students to share with their partner what *shadowing* might mean. Nearly everyone knew what a shadow was, but they were struggling with the term *foreshadowing*. Mrs. Ornelas asked the students if, when she was reading the brief vignette at the beginning of class, they had formed any ideas of what today's story might be about. Many students' hands flew into the air. After taking a few responses, Mrs. Ornelas told the class, "I used foreshadowing to help

you think about the story we're going to read before we actually read it. You're now already making some predictions based on the hints I provided, right? What are they?"

After taking some responses, Mrs. Ornelas told the students that in the story, *Two Were Left*, the author would also give some hints about what was going to happen later in the story. She said, "These hints are called *foreshadowing*. Throughout our reading, we will make predictions and as we continue, we will either confirm or disconfirm our predictions, sometimes based on the foreshadowing the author provides." Mrs. Ornelas reminded students that they had worked with confirming and disconfirming predictions before in other stories, and she reminded them about how to use the strategy. She also told them that the author's use of foreshadowing would help them predict what would happen in the story. She encouraged them to see if they could find examples of *foreshadowing* and to underline them while they read the story together. Mrs. Ornelas then distributed copies of *Two Were Left* and the class engaged in a familiar group reading activity called the Directed Reading-Thinking Activity (DR-TA)(see Chapter 5, p. 133 for more details).

Mrs. Ornelas began by asking the students to cover with another piece of paper everything but the title, *Two Were Left*. She then asked, "With a title like *Two Were Left*, what do you think this story is going to be about?" The students laughed and said, "About a boy and a dog!" Mrs. Ornelas directed the students to uncover and read the next brief paragraph that provided more information. She then said, "Okay ... now you have new information. What do you think is going to happen next? Why do you think so?" And off they went, uncovering more and more of the story while reading, predicting, discussing, confirming, and disconfirming their ideas, until Noni and Nimuk were finally rescued. Most students could find some foreshadowing, starting with the title, and some even identified the quivering knife that eventually signaled the pilot. The story concluded with a brief discussion of the unit's theme (Decisions and Consequences) and Noni's decision to throw away the knife. After reviewing their objectives, students and teacher alike agreed that their content and language objectives had been met.

The next day, for a follow-up vocabulary activity, the students in pairs or triads selected their favorite part of *Two Were Left*, and typed it into a word cloud box on the classroom computers. The most frequent words from the story were emphasized on the word clouds. Later, the students discussed how important these words were to the story (see Figure 3.8 on the following page).

Check your understanding: On the SIOP form in Figure 3.9 on the following page, rate Mrs. Ornelas's lesson for each of the Building Background features.

Mr. Engelhart

Mr. Engelhart began his lesson by telling his students the objectives: *You will learn some new words from the story we are going to read and complete a story plot graphic organizer.* He then distributed a worksheet that had vocabulary word definitions and sentences from the day's story, *Two Were Left*. He gave each student eight index cards so that they could copy the information from the worksheet, one vocabulary word per card so that students would have eight flash cards for practice. The words on the worksheet included the following: *marooned, warily, labored, inventions, thrust, aroused, feebly, quivering.*

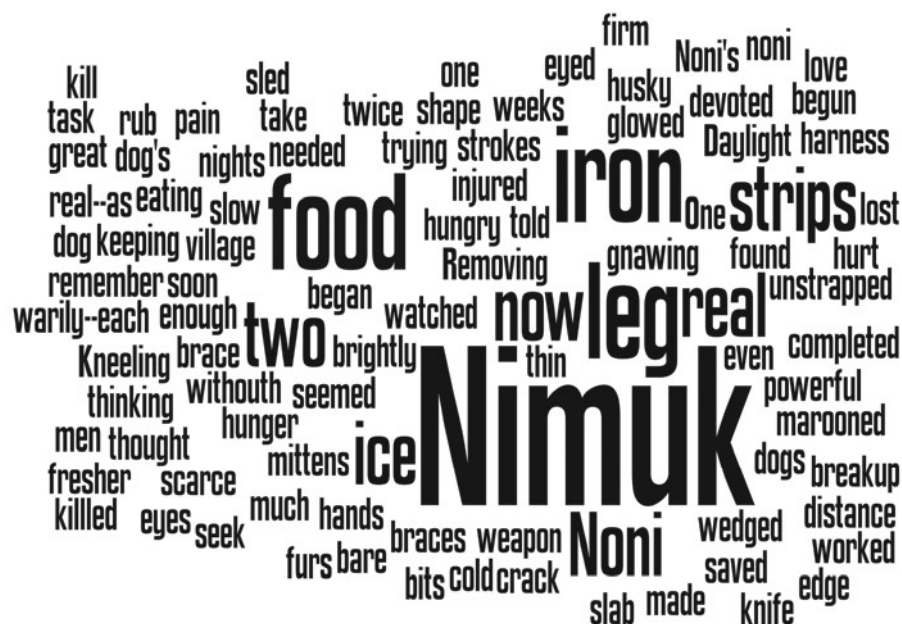
FIGURE 3.8 Word Cloud from *Two Were Left*

FIGURE 3.9 Building Background Component of the SIOP® Model: Mrs. Ornelas's Lesson

4	3	2	1	0	N/A
7. Concepts explicitly linked to students' background experiences		Concepts loosely linked to students' background experiences		Concepts not explicitly linked to students' background experiences	
4	3	2	1	0	
8. Links explicitly made between past learning and new concepts		Few links made between past learning and new concepts		No links made between past learning and new concepts	
4	3	2	1	0	
9. Key vocabulary emphasized (e.g., introduced, written, repeated, and highlighted for students to see)		Key vocabulary introduced, but not emphasized		Key vocabulary not introduced or emphasized	



Reflect and Apply

Click here to explain your ratings for Mrs. Ornelas's lesson on each of the Building Background features.

The following are examples of four of the vocabulary words, definitions, and sentences that the students copied onto their index cards from the words on the worksheet.

Marooned: to place or leave alone without hope of escape; “And, now, the two, completely alone, *marooned* on the ice, eyed each other warily.”

Warily: careful and watchful for danger; “And, now, the two, completely alone, marooned on the ice, eyed each other *warily*.”

Labored: to move with great effort; “He could see hunger and suffering in the dog’s *labored* breathing and awkward movements.”

Intentions: a planned way of acting; “Closer Nimuk came, aware of Noni’s *intentions*.”

After the students had copied the words, definitions, and sentences onto their eight vocabulary cards, Mr. Engelhart distributed copies of the *Two Were Left* story. He then asked for volunteers to take turns reading the story aloud. He directed students to underline the sentences where the eight vocabulary words were found. When the story was completed, Mr. Engelhart asked students how they liked the story, and all said it was good. A discussion followed on what the students liked about the story, and why. A graphic organizer for the story’s plot was assigned as homework. He collected the vocabulary cards for checking and concluded the lesson, satisfied that his goals had been met.

Check your understanding: On the SIOP form in Figure 3.10, rate Mr. Engelhart’s lesson for each of the Building Background features.

FIGURE 3.10 Building Background Component of the SIOP® Model: Mr. Engelhart’s Lesson

4	3	2	1	0	N/A
7. Concepts explicitly linked to students’ background experiences		Concepts loosely linked to students’ background experiences		Concepts not explicitly linked to students’ background experiences	
4	3	2	1	0	
8. Links explicitly made between past learning and new concepts		Few links made between past learning and new concepts		No links made between past learning and new concepts	
4	3	2	1	0	
9. Key vocabulary emphasized (e.g., introduced, written, repeated, and highlighted for students to see)		Key vocabulary introduced, but not emphasized		Key vocabulary not introduced or emphasized	



Reflect and Apply

Click here to explain your ratings for Mr. Engelhart’s lesson on each of the Building Background features.

■ Discussion of Lessons

7. *Concepts Explicitly Linked to Students' Background Experiences*

Miss Saunders: 3

Mrs. Ornelas: 4

Mr. Engelhart: 0

- **Miss Saunders's** lesson received a “3” for this feature. She chose to develop students' background knowledge for the story, *Two Were Left*, by showing them photographs of Alaska, similar to the setting of the story. The Think-Pair-Share activity was a good one to choose so that students could share their impressions of the photos with each other and the class. While Miss Saunders's vacation photos and stories were interesting, they didn't directly relate to the setting of the story the students were going to read. Perhaps a video clip from the Internet could have been shown, and, depending on the location of Miss Saunders's school, having the students contrast their living conditions (such as southern California or Florida) to the story's setting would have been meaningful. Also, since the main characters are a boy and a dog, bringing students' feelings about their pets (or others' pets they know) could have prepared them for the emotional aspect of this story.
- **Mrs. Ornelas's** lesson received a “4” for this feature. She spent about 15 minutes activating her students' prior knowledge and building their background about the setting of the story, *Two Were Left*. Because the setting and the situation were so very different from the students' experiences, the time was well spent. It's not just the actual setting that is so different (the Arctic area), but it's also the **culture** of the people in the story, where dogs aren't pets, but rather commodities that can mean the difference between life and death. (For this story, it might be interesting to mention to students that keeping dogs as pets might also be a cultural difference for other people, including some Asian cultures where dogs are food, and in some Arabic cultures, where neither dogs nor cats are pets.) In the lesson, the students' predictions and ability to grapple with a challenging literary device like foreshadowing were enhanced by the visualization exercise (with students' eyes closed and the wind blowing) and the comparison/contrast of their lives to Noni's via the Venn diagram. Also, the DR-TA is a powerful activity that enables teachers to really understand where students' predictions and ideas are coming from while they're reading. Students use their background experiences and knowledge throughout a DR-TA to make and then confirm/disconfirm their predictions while developing comprehension of the story. (Note that confirming predictions requires citing text evidence, which is a Common Core State Standard.)
- **Mr. Engelhart's** lesson received a “0” for this lesson. He didn't attempt to activate students' background knowledge or build background information related to the story's content concepts or vocabulary. He did state his goals, but these were not written as content and language objectives because the verb *learn* isn't

measurable or observable, and “completing a graphic organizer” doesn’t indicate the cognitive work the students will be engaged in. When objectives are well written, they provide information that begins to activate students’ prior knowledge and build background knowledge.

8. *Links Explicitly Made between Past Learning and New Concepts*

Miss Saunders: 1

Mrs. Ornelas: 3

Mr. Engelhart: 0

- **Miss Saunders’s** lesson received a “1” for this feature. She made only one reference to the students’ past learning and it was toward the end of the lesson. When she asked her students if they recalled when they talked about story sequence, the students gamely replied with a unison nod. Because understanding story sequence was critically important for the homework assignment, explicitly reviewing (and if necessary, re-teaching) the steps taught previously (e.g., introduction, rising action, falling action, climax, conclusion; or beginning, event 1, event 2, ... conclusion) was very important. English learners would have benefited from working together with the teacher and/or a small group to identify the story sequence prior to creating the storyboard. There will also most likely be confusion when doing the homework if the number of boxes (8) doesn’t match the number of story events they identify at home.
- **Mrs. Ornelas’s** lesson received a “3” for this feature. She was prepared to make an explicit link between the students’ previous learning about the Arctic area and the story they were going to read in this lesson. She had the photos from the Science lesson ready to display on the interactive whiteboard so students could make the connections. It would have been a good idea to be more explicit in reminding students of how readers make predictions, and more importantly, how they could confirm and disconfirm predictions while reading. This was especially important because Mrs. Ornelas was connecting making predictions to the author’s use of foreshadowing in the story. This might have been confusing to some English learners and struggling readers who still needed more practice in understanding making predictions as a metacognitive strategy (see Chapter 5 for more information).
- **Mr. Engelhart’s** lesson received a “0” for this feature because it included nothing to connect past learning to today’s lesson in terms of content concepts, vocabulary, or language. Although students may have completed vocabulary cards previously, there was no attempt to connect former vocabulary to today’s new words.

9. *Key Vocabulary Emphasized*

Miss Saunders: 2

Mrs. Ornelas: 4

Mr. Engelhart: 1

- **Miss Saunders's** lesson received a “2” for this feature. She selected some interesting and perhaps tricky words from the story for her students to work with. However, the time that was spent on finding informal and formal definitions of these words was not necessarily going to enable the English learners (and other students) to better understand this story. That is, they were not critical to the story's outcome, especially character names, which are easily learned. It would have been more relevant to this particular story and the objectives (sequencing the events in the story) if she had spent the time reviewing the academic vocabulary related to sequencing, perhaps with signal words the students could have used on their storyboards (*first, next, then, finally, in the end*, and so forth). She then could have identified and talked about some of the more interesting and challenging words in the story, working with the students to use the context clues for the informal definitions.
- **Mrs. Ornelas's** lesson received a “4” for this feature. She chose to teach explicitly two academic vocabulary words that she felt were essential to fully comprehending the story. One is an important literary term related to author's craft (*foreshadowing*), and the other is a critical strategy for reading (*predicting*). Notice how she introduced these concepts with the visualizing activity. She then divided the word *foreshadowing* into two parts (*fore + shadowing*) before writing *foreground* and *forethought* on the board, leading students to generalize the meanings of the three words. There are many other very interesting words in this story, and on the following day, the students worked with them when creating their word cloud designs. Because the word clouds emphasized the most frequent words in the passages the students chose, they could readily compare them with the interesting, but less frequently used words.
- **Mr. Engelhart's** lesson received a “1” for this feature. He provided his students with a list of vocabulary words, definitions, and sentences from the story they read, but the students' assignment to copy them onto the flash cards didn't have a clear purpose and it's unlikely the words carried much meaning for them. Making connections to the words would have been difficult to do since several were somewhat unique to this story, and thus challenging for grade 6 students. One exposure to these words would not ensure retention of either the words or their meanings. Mr. Engelhart's students may have enjoyed listening to and reading the story, but his lesson missed many opportunities to develop his students' content and language knowledge.

 Watch this video to hear Dr. Jana Echevarría review the Building Background Component, and to watch a grade 3 language arts lesson on fact and opinion. To what extent are each of the three features of the Building Background Component present in this lesson?

(For more ideas of lessons and units in English-language arts in grades K–6, please see Vogt, M.E., Echevarría, J., and Short, D. (2010). *The SIOP® Model for Teaching English-Language Arts to English Learners*. Boston: Allyn & Bacon.)

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Digital Flashcards: All of the teachers featured in the scenarios for this chapter agreed that their students could benefit from an engaging way to reinforce vocabulary. Ms. Palacios suggested that the teachers build sets of digital flashcards on the website *Quizlet*. During a technology workshop, Ms. Palacios worked with Mr. Englehart, Miss Saunders, and Mrs. Ornelas to create lists on *Quizlet* using vocabulary from the short story *Two Were Left*. The teachers made various sets of flashcards, some with words and definitions and others with words and images. All three teachers then posted links to the vocabulary sets on their class Web pages. After a few days of use, the teachers saw positive results. A quick survey in class showed that students were practicing words at home on computers, various types of tablets, and smartphones. Many students reported preferring the online study versus traditional index cards or notes. In the weeks following, the teachers explored the application further. They were happy to discover a number of other valuable features such as support for over a dozen languages, audio with a realistic voice, options to record your own voice, and multiple ways to practice the words including spelling and games.

Other terms for this type of tool: online vocabulary review/practice;

Related products: *StudyBlue*, *Brainscape*, and *Spelling City*

Surveys for Vocabulary Self-Collection: Many schools around the world have adopted Google Apps for Education or GAFE, a free suite of apps that includes *Docs*, *Sheets*, and *Forms*, and others. For an introduction to the suite, Ms. Palacios focused on the app named *Forms*, which provides an easy way to create surveys and collect information from students. This tool connects well with the Vocabulary Self-Collection Strategy (VSS) (p. 84). The activity gives students the opportunity to select vocabulary that they consider essential to understanding a particular text. While VSS has proven to be consistently valuable, teachers have found that compiling students' word lists can be time-consuming. Ms. Palacios thought using *Forms* could expedite that process. To test out the new tool, Mr. Englehart, Miss Saunders, and Mrs. Ornelas created a Google Form to collect the students' vocabulary selection for the short story that followed *Two Were Left*. They shared the Form with the students via their class Web sites. For homework, the students read the new story and entered their essential vocabulary into the form. One feature of *Forms* that the teachers found convenient was the response sheet. All of the data that entered into a Form gets automatically sent to a spreadsheet, where it's sorted into columns corresponding to each question on the survey. It took much less time than collecting and compiling paper word lists from all of the students. Also, for teachers interested in using word clouds, it will be simple to copy all of the student vocabulary submissions from the form response sheet and then paste them into a word cloud generator. Related Products: Survey Monkey



Check Your Understanding

Click here to check your understanding of Chapter 3, Building Background.

■ Summary

As you reflect on this chapter and the impact of connecting students' background knowledge and learning experiences to the content being taught, and the importance of explicitly teaching academic vocabulary, consider the following main points:

- Explicitly linking a lesson's key content and language concepts to students' background knowledge and experiences enables them to forge connections between what they know and what they are learning.
- In addition, explicitly connecting past content and language learning to a new lesson's content and language concepts assists students in understanding that their previous learning connects to the lesson they will have today.
- English learners may have a difficult time with the academic vocabulary of various disciplines. Three types of academic vocabulary discussed in this chapter are: (1) subject-specific and technical vocabulary; (2) general academic: cross-curricular/process/function vocabulary; and (3) word parts: roots and affixes.
- Teaching ideas, such as using visuals to provide concrete meanings, Four Corners Vocabulary charts, differentiated signal words, and word clouds, engage students in interactive practice with words that promotes academic vocabulary development for English learners.

■ Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
 - a. Identify techniques for connecting students' personal experiences and past learning to lesson concepts?
 - b. List elements of academic language and describe its importance for English learners?
 - c. Select academic vocabulary for a SIOP lesson using words from these three groups: content vocabulary, general academic vocabulary, word parts: roots and affixes?
 - d. Write a lesson plan incorporating attention to building background, links to students' past learning, and key academic vocabulary?
2. Some educators argue the importance of connecting new information to English language learners' own cultural backgrounds in order to make content concepts meaningful. Others disagree, stating that students relate more to popular American influences than they do to their parents' traditional cultural practices. What are some merits and problems with both positions? What about English learners born in the United States who have never lived in their native cultural setting?
3. Think about a joke or cartoon that you didn't understand, such as from a late-show monologue or a political cartoon. Why was it confusing or not amusing?

What information would you have needed for it to make sense? What are the implications for teaching content to all students, including English learners?

4. Add to the SIOP lesson you have started. Think about how you will activate students' prior knowledge and build background. What explicit connections to past learning can you make? What are your key academic vocabulary words, and how will you teach them? Choose some techniques or activities for the lesson.

Comprehensible Input

Learning Outcomes

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

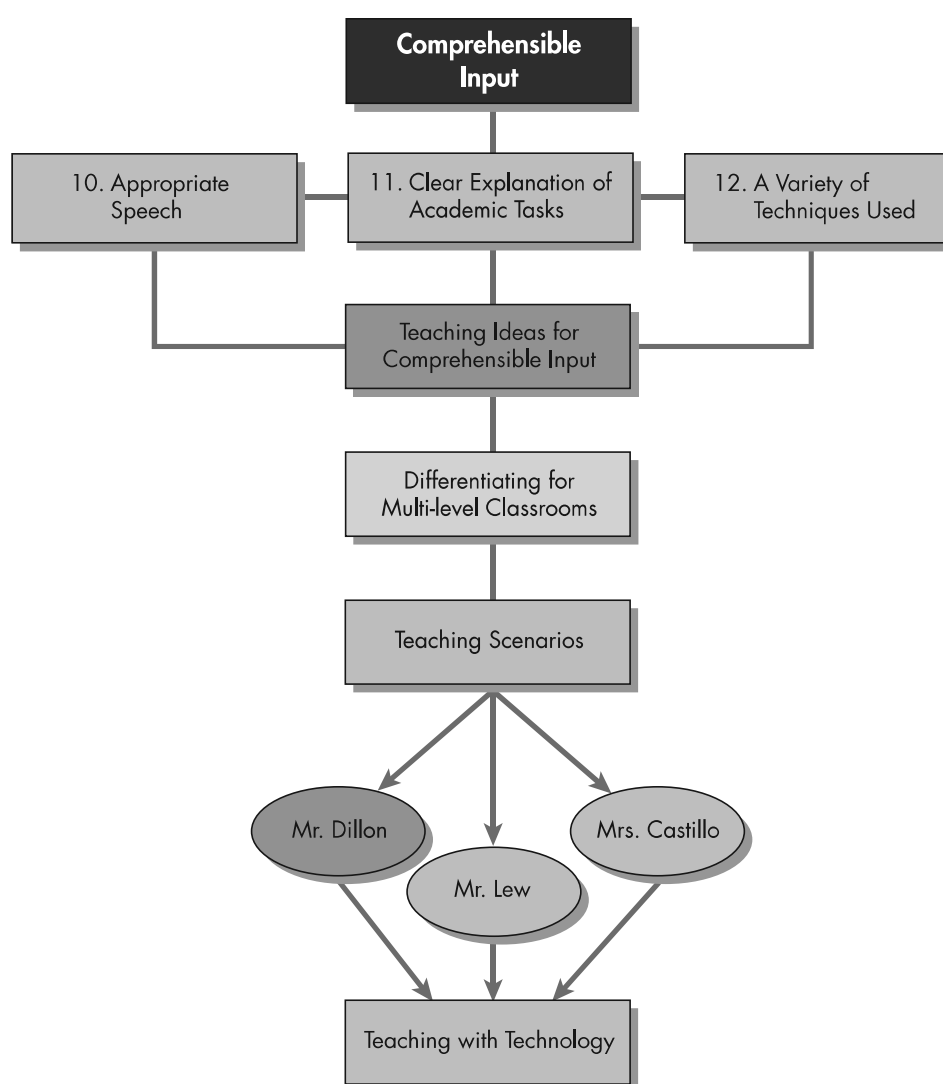
Identify techniques for presenting content information in ways that students comprehend.

Review various ways to provide directions for completing academic tasks.

Language Objectives

Discuss modifications to teacher speech that can increase student comprehension.

Write the steps needed for students to perform an academic task and have a partner perform each step.



As you look through the features of the **SIOP**, you will see that they reflect what we know about effective instruction for all students—English speakers and **English learners** alike. However, implementation of particular features is critical for making content understandable for English learners. The features of the Comprehensible Input component make SIOP instruction different from “just good teaching.” While English learners benefit from many of the teaching practices that are effective for all students, these students also require modifications to make instruction meaningful (August & Shanahan, 2006, 2010). Making a message understandable for students is referred to as *comprehensible input* (Krashen, 1985). A **culturally responsive** SIOP teacher takes into account the unique linguistic needs of English learners and modifies teaching accordingly. Whether instruction is for a designated **English language development/ESL** lesson or for a content area lesson that makes subject matter accessible while also developing **English language proficiency**, comprehensible input techniques are essential. ●



© Juice Images/Alamy

Have you ever tried to water ski without a boat? Impossible, right? No matter how badly you want to ski, it can't happen without a boat. A teacher using the features of Comprehensible Input functions as the boat because English learners, no matter how motivated, can't be successful academically if they don't understand what the teacher is saying, what they are expected to do, or how to accomplish a task. Humans don't “pick up” language solely from exposure. For example, many of us have been around speakers of Spanish, Vietnamese, or Farsi, but we understand little, if anything of what is being said. Comprehensible input techniques are necessary for students to understand the essence of what is being said or presented. A SIOP teacher makes verbal communication more understandable by consciously using supports that are matched to students' levels of English proficiency.

In this chapter, we present ways to support English learners' comprehension so that lessons are understandable for them.

Background

 Watch this video to see teachers demonstrate what comprehensible input is all about. Can you identify several techniques that are shown? How might you increase comprehensibility using some of the ideas mentioned by Dr. Vogt? <https://www.youtube.com/watch?v=mTnHonxao70>

 Watch this video and notice how the teacher makes a multiple-meaning words lesson more comprehensible for English learners. Pay attention to her slower, well-articulated speech and the way she effectively uses gestures and pointing. What are some other ways she makes the lesson comprehensible?

Specialized teaching techniques are needed when working with English learners who are expected to master rigorous content material to meet high academic standards in a language they do not speak or comprehend completely. Acquiring a new language takes time and is facilitated by many “clues”—by speech that is geared to individual proficiency levels and by techniques that are used consistently in daily teaching routines.

Comprehensible input entails much more than simply showing pictures as visual clues during a lesson. It involves a conscious effort to make the lesson accessible through a variety of means. Communication is made more understandable through speech that is appropriate to students’ proficiency levels. The teacher enunciates and speaks more slowly, but in a natural way, for students who are beginning English speakers. More repetition may be needed for beginners and, as students gain more proficiency in English, the teacher adjusts her speech to the students’ levels. Teachers will increase students’ understanding by using appropriate speech coupled with a variety of techniques that will make the content clear.

These techniques are particularly important as students aim to meet the **Common Core State Standards (CCSS)** and other state standards in each grade level. Across grade levels, the standards ask students to comprehend information presented orally and to express their understanding in a variety of ways, such as recounting key ideas and details, and paraphrasing or summarizing the information presented. The way information is presented orally will have a significant impact on the degree to which English learners will be able to achieve these standards.

We will discuss a number of ways to make teacher talk comprehensible to students in the next sections. In the scenarios that follow later in the chapter, you will see examples of teachers who use comprehensible input techniques with varying degrees of effectiveness.



SIOP® FEATURE 10:

Speech Appropriate for Students’ Proficiency Levels

For this feature, speech refers to (1) rate and enunciation and (2) complexity of language. The first aspect addresses *how* the teacher speaks and the second aspect refers to *what* is said, such as level of vocabulary used, complexity of sentence structure, and use of idioms.

Students who are at the beginning **levels of language proficiency** benefit from teachers who slow down their rate of speech, use pauses, and enunciate clearly while speaking. As students become more comfortable with the language and acquire higher levels of proficiency, a slower rate isn’t as necessary. In fact, for advanced and transitional students, teachers should use a rate of speech that is normal for a regular classroom. Effective SIOP teachers adjust their rate of speech and enunciation to their students’ levels of English proficiency.

Likewise, students will respond according to their proficiency level. The following example illustrates the variation in responses that may be expected when students at six different levels of English proficiency are asked to describe the setting in a story. The levels reflect the WIDA performance definitions (<http://www.wida.us/standards/elp.aspx>).

 Watch this video to see how the teacher enunciates in a natural but effective way for her students. Also pay attention to her rate of speech. Select one technique she uses that you might use with your students.

- Entering: “Cold day.”
- Beginning: “Day is cold and there snow.”
- Developing: “The day is cold and there is snow.”
- Expanding: “The day is very cold and heavy snow is falling.”
- Bridging: “It is a cold, winter day and it is snowing more heavily than usual.”
- Reaching: “The unusually heavy snow on the day the story takes place causes a number of problems for the characters.”

While still providing English learners with exposure to grade-level language, SIOP teachers carefully monitor the vocabulary and sentence structure they use with English learners in order to match the students’ proficiency levels, especially with students at beginning levels of English proficiency. The following are ways to monitor classroom speech:

- Enunciate clearly. Sometimes it is easy to rush through information or instructions because of the time pressure of teaching by the clock or because you want the pace to move along so that students don’t lose interest. For English learners, a brisk speaking pace is difficult to follow, especially if care isn’t taken to enunciate clearly. When each syllable of each word isn’t pronounced properly but naturally, the words get slurred together. Students have difficulty understanding, especially if there is other noise around the room.
- Ask students for elaboration. Especially with students at intermediate and advanced levels, teachers should frequently ask students to: explain their answers; provide evidence for their answers; say it another way; answer *why*, *how*, or *what if* questions; and show where they found something in the text. Teachers should also ask students to connect words, phrases, and short sentences into compound sentences that represent their ideas and thoughts. In this way, students not only use the language but also think about *how* to use it as well.
- Model what you want students to say before having them produce language. For example, in science the teacher might say, “We’ve been studying that there are many changes that occur in the earth’s crust. Some come quickly and others take millions of years. Ask your partner, ‘What is one change that comes quickly?’” In this way, students know what to say when they turn to their partners because they have heard correct sentence formation. Providing students with a model of what to say increases the likelihood that on-point discussion will occur.
- Avoid idioms, particularly with beginners. These common sayings that do not have exact translations create difficulty for students who are trying to make sense of a new language. Some common idioms include “below the belt” for unfair; “put one’s foot down” meaning to be firm; “see eye to eye” for being in agreement; “get the hang of” meaning to become familiar with; and “get a person’s back up” indicating to make someone annoyed. English learners are better served when teachers use language that is straightforward, clear, and accompanied by a visual representation.
- Employ paraphrasing and repetition to enhance understanding. English learners may require repeated exposures to a word in order to hear it accurately since they often lack the auditory acuity to decipher sounds of English words. Then they need

to see and hear the words used repeatedly, preferably in a variety of ways. Brain research tells us that repetition strengthens connections in the brain (Jensen, 2005).

- Point out cognates to promote comprehension for students whose **native language** has a Latin base. For example, using “calculate the mass/volume ratio” (*calcular* in Spanish) may be easier for some students to understand than “figure out the mass/volume ratio.” (See Vogt and Echevarría, 2008, for more examples of cognates.)
- Simplify sentence structures to reduce the complexity that some English learners find confusing. Use subject–verb–object with beginning students and reduce or eliminate embedded clauses. For example, in a history lesson, the teacher may use the following complex sentence structure that is difficult to understand: “English colonists brought free enterprise, the idea of owning and controlling their own businesses, from England but because England’s leaders wanted the colonies’ financial support, laws were passed to limit the free enterprise system in the colonies.” It might be better stated as, “English colonists brought the idea of owning and controlling their own businesses from England. This idea is called free enterprise. England’s leaders wanted the colonies’ financial support, so the laws were passed to limit the free enterprise system in the colonies.” Reducing the complexity of language is effective for beginners but should be used judiciously. Oversimplification of spoken or written language eliminates exposure to a variety of sentence constructions and language forms (Crossley et al., 2007), especially complex text called for in the Common Core State Standards. The best way for English learners to acquire the language of complex texts is through exposure to those texts and explicit instruction in ways to make sense of embedded clauses such as those seen above. However, a text that is one proficiency level up *is* complex; beginners and low intermediates need scaffolding/support to build up to the complex texts given to native English speaker. Too often English learners are regarded as incapable of interacting with more rigorous text and are not given the opportunity to learn the very language they need.

Using appropriate speech patterns and vocabulary for English learners contributes to comprehensible input and provides a basis for students to be successful. It is difficult for students to learn if a teacher’s way of delivering information is too fast, too complex, or inarticulate.



SIOP® FEATURE 11:

Clear Explanation of Academic Tasks

English learners at all levels (and **native English speakers**) perform better in academic situations when the teacher gives clear instructions for assignments and activities. In their discussion of working memory, which is central to learning, Baily & Pransky (2014) point out that when students are confused about the lesson’s topic or the activity’s purpose, they either disengage or frantically try to make connections with what they already know. In this process, they are wasting valuable working memory processing space. So, when the teacher isn’t clear, there is more at stake than just taking up time repeating unclear instructions. Effective teachers present instructions in a step-by-step manner, preferably using modeling or demonstrating the task for students. Ideally, a finished product such as a business letter, a research report, or a graphic organizer is shown

to students so that they know what the **task** entails. Oral directions should always be accompanied by written ones so English learners can refer back to them at a later point in time as they complete the assignment or task. Students with auditory processing difficulties also require clear, straightforward instructions written for them to see.

According to case study data collected from English learners in **sheltered instruction** classes (Echevarría, 1998), middle school students were asked what their teachers do that makes learning easier or more difficult. The following are some student comments:

- “She doesn’t explain it too good. I don’t understand the words she’s saying because I don’t even know what they mean.”
- “She talks too fast. I don’t understand the directions.”
- “He talks too fast. Not patient.”
- “It helps when he comes close to my desk and explains stuff in the order that I have to do it.”

These students’ comments illustrate the importance of providing a clear explanation of teachers’ expectations for lessons, including delineating the steps of academic tasks. This point cannot be overstated. In our observations of classes, many “behavior problems” are often the result of students not being sure about what they are supposed to do. A cursory oral explanation of an assignment can leave many students unsure about how to get started. The teacher, frustrated with all the chatter, scolds students, urging them to get to work. However, students do not know *how* to get to work and oftentimes do not know how to articulate that fact to the teacher. Bottom line: Making expectations clear to students contributes to an effective and efficient classroom.

SIOP teachers go over every aspect of the lesson, showing visuals with each step, if needed. For example, in a reading class, the teacher wants students to complete a graphic organizer with information about the characters, setting, problem, resolution of the problem, and theme of a piece of literature the class has been reading. Using this information, students will write a summary. Figure 4.1 contrasts clear directions and step-by-step instruction with unclear directions and unguided instruction. Think about the way you present directions to your students.

In the left column, the teacher uses a written agenda so that if students don’t understand, weren’t paying attention, or simply forgot, they have the written steps to guide them and keep them on task. Depending on the age and proficiency levels of the group, the teacher may need to model one or more of the steps. By the time students complete the graphic organizer, they have received feedback on the accuracy of the information they will use and have seen a model of a partially completed graphic organizer. Likewise, using information in the graphic organizer to write a summary is modeled for them. This type of teaching facilitates writing of an accurate, complete summary. In the right column, the teacher gives information and instructions orally, and only a handful of students participate in the discussion. When it is time to complete the graphic organizer, most likely many students are unsure about where to begin or what information is pertinent. Undoubtedly few students will be able to complete the homework assignment.

As a check of how clear your task explanations are, you might write out the directions you would give your students for completing an academic task and ask a colleague to follow them. It can be eye opening!

FIGURE 4.1 Clear Explanation Contrasted with Unclear Explanation

Clear Explanation	Unclear Explanation
The teacher writes on the board: 1. Review your notes from yesterday. 2. Use your notes to answer the 5 questions on the board. 3. Write your answers on your white board. 4. Complete the graphic organizer. After giving students a few minutes to review their notes with a partner (more fluent speaker paired with less-proficient; additional information is added as needed), the teacher gives them a set amount of time to answer the first of five questions. She gives them a 30-second signal and then asks the class to “show me” their white boards where they have written their answers. She can see from a glance at their boards who got it right and who needs assistance or clarification. This process continues until all five questions are answered. The teacher shows a copy of the graphic organizer on the document reader and completes the first part with the class. Then students take the information from the five questions and use it to complete the graphic organizer. Students are allowed to work with a partner on completing the graphic organizer, but the teacher circulates and observes to make sure that both partners have mastered the content. She asks questions and prompts to ensure understanding.	The teacher gives an oral review of what was discussed in the story the previous day. Then she asks a series of questions about the characters, the story’s problem, and how the problem in the story was resolved. Several students raised their hands to answer the questions. The teacher talks about the theme and the importance of recognizing a story’s theme. Then the teacher hands out a graphic organizer and tells the students that they have the remainder of the period to complete it using the story and the information they have talked about.

In the area of writing, students need to be shown very specifically—and have opportunities to practice what has been clearly explained—the essential elements of good writing. Showing students what constitutes good writing, explaining it clearly, and providing opportunities to practice will result in improved writing (Echevarría & Vogt, 2011; Graham & Perin, 2007; Schmoker, 2001). For intermediate and advanced speakers, focused lessons on “voice” or “word choice” may be appropriate, while beginning speakers benefit from models of complete sentences using adjectives or forming a question.



SIOP® FEATURE 12:

A Variety of Techniques Used to Make Content Concepts Clear

Effective SIOP teachers make content concepts clear and understandable for English learners through the use of a variety of techniques. We have observed some teachers who teach the same way for English learners as they do for native English speakers,

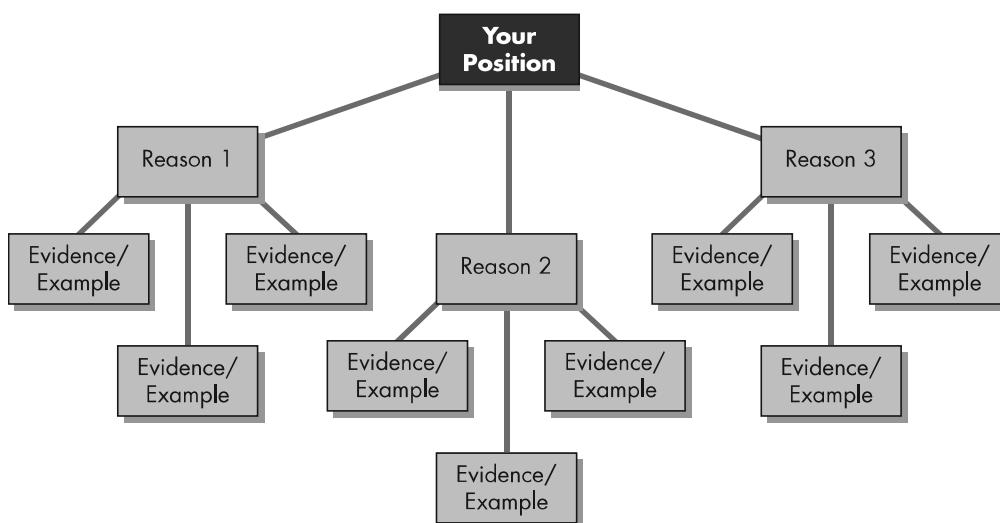
except that they use pictures to illustrate ideas or words for English learners. English learners benefit from a wider range of supports to make the material understandable. The actual techniques a teacher uses should match the task. For example, when explicitly teaching academic vocabulary words in depth, the teacher might use examples and non-examples, video clips, and other concrete representations of the words (Baker et al., 2014). High-quality SIOP lessons offer students a variety of ways for making the content accessible to them. Some techniques include:

- Use gestures, body language, pictures, and objects to accompany speech. For example, in a lesson on informational text the teacher points to a poster that illustrates text features and says, “There are a number of features used in informational text that help the reader. One is (holds up 1 finger) headings (points to the heading). Headings tell us what the text will be about. What is the heading for this text? (Class reads together). Another feature is captions (points to the caption below an illustration). Captions give information about a photo or illustration. There are also bold words (points to bold words). These words are important for understanding the text.” Gestures and visual aids assist students in organizing and making sense of information that is presented verbally.
- Provide a model of a process, task, or assignment. For example, as the teacher discusses the process of water taking on the form of ice, she shows or draws a model of the process as it is being described. When students are later instructed to record conditions under which the change in ice from a solid to a liquid is accelerated or slowed, the teacher shows an observation sheet that is divided into three columns on the overhead projector (or document reader or interactive whiteboard). The teacher has a number of pictures (e.g., lamp, sun, and refrigerator) that depict various conditions such as heat and cold. She demonstrates the first condition, heat, with a picture of the sun. She models how students will describe the condition in the first column (e.g., heats). Then she asks students what effect the sun, or heat, has on ice. They answer and in the second column she records how the ice changed (e.g., melted), and in the third column she indicates if the process was accelerated or slowed by the condition (e.g., accelerated). Providing a model as the students are taken through the task verbally eliminates ambiguity and gives the message in more than one way. Students are then able to complete the rest of the worksheet.
- Preview material for optimal learning. When students’ attention is focused on the specific material they will be responsible for learning in the lesson, they are able to prepare themselves for the information that is coming, making it more comprehensible for them. Further, they have an opportunity to access prior knowledge and make the connections that they will need to understand the lesson.
- Allow students alternative forms for expressing their understanding of information and concepts. Often English learners have learned the lesson’s information but have difficulty expressing their understanding in English, either orally or in writing. Hands-on activities can be used to reinforce the concepts and information presented, with a reduced linguistic demand on these students.
- Use multimedia and other technologies in lessons. Teachers may use PowerPoint slides, interactive whiteboards, a document projector, or relevant Web sites and

apps as supplements to a presentation. In so doing, they not only provide more visual support but also model the use of the technology.

- Provide repeated exposures to words, concepts, and skills. English learners are learning through a new language, and in order for the input to be comprehensible, they need repetition. However, excessive practice of a single word or skill can become monotonous and defeat the purpose. Jensen (2005) discusses a process for introducing material repeatedly in a variety of ways. He suggests introducing terms and skills well in advance of learning the material (pre-exposure); explicitly previewing the topic at the start of the lesson; exposing students to the target information (priming); reviewing the material minutes after students have learned it; and allowing students to revise or reconstruct information hours, days, or weeks after the lesson to revisit the learning. Research indicates that teachers ought to provide students with the specifics of what they need to learn—the key details of the unit—and then find ways to expose students to the details multiple times (Marzano, Pickering, & Pollock, 2001).
- Use graphic organizers effectively. New ideas and concepts presented in a new language can be overwhelming for English learners. Graphic organizers take the information, vocabulary, or concept and make it more understandable by showing the key points graphically. To paraphrase the saying “a picture is worth a thousand words,” a graphic organizer can capture and simplify a teacher’s many potentially confusing words. While graphic organizers are used commonly in school, they are most effective when they match the task and lead to attaining the lesson’s objectives.

Some graphic organizers may be simple, such as a problem/solution chart or a web with vocabulary definitions. For older students, graphic organizers may be more elaborate. For example, the CCSS and other state standards call for students to have an understanding of the argumentation process. Prior to giving a presentation that requires argumentation or an argumentative writing assignment, a **scaffold** might be to have students complete the following Argumentation Map:



See Vogt and Echevarría (2008) *99 Ideas and Activities for Teaching English Learners with the SIOP® Model* for many SIOP-appropriate graphic organizers.

- Audiotope texts for greater comprehension. There are a variety of commercially available resources that provide an audio version of a story or book. Publishers often include access to audio versions of a text. Also, software exists for creating MP3 files by scanning text and reading it aloud. Students can listen to the file on a smartphone or tablet. An audio version of the text not only allows for multiple opportunities to hear the text, but also enables adjustments for different proficiency levels. When the teacher (or someone else) records the text himself or herself, the same passage may be read more slowly with clear enunciation for beginning speakers, or synonyms may be substituted for difficult words.



Watch this video of a teacher who exemplifies all three features of the Comprehensible Input component in this SIOP lesson. Do you think the students will learn the vocabulary terms well? What are some of his techniques that you might employ?

The Comprehensible Input techniques we present in this chapter assist English learners in understanding the lesson's information, especially when it is presented orally. Whether the teacher is giving directions, conveying content information, or teaching a skill or concept—any time a message is delivered verbally—it must be made understandable for all students. Many English learners adapt to the classroom environment by pretending they understand, when, in fact, they may not. SIOP teachers use frequent checks to gauge how well students comprehend material and to discern how speech may need to be differentiated based on proficiency.



Teaching Ideas for Comprehensible Input

In the section that follows, you will find some teaching ideas to help you with preparing SIOP lessons.

- Record step-by-step instructions for completing a task or project, using an electronic tablet application. English learners, individually or in pairs, listen to the instructions as many times as needed, using the speech speed feature to slow the output to their level of understanding. You may also generate questions for partners to ask each other, such as “Which pages do we read before completing the graphic organizer?” or “Are the words we use in the graphic organizer found in the reading passage or somewhere else?” In this way, students listen to the instructions again with a focus on specific questions whose answers will help them complete the task. English learners may be unaware that the headings or bolded words in a text are those used to complete a graphic organizer.
- Use sentence strips. This common technique can be used in a variety of ways at all grade levels. In reading/language arts, students can review events in a story by writing each event on a sentence strip, then sequencing the strips to retell the story. This technique can be applied in science to sequence steps in an experiment. For optimal engagement, students in math might work in groups to sequence the steps for problem solving. After the group has put the strips in the correct order, each student takes a strip and lines it up in the order of how the math problem is solved. Other groups provide feedback as to whether the order is correct.

- Show a brief (2–4 minutes) video clip that reinforces the content objective and complements the reading assignment prior to reading a passage of informational text. Have students work in pairs to discuss specific questions about the video clip so that they have a grasp of the big ideas before participating in reading (Reutebuch, 2010).
- Spell difficult words or math formulas to the tune of B-I-N-G-O or another song while clapping out each letter, number, or symbol.
- Make lectures or presentations more compelling to the brain by using objects, photographs, slides, graphs, bulletin board displays, and color. Visuals are important for remembering information. Change things up: Use vivid posters, drawings, videos, and other ways to grab attention (Jensen, 2008).

■ Differentiating Ideas for Multi-level Classes

We know that most classes with English learners have students with multiple proficiency levels. Even those designated **ESL 2**, for example, may have some students who have stronger listening skills than writing skills or stronger reading skills than speaking ones. Teachers have at their disposal a variety of ways to differentiate spoken English to make it comprehensible for our diverse English learners. Almost every utterance can be modified in some way to address the variety of proficiency levels of students in your classrooms. Several considerations include the following.

- Use a slower rate, clear enunciation, and simple sentence structure for beginning speakers; use a more native-like rate and sentence complexity for intermediate and advanced speakers of English.
- Remember that you make a huge contribution to your students' attitude toward school. Particularly in the early grades, students' experiences form their impressions about school and learning. At any age, learners in a positive environment are more likely to experience enhanced learning, memory, and self-esteem (Jensen, 2008, 2013). Differentiating how information is delivered so that it is comprehensible helps students with lower levels of proficiency feel accepted, understood, and as much a part of the class as native speakers of English.
- Allow students to provide differentiated responses to questions and assignments. For oral responses, provide sentence frames for those students who need them. With written assignments, beginning speakers may require partially completed information (e.g., Cloze procedure), while advanced speakers may only need a word bank, or other support, to complete the assignment. Level of support should be differentiated so that students at each level of proficiency are able to understand expectations and be successful in lessons.

■ The Lesson

Buoyancy (Ninth Grade)

The following lessons take place in an urban high school where English learners make up 35% of the school population. In the classrooms described, all the students are beginning to advanced-beginning speakers of English, and they have varying levels of literacy in their native languages.

Ninth-grade teachers Mr. Dillon, Mr. Lew, and Mrs. Castillo are all teaching a unit that addresses the NGSS Scientific and Engineering Practices to teach the physical science concept of buoyancy. The standards associated with the unit require that students understand why some objects float while others sink. In addition, the teachers review the concepts of *mass*, which is a quantity of matter of nonspecific shape, and *volume*, which is the capacity of a three-dimensional object. The goal is for students to understand that an object will float as long as the mass doesn't exceed the object's capacity, or volume. Students have calculated mass/volume ratios prior to this unit, although the application of these concepts to buoyancy is new. Part of the curriculum is a short video, *Archimedes' Principle of Buoyant Force*, which all teachers show. You will see in the lesson descriptions that the teachers have their own way of helping students understand that an object's ability to float is based on its mass/volume ratio.

■ Teaching Scenarios

Mr. Dillon

Mr. Dillon began the lesson by having students open their science texts to the chapter on buoyancy. He told them that in this unit they would learn what makes objects buoyant. He gave a five-minute oral introduction to the concepts behind buoyancy, discussing the fact that if the object's mass exceeds its volume, then it will sink. Mr. Dillon used his normal, somewhat rapid manner, the same speaking style he used with all his classes. He then showed the video *Archimedes' Principle of Buoyant Force*. When it was over, he directed the students' attention to 13 vocabulary terms written on the whiteboard and told the class to copy each word, look up the definition in the glossary, and copy the definition onto their papers. After students looked up vocabulary words in the glossary, Mr. Dillon asked them to put the papers in their homework folders. He told them that they needed to take the words home, and their homework assignment was to use each word in a sentence. He emphasized that students needed to complete their homework since he had been frustrated by low homework response rates in this class.

Then Mr. Dillon turned to the science text, telling students to open their books to the beginning of the chapter. He proceeded to lecture from the text. Since Mr. Dillon had attended a series of professional development sessions on the Next

Generation Science Standards, he knew that it was an important part of scientific and engineering practices to ask questions (for science) and define problems (for engineering). Mr. Dillon asked students questions based on the text to stimulate a class discussion and get students to think about how to define problems. Most students were reluctant to speak up. After lecturing and questioning on the material in the first five pages of the text, Mr. Dillon gave students a worksheet about buoyancy. He told them they could work in pairs or alone, calculating the mass/volume ratio of the objects shown on the worksheet and then stating why each object would or would not float based on mass/volume ratios. He said, “You remember how to calculate mass/volume ratios? First you determine the volume of the object, and then you take the mass and divide it by the volume. Okay, just calculate the ratios for each object shown on the worksheet, and address the problem of buoyancy. When you finish, you may begin doing your homework.”

After the class completed the worksheet for calculating mass/volume ratios and concluding whether or not each object would float, Mr. Dillon went over the answers with the whole group. He began by demonstrating how to calculate the first problem. He wrote the numbers on the overhead and went through the process. When he finished, he said, “If you got the same answer as I did, raise your hand.” About half of the students raised their hands. Then he asked about the object’s buoyancy. Mr. Dillon determined that he needed to demonstrate a few more problems so that more students would understand the process. He continued with the next three problems, asking students what they did differently.

Finally, he told the class to work in pairs to review their work, checking the final problems against the process he demonstrated.

Check your understanding: On the SIOP form in Figure 4.2, rate Mr. Dillon’s lesson on each of the Comprehensible Input features.

Mr. Lew

As Mr. Lew began the lesson, he drew students’ attention to the objective written on the board and told them that the purpose of the unit was to understand why some objects float and others sink. As he said the word *float*, he pointed to an orange floating in the aquarium at the front of the room, and as he said the word *sink*, he dropped a peeled orange into the water, and it sank to the bottom. Then, while pointing at the corresponding object, he repeated, “Some things float and others sink.” He went on to tell the students that at the end of the unit they would be able to calculate and predict whether something has buoyancy. The words *float*, *sink*, *calculate*, *predict*, and *buoyant* were written in the Word Bank for students to see. The word list included content vocabulary (*buoyant*, *float*, and *sink*) as well as functional language (*calculate* and *predict*). Since many of Mr. Lew’s students were recent immigrants and had gaps in their educational backgrounds, Mr. Lew was careful to make sure students not only knew the meaning of content vocabulary, but also knew the meaning of words associated with academic tasks, such as *predict* and *calculate*. Then Mr. Lew gave students a worksheet with two images from the video (a ship floating, then sinking) and provided a brief introduction to the video. After showing the video, he told students to work in pairs to label the objects using vocabulary from the word bank.

FIGURE 4.2 Comprehensible Input Component of the SIOP® Model: Mr. Dillon's Lesson

4	3	2	1	0
10. Speech appropriate for students' proficiency levels (e.g., slower rate, enunciation, and simple sentence structure for beginners)		Speech sometimes inappropriate for students' proficiency levels		Speech inappropriate for students' proficiency levels
4	3	2	1	0
11. Clear explanation of academic tasks		Unclear explanation of academic tasks		No explanation of academic tasks
4	3	2	1	0
12. A variety of techniques used to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language)		Some techniques used to make content concepts clear		No techniques used to make concepts clear



Reflect and Apply

Click here to explain your ratings for Mr. Dillon's lesson on each of the Comprehensible Input features.

Throughout the lesson, Mr. Lew used language structures and vocabulary that he believed the students could understand at their level of proficiency. He spoke slowly, often contextualizing vocabulary words, and enunciated clearly. Also, he avoided the use of idioms, and when he sensed that students did not understand him, he paraphrased to convey the meaning more clearly. He repeated important words frequently and wrote them for students to see.

As the lesson progressed, he asked the students to complete an activity while working in small groups. Mr. Lew was very explicit in his instructions. He had prepared a PowerPoint slide with the instructions and projected it on a screen; then he went over each step orally. He said, "First, you will get into your assigned groups and prepare to perform the role that has been assigned to you. Second, you will make shapes out of aluminum foil and try to get them to float (he put a small aluminum foil boat on the water and it floated). Third, you will calculate the object's volume (the students already know how to do this) and write it on the worksheet, and fourth, you will determine the maximum mass the boat will hold before it sinks. Finally, you will calculate the mass/volume ratio. You will write all of these numbers on the worksheet." Then Mr. Lew told the students to watch as he demonstrated. He took a piece of aluminum foil and shaped it into a long, narrow boat. He pointed to #2 on the screen. Then he took the boat, filled its interior space with water, and then poured the water from the boat into a measuring cup to calculate the volume. He wrote the amount on the worksheet. Mr. Lew went on to determine the maximum mass and the mass/volume ratio, typing each step on a PowerPoint slide as he made

the calculations. He told the students that they must make at least five different boat shapes during the experiment. He wrote the number 5 next to step #2 on the PowerPoint slide.

After Mr. Lew showed students the steps for calculating mass/volume ratios described above, he gave students thirty seconds to get into their assigned group, get their items organized for the experiments, and begin working. Mr. Lew circulated through the classroom, supervising the students and answering their questions. After about five minutes, Mr. Lew determined that all the groups except one were clear about their assignment. To clarify for the other group, Mr. Lew drew that group's attention to another group that was doing well. He asked one student to stand and explain the steps of what they were doing. As the student talked, Mr. Lew pointed to the step-by-step instructions projected on the screen. When the student finished explaining, Mr. Lew asked a volunteer from the group that was having difficulty to explain what they were going to do.

After all groups had calculated at least five boats' mass/volume ratios, Mr. Lew used the document reader to show a table with columns for mass and volume figures. He asked students to pool their data by selecting two boats per group and reporting their mass and volume. A representative from each group wrote the group's figures in the appropriate columns on the document reader. Then Mr. Lew told the class that they would use these data to construct a graph, plotting the maximum mass held by the boat on the y-axis and the boat's volume on the x-axis. Each student then plotted the mass-to-volume ratios on their individual graphs. At the end of the lesson, Mr. Lew had the class look at the objective written on the board and asked each student to write on his or her paper why some objects float and others sink.

Check your understanding: On the SIOP form in Figure 4.3, rate Mr. Lew's lesson on each of the Comprehensible Input features.

Mrs. Castillo

As is her practice, Mrs. Castillo wrote the objective, "Find the mass/volume ratio for objects that float," on the board. She began the lesson by discussing the fact that some things float and others sink, giving examples of objects that float, such as a large ship, and others that sink, such as a small coin. Then she asked the class if they knew what makes some objects float and others sink. A few students guessed, but nobody was able to give an accurate explanation. During the discussion, Mrs. Castillo's rate of speech was normal for her speech style, with a mix of both simple and slightly complex sentences. When the discussion was completed, she noticed that some of the students still seemed confused. She thought that watching the video might clear up any questions students might have.

After the video, Mrs. Castillo told the students that the information they had learned from the video about buoyancy was also in their text. She asked them to read the first three pages of their text to themselves and stated that they would discuss it when they'd finished. After the students indicated that they were done reading, Mrs. Castillo asked if there were any words in the text they did not know. Several students called out unfamiliar words, and the teacher wrote them on the

FIGURE 4.3 Comprehensible Input Component of the SIOP® Model: Mr. Lew's Lesson

4	3	2	1	0
10. Speech appropriate for students' proficiency levels (e.g., slower rate, enunciation, and simple sentence structure for beginners)		Speech sometimes inappropriate for students' proficiency levels		Speech inappropriate for students' proficiency levels
4	3	2	1	0
11. Clear explanation of academic tasks		Unclear explanation of academic tasks		No explanation of academic tasks
4	3	2	1	0
12. A variety of techniques used to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language)		Some techniques used to make content concepts clear		No techniques used to make concepts clear



Reflect and Apply

Click here to explain your ratings for Mr. Lew's lesson on each of the Comprehensible Input features.

overhead. Then she assigned students at each table a word to look up in the glossary. After several minutes, she asked the students what they had found. Only about half of the words were included in the glossary, since the other words were not science terms per se, but words such as *therefore* and *principle*. Mrs. Castillo orally gave students the definitions of those words that were not in the glossary and then summarized the information the students had read in the text. While reading, she intermittently asked questions to encourage scientific thinking but students were reluctant to respond. As she talked, she occasionally spoke rapidly, using long, detail-laden sentences in her summary. When she noticed that students were not paying attention, she slowed her rate of speech to make it understandable and to regain students' interest.

Mrs. Castillo continued the lesson following the same format as described previously. She asked students to read a portion of the text, paused to clarify unknown vocabulary, and summarized the part of the text students read. When they completed the chapter, Mrs. Castillo selected several end-of-chapter questions for students to answer. She let students work in pairs or groups to complete the questions, and then the class discussed the answers together.

Check your understanding: On the SIOP form in Figure 4.4 on the following page, rate Mrs. Castillo's lesson on each of the Comprehensible Input features.

FIGURE 4.4 Comprehensible Input Component of the SIOP® Model: Mrs. Castillo's Lesson

4	3	2	1	0
10. Speech appropriate for students' proficiency levels (e.g., slower rate, enunciation, and simple sentence structure for beginners)		Speech sometimes inappropriate for students' proficiency levels		Speech inappropriate for students' proficiency levels
4	3	2	1	0
11. Clear explanation of academic tasks		Unclear explanation of academic tasks		No explanation of academic tasks
4	3	2	1	0
12. A variety of techniques used to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language)		Some techniques used to make content concepts clear		No techniques used to make concepts clear



Reflect and Apply

Click here to explain your ratings for Mrs. Castillo's lesson on each of the Comprehensible Input features.

Discussion of Lessons

10. *Speech Appropriate for Students' Proficiency Level (Rate and Complexity)*

Mr. Dillon: 0

Mr. Lew: 4

Mrs. Castillo: 2

As you can see in the lesson descriptions, the teachers varied in their attention to the unique language needs of the English learners in their classes.

- **Mr. Dillon** seemed unaware that his students would understand more if he adjusted his oral presentation to accommodate the proficiency levels of English learners in his class. He lectured about new, complex concepts without regard to either his rate of speech or the complexity of his speech, variables that impact English learners' ability to comprehend information in class. Also, copying definitions for new terms and creating original sentences are inordinately difficult tasks for English learners. Unwittingly, Mr. Dillon set the students up for failure and then was frustrated by the low number of completed homework assignments. While he believed students chose not to complete assignments, in reality they *could not* complete the type of assignment he gave.

Mr. Dillon did not discuss the lesson content or the class or homework assignments in any meaningful or understandable way for English learners. He thought that discussing the material in the chapter and asking questions during his lecture would make the concepts clear for his students, but the type of language he used did little to facilitate learning for them. His efforts were lost on the English learners who needed richer, comprehensible development of the lesson's concepts to understand the text or lecture. The few students who participated in the discussion gave Mr. Dillon the inaccurate impression that the class was following along.

- **Mr. Lew** was the most attuned to the benefit of modulating his speech to make himself understood by the students. He slowed his rate of speech and enunciated clearly when he addressed beginning speakers; he adjusted his speech for the other, more proficient speakers of English. He used a natural speaking voice but paid attention to his rate of speed and enunciation. Further, Mr. Lew adjusted the level of vocabulary and complexity of the sentences he used so that students could understand. Since most students were beginning English speakers, he selected words that were appropriate to their proficiency level. Although the science book highlighted nearly fifteen terms for the unit on buoyancy, Mr. Lew knew from experience that it is better for his students to learn fewer vocabulary words thoroughly than to give superficial treatment to dozens of content-associated vocabulary words. His students will be able to use and apply the selected words and their concepts since they have a complete understanding of their meaning.
- **Mrs. Castillo's** rate of speech and enunciation vacillated between that used with native speakers and a rate that her students could understand. She didn't consistently adjust her speech (rate or complexity) to the variety of proficiency levels in the class. She was aware that her English learners needed extra attention in understanding the language, but she only addressed their needs by asking for unfamiliar vocabulary and with occasional comprehension questions. She could have paraphrased, using simpler sentence structure, and she could have used synonyms for words that appeared too difficult for students to understand. The questions could have been structured so that they were comprehensible.

11. *Clear Explanation of Academic Tasks*

Mr. Dillon: 1

Mr. Lew: 4

Mrs. Castillo: 1

Making your expectations crystal clear to students is one of the most important aspects of teaching, and when working with English learners, explicit, step-by-step directions can be critical to a lesson's success. It is difficult for almost any student to remember directions given only orally, and oral directions may not even be understood by many English learners. A lesson is sure to get off to a rocky start if students don't understand what they are expected to do. Written procedures and modeling provide students with a guide.

- **Mr. Dillon** had a tendency to be unclear about his expectations but then blamed the students for not completing work. It is obvious that he doesn't understand the importance of making sure students are given explicit instructions at their level of understanding. First, he made unsubstantiated assumptions about the students' knowledge and ability to complete tasks. He said, "You remember how to calculate mass/volume ratios? . . . Okay, just calculate the ratios for each object and address the problem of buoyancy" and left them to work independently. Some students did not know how to calculate the ratios or express in writing whether or not the object would float, but were left on their own to try to do so.

Second, while he did demonstrate how to calculate ratios, Mr. Dillon should have done that kind of demonstration *before* asking students to do it independently. He should have also modeled writing a statement about the object's buoyancy. Teaching is more effective when a good model is demonstrated prior to the exercise, rather than a post hoc review of student work, correcting their mistakes after completion. The process of explaining the assignment *after* students completed the worksheet was particularly confusing for the English learners in his class who struggled to make sense of the assignment only to find out that they had calculated most of the problems incorrectly and therefore couldn't determine the object's buoyancy.

Third, Mr. Dillon did not make his expectations—for in-class assignments and for homework—clear by modeling and discussing what students were to do. He should have provided a step-by-step explanation of the academic tasks he asked the students to complete.

- As an experienced teacher, **Mr. Lew** understood the value of being explicit in what he wanted the students to do. He walked them through each step of the buoyancy experiment, demonstrating what they were expected to do. When a group hadn't gotten started, he had other students model the steps of the assignment for the class, drawing their attention again to the instructions on the PowerPoint slide. The effort that Mr. Lew put into making sure students knew what to do contributed to the success of the lesson and enhanced learning.
- **Mrs. Castillo**, on the other hand, did not explain to the students what was expected during the lesson, although the expectation was implied by the format she used: read material, discuss unknown terms, answer questions, summarize material. Since Mrs. Castillo followed the same format whenever the class read from the text, the students knew what was expected, however uninteresting the format made the lessons.

The focus of this feature is explaining tasks clearly so students know what they are expected to do. However, it is also important that the tasks themselves reflect high expectations. Mrs. Castillo's lesson did not have the rigor or practices that are reflected in the NGSS.

12. *A Variety of Techniques Used*

Mr. Dillon: 2

Mr. Lew: 4

Mrs. Castillo: 0

Concepts become understandable when teachers use a variety of techniques, including modeling, demonstrations, visuals, and body language.

- **Mr. Dillon** attempted to employ a number of techniques to make concepts clear, such as using the text as a basis for discussion, showing the video, providing a worksheet that showed different-size boats and other objects, and demonstrating some of the calculations. Also, he let students work in pairs to calculate the mass-to-volume ratios and determine the buoyancy of each object. However, Mr. Dillon should have introduced the video more effectively by, for instance, reviewing the meaning of the terms used in the video or giving an outline of the concepts presented. The video would have been more meaningful if he had debriefed it with students. In the lesson he also could have used more visuals, modeled what he expected from the students *before* he asked them to work independently, and provided a hands-on activity for this lesson. Some lessons, like this one, lend themselves easily to hands-on activities, but Mr. Dillon did not take advantage of the opportunity.
- Throughout his lesson, **Mr. Lew** did an excellent job of providing visuals through the use of the tanks and aluminum foil, as well as by using PowerPoint slides, video, and the document reader. Not only did he write the vocabulary and assignment for students to see, but also he consistently referred back to the visual information. In addition to providing a clear explanation of the assignment, this technique teaches students to use visual clues to gain understanding. Also, Mr. Lew used graphing and writing effectively to review the concepts of the lesson. Notice that these academic tasks came after students were already familiar with the lesson's concepts and vocabulary, which increased the likelihood that students would be able to successfully complete the academic tasks.

Finally, students were able to apply their knowledge through the hands-on activity, making the concepts of mass, volume, and buoyancy tangible, and thus more understandable. Measuring a boat's actual volume and determining maximum mass by adding to the mass by hand makes the concepts come alive for students. Compare the benefit of this hands-on activity to the other scenarios where the students simply went through a paper-and-pencil task. Surely those students learned and remembered less about buoyancy and mass-to-volume ratios than did the students in Mr. Lew's class.

- **Mrs. Castillo** is a compassionate teacher who is concerned about the academic success of the English learners in her class. She wanted to include scientific and engineering practices by asking questions and analyzing and interpreting data but she was concerned that those practices would be too difficult for her students. Her effort to help English learners understand the material included clarifying unknown vocabulary (in a somewhat random fashion), paraphrasing or summarizing the chapter (done orally, without visuals or other contextual clues), asking some oral questions, reducing the number of end-of-chapter questions (done independently by students), and having the students work together in answering questions (with no systematic checks for understanding). Although she had good intentions and wanted her

students to understand the concept of buoyancy, Mrs. Castillo did not use the kinds of techniques that make rigorous science content accessible for English learners.

The atmosphere in Mrs. Castillo's classroom was warm and nonthreatening for English learners. She chatted with students throughout the class and showed genuine interest in their well-being. Although it is clear that she enjoys working with students from diverse cultural backgrounds, she needs to develop practices that challenge students to engage in scientific inquiry. The lesson was presented almost entirely orally, which was difficult for the beginning English speakers in her class to follow. Having students read a portion of the text followed by her summary was a good idea, except that there were no techniques used to ensure students understood the text, which was likely too difficult for them to read independently. Also, she did not teach them the necessary skills so that eventually they could read texts on their own. The summary was given orally, which makes it likely that beginning English speakers gained little understanding from it. Mrs. Castillo should have had a more structured approach to reading the text and discussing the concepts followed by an activity where students applied the knowledge they had gained through reading. Finally, she should have adjusted the number of questions students had to answer according to their ability level. The students worked diligently on the assignment because they liked Mrs. Castillo and wanted to please her, but they needed assistance in making the information meaningful—assistance beyond what Mrs. Castillo provided.



Watch this video as Dr. Deborah Short describes the features of CI. To what extent is each of the three SIOP features for Comprehensible Input present in the science lesson?

(For more examples of lesson and unit plans in science for grades K–12, see Short, Vogt, and Echevarría, 2010.)

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Put the Pieces Together with Presentation Software: During a conversation with Ms. Palacios, Mr. Lew decided to expand his use of PowerPoint for the buoyancy lesson. He wanted to move beyond using just a few slides with instructions. Mr. Lew wanted to make sure the students were engaged and had access to the content. He designed his first slide to read *Sink vs. Float: What is buoyancy?* On that initial slide, in addition to the catchy title, he inserted images that clearly represented those concepts. The subsequent slide revealed the objectives of the lesson. After the objectives were slides with important vocabulary accompanied by related images. For example: for the word *predict*, Mr. Lew added clipart images of a fortuneteller and the weather forecast. His final slides described the tasks the students must complete.

While revising the presentation, Mr. Lew decided to impose a few creative constraints. First, he limited the presentation to eight slides only. This limitation would cause him to be precise in his language use and not risk

overwhelming his students with too much information. Second, he knew that visuals were essential. In addition to the images, he searched YouTube and found a number of videos showing experiments with buoyancy. Mr. Lew then added an animation showing the equation for density and a problem being solved.

Mr. Lew posted the presentation on his teacher Web site, where students used it as a reference while completing the related buoyancy assignments. For the next lesson, Mr. Lew followed the same presentation format to reinforce his new method of lesson launch and to ensure an accessible amount of information shown in a comprehensible manner.

Related Tools: *Keynote, Google Slides, Prezi, Haiku Deck*

Student Response System: Mr. Dillon reflected on his lesson and felt his students could benefit from another introduction to buoyancy. He wondered if there was a technology component that might enhance the lesson. He noticed that Ms. Palacios mentioned new tools in her weekly tech news e-mail. She described a student response system called *Socrative* that allows students to answer short quizzes, participate in polls, and complete Do Nows and exit tickets from various devices. Ms. Palacios explained that often these tools don't require students to create accounts, making the process easier. The newsletter described how many of these systems allow you to see students' responses in real time and to track data over multiple lessons. Mr. Dillon thought this sounded like an interesting tool and decided to include it as part of his lesson.

Ms. Palacios came to Mr. Dillon's classroom a few minutes before the period began. She set up iPads on tables in Mr. Dillon's room. She used her low cost iPad holders (dish drying racks) to arrange them for easy student access. There weren't enough iPads for each student in the class, but Mr. Dillon decided pairing students would generate more interaction among them because together they would have to debate the answers to the questions.

At the beginning of class, Ms. Palacios demonstrated how to use *Socrative*, which students accessed on the tablets. She walked the students through joining Mr. Dillon's "room" using a code generated by the site. Then they answered a practice question about their favorite breakfast foods. Taking a few tips from Mr. Lew's lesson, Mr. Dillon asked the students to predict whether certain objects would float or sink. Students responded to the questions and Mr. Dillon was able to track answers on his iPad and discuss the answers with the students. He also added an exit ticket to help him learn more about the students' understanding and plan where his next lesson should begin.

Other terms for this type of tool: student clickers, audience response systems

Related Products: *Verso, Kahoot, Poll Everywhere, Geddit* and other products that connect with various brands of interactive whiteboards.

Due to the constantly evolving nature of the Internet, it is a challenge to ensure that all of the links and Web services listed here are updated and functional when you read the technology sections. While specific tools or services may appear in the narrative, we have also included the general term for each tool. If a specific service does not work or is no longer available, search with the general term for the tool and you should be able to find a comparable Web site.



Check Your Understanding

Click here to check your understanding of Chapter 4, Comprehensible Input.

■ Summary

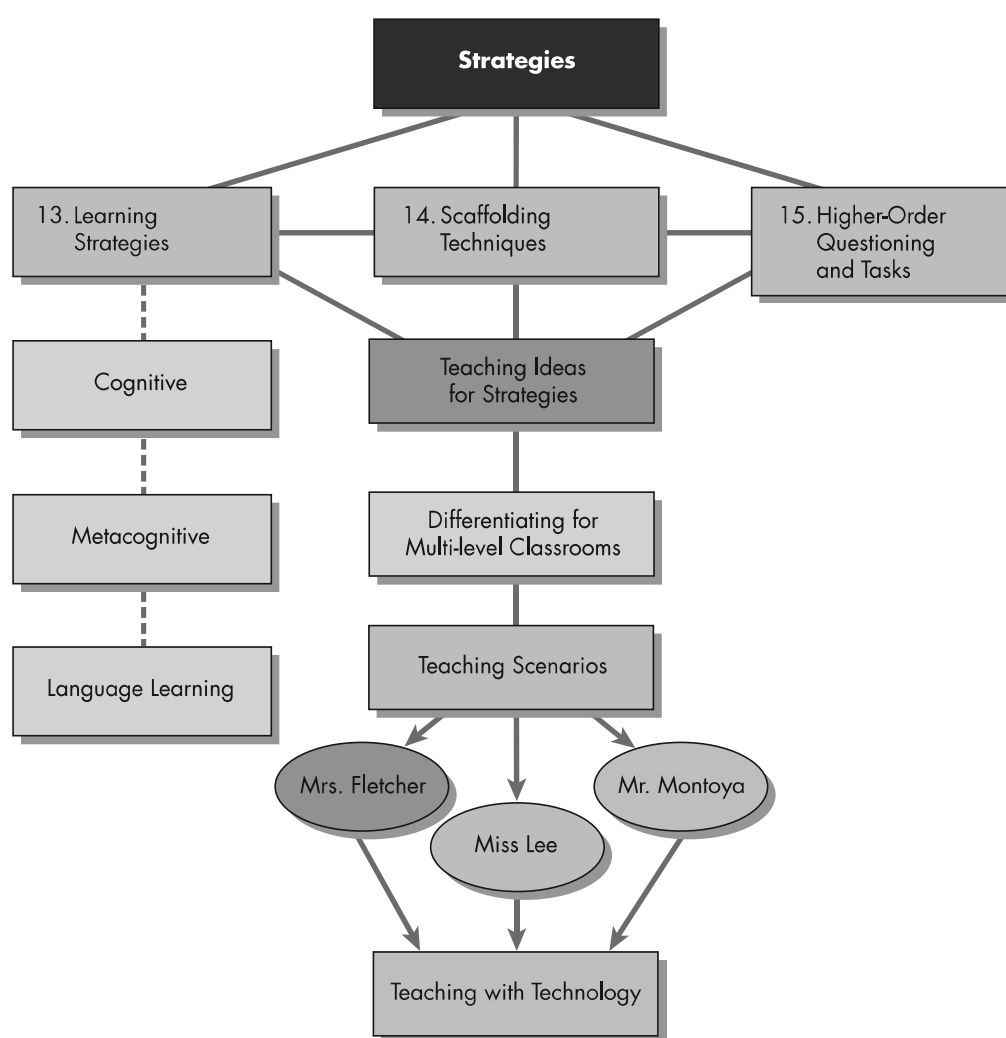
As you reflect on this chapter and consider the impact of comprehensible input on learning, consider the following main points:

- Although English learners learn in many of the same ways as fluent English-speaking students, they do require special supports or accommodations to make instruction understandable (August & Shanahan, 2006; Goldenberg, 2008).
- Effective SIOP teachers constantly modulate and adjust their speech to ensure that the content is comprehensible.
- Concepts are taught using a variety of techniques, including modeling, gestures, hands-on activities, and demonstrations, so that students understand and learn the content material.
- Effective SIOP teachers provide explanations of academic tasks in ways that make clear what students are expected to accomplish and that promote student success.

■ Discussion Questions

1. In reflecting on the learning outcomes in the content and language objectives at the beginning of the chapter, are you able to:
 - a. Identify techniques for presenting content information in ways that students comprehend?
 - b. Review various ways to provide directions for completing academic tasks?
 - c. Discuss modifications to teacher speech that can increase student comprehension?
 - d. Write the steps needed for students to perform an academic task and have a partner perform each step?
2. Many times in classrooms, discipline problems can be attributed to students not knowing what they're supposed to be doing. If students don't know what to do, they find something else to do. What are some ways that you can avoid having students become confused about accomplishing academic tasks?
3. If you have traveled in another country, or if you are an English learner, reflect on difficulties you had in understanding others. What are some techniques people used to try to communicate with you? What are some techniques you can use in the classroom?
4. Using the SIOP lesson you have been developing, add to it so that the Comprehensible Input features in the lesson are enhanced.
5. For the lesson on buoyancy, what are some comprehension checks that are quick, nonthreatening, and effective for determining if a student is ready to move on?

Strategies



Learning Outcomes

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

Identify the learning strategies that your students are currently using, and suggest others that they need to learn and practice. Identify techniques for verbal, procedural, and instructional scaffolding.

Language Objectives

Identify language learning strategies to include in a lesson. Write a lesson plan that includes explicit instruction with learning strategies, and varied techniques for scaffolding student understandings. Write a set of questions or tasks on a chosen topic with increasing levels of cognition.

Think about a time when you had to solve a really challenging problem. For example, you were trying to balance the family budget; or perhaps you were trying to find a particular location while driving, and your GPS was taking you in what seemed like the opposite direction; or maybe you were reading an important document that you didn't understand, and even though you read it twice, you still didn't get it.

If these were actual problems you were facing, what would you do to solve each one? More than likely, as an experienced learner, you would activate a plan for dealing with each problem, and you would do so by relying on a repertoire of strategies you have developed over the years, for balancing a budget, for finding your way from point A to point B, or for navigating difficult reading material. As you think about these strategies, which were taught to you by someone with more experience? Which did you learn by yourself through trial and error? ●



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■ Background

As introduced in Chapter 3, researchers have found that information is retained and connected in the brain through “mental pathways” that are linked to an individual's existing schemata (Anderson, 1984; Barnhardt, 1997). If schemata for a particular topic are well developed and personally meaningful, new information is easier to retain and recall, and proficient learners initiate and activate their associations between the new and old learning. In cognitive theory, initiation and activation are described as the mental processes that enhance comprehension, learning, and retention of information.

Teachers of **English learners** sometimes have difficulty determining their students' proficiency with learning strategies, especially in the beginning stages of their acquisition of English. Teachers may observe English learners' lower *English* proficiency and misjudge it as a symptom of poor or underdeveloped *learning*

strategies. In this chapter, we discuss the importance of teaching and providing practice with a variety of learning strategies that facilitate knowledge acquisition. We also suggest that all students, including English learners, benefit from questions and tasks that involve higher levels of thinking. In order to accomplish these goals, teachers must carefully scaffold instruction for those who need additional support.



SIOP® FEATURE 13:

Ample Opportunities Provided for Students to Use Learning Strategies

There is considerable evidence from research over the past four decades supporting the assertion that explicitly teaching a variety of self-regulating strategies improves student learning and reading (August & Shanahan, 2010; Dole, Duffy, Roehler, & Pearson, 1991; Pressley, 2000; 2002; Snow, Griffin, & Burns, 2005; Vogt & Nagano, 2003). Many of these research studies focused on highly effective readers and learners who use a variety of strategies in an interactive and recursive manner. These readers use learning strategies that are flexible and appropriate to the task. They are also active and strategic thinkers who can readily transfer strategies to new tasks.

As English learners develop English proficiency, it is important that their language, literacy, and content instruction include a focus on learning and practicing a variety of strategies (Chamot, 2009; Dymock & Nicholson, 2010; National Institute of Child Health and Human Development, 2000; Vogt, Echevarría, & Short, 2010).

Among the strategies that can be taught and that generally transfer to new learning are:



Watch this video in which Dr.

MaryEllen Vogt describes learning strategies—what they are and how we can teach them meaningfully. Consider your own learning—under what conditions do you learn best, and which cognitive and metacognitive strategies do you regularly use? <https://www.youtube.com/watch?v=rhYI3w5I0EA>

1. **Cognitive Learning Strategies.** Cognitive strategies are used by learners when they mentally and/or physically manipulate information, or when they apply a specific technique to a learning task (McLaughlin, 2010; Vogt & Shearer, 2011). Examples of cognitive strategies include the following:
 - ◆ Previewing a story or chapter before reading
 - ◆ Establishing a purpose for learning
 - ◆ Consciously making connections with past learning
 - ◆ Using mnemonics
 - ◆ Highlighting, underlining, or using sticky notes to identify important information
 - ◆ Taking notes or outlining
 - ◆ Rereading to aid understanding
 - ◆ Mapping information or using a graphic organizer
 - ◆ Identifying key vocabulary
 - ◆ Identifying, analyzing, and using varied text structures
2. **Metacognitive Learning Strategies.** *Metacognition* is the process of purposefully monitoring our thinking (Baker & Brown, 1984). The use of metacognitive strategies implies awareness, reflection, and interaction, and effective learners

use these strategies in an integrated, interrelated, and recursive manner (Dole, Duffy, Roehler, & Pearson, 1991). Studies have found that when metacognitive strategies are taught explicitly and practiced frequently, reading comprehension is improved (Duffy, 2002; Snow, Griffin, & Burns, 2005; Vogt & Nagano, 2003). Examples of metacognitive learning strategies include:

- ◆ Predicting and inferring
- ◆ Generating questions and using the questions to guide comprehension
- ◆ Monitoring and clarifying (“Am I understanding? If not, what can I do to help myself?”)
- ◆ Evaluating and determining importance
- ◆ Summarizing and synthesizing
- ◆ Making mental images (visualizing)

3. **Language Learning Strategies.** As with other aspects of learning, effective language learners consciously use a variety of strategies to increase their progress in speaking and comprehending the new language (Cohen & Macaro, 2008). Examples of language learning strategies include:

- ◆ Conscientiously applying reading strategies, such as previewing, skimming, scanning, and reviewing
- ◆ Analyzing and using forms and patterns in English, such as the *prefix + root + suffix* pattern
- ◆ Making logical guesses based on contextual and syntactic information
- ◆ Breaking words into component parts
- ◆ Purposefully grouping and labeling words
- ◆ Drawing pictures and/or using gestures to communicate when words do not come to mind
- ◆ Substituting a known word when unable to pronounce an unfamiliar word
- ◆ Self-monitoring and self-correcting while speaking English
- ◆ Paraphrasing
- ◆ Guessing and deducing
- ◆ Imitating behaviors of native English-speaking peers to successfully complete tasks
- ◆ Using verbal and nonverbal cues to know when to pay attention

Other language learning strategies include those described as social-affective, such as seeking out conversational partners, taking risks with the new language, practicing English when alone, and combatting inhibition about using English by having a positive attitude. Another important social-affective strategy is asking for clarification, something that is often difficult for English learners.

Things to Consider When Teaching Learning Strategies

- The **Common Core State Standards** require that students adapt their communications for varied audiences, purposes, and tasks. While reading, writing, and speaking, students should be able to set and adjust their purposes as needed

by the particular tasks (© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.) This is precisely what it means to be an effective user of reading and language strategies.

- Whichever sets of strategies are emphasized, learned, and used, it is generally agreed that they can be taught through explicit instruction, careful modeling, and scaffolding (Fisher & Frey, 2014; Harvey & Goudvis, 2013; Vogt & Shearer, 2011).
- Lipson and Wixson (2012) suggest that just teaching a variety of strategies is not enough. Rather, learners need not only *declarative* knowledge (What is the strategy?), but also *procedural* knowledge (How do I use it?) and *conditional* knowledge (When and why do I use it?). Also, it is important that students practice and apply strategies with different tasks and genres.
- Many English learners who have been well schooled in their **home language** have developed a variety of learning strategies that they can talk about once they learn the English terms for them. Therefore, it's important to know your students' educational backgrounds and their native language literacy proficiency so you can be aware of what they already know and can do regarding strategy use in their home language.

Strategies transfer to learning in the new language. For example, once you know how to find a main idea in a text written in your home language (L1), you can do it with a text in your target language (L2). Likewise, if you know how to make predictions in your L1, you can engage in making predictions in your L2.

- Remember that having students list, identify, and label strategies is not the end goal. Instead, the desired outcome is for students to engage in various learning strategies while they're reading, listening, writing, speaking, and working with other students (Marcell, DeCleene, & Juettner, 2010, p. 687).
- To assist students in becoming effective strategy users, see the section Teaching Ideas for Strategies, later in this chapter. In particular, note the following instructional activities: Directed Reading-Thinking Activity (DR-TA), SQP2RS (Squeepers), Question-Answer Relationships (QAR), and Questioning the Author (QtA). Also, see Mr. Montoya's lesson on The Rainforest in this chapter, and determine which cognitive, metacognitive, and language learning strategies his lesson incorporates.

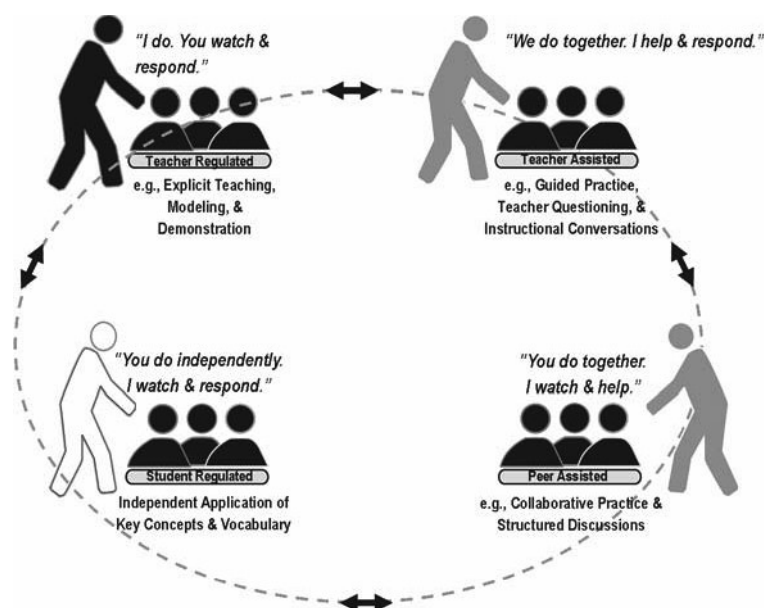


SIOP® FEATURE 14:

Scaffolding Techniques Consistently Used, Assisting and Supporting Student Understanding

Scaffolding is a term coined by Jerome Bruner (1983) that is associated with Vygotsky's (1978) theory of the Zone of Proximal Development (ZPD). In essence, the ZPD is the difference between what a child can accomplish alone and what he or she can accomplish with the assistance of a more experienced individual. The assistance that is provided by a teacher is called *scaffolding*.

FIGURE 5.1 Scaffolding: Gradual Increase of Student Independence (GISI)



Reproduction of this material is restricted to use with Echevarría, J., Vogt, M.E., & Short, D. (2017). *Making Content Comprehensible for English Learners. The SIOP Model* (5th Ed.) Boston: Pearson/Allyn & Bacon.



Watch this video to see teacher

Megan Montgomery talk about scaffolding for her students in grades 5–6. Compare Ms. Montgomery’s scaffolding scheme to Figure 5.1. What are the implications of each scheme for you and your students? <http://www.youtube.com/gleNo8dqHb8?list=PLFUCIV4pZkjMw-UAFV1NnRAOnNqSGhCYb>

Pearson and Gallagher (1983) described ZPD and scaffolding as the “gradual release of responsibility” (GRR) as it relates to classroom practices. Do a Web search for “gradual release of responsibility” and you will find several interesting graphics depicting the move from teacher-regulated learning to student independence. The intent of the GRR model is to move from reliance on the teacher to student independence in applying key content concepts and vocabulary, but as we all know, a lesson may not move smoothly from one phase to the next.

What has been mostly absent in GRR explanations is the notion that teaching is a recursive, not linear, process. Therefore, we offer an alternative to GRR that has as its focus recursive teaching, which is essential for English learners and struggling students (see Figure 5.1). With GISI, after explicitly teaching a concept (*I do. You watch and respond.*), students practice what has been taught with assistance from the teacher (*We do together. I help and respond.*). Students who are successful can then practice with other students, with minimal supervision (*You do together. I watch and respond.*). For some students it may be necessary to take a step back and reteach and re-model before moving again to supported practice. Of course, the goal for all students is independent application of key concepts and vocabulary (*You do independently. I watch and respond.*). This process is definitely not linear and it leads to differentiated teaching, enabling those who can move forward to do so. But for those who need additional modeling and support, opportunities are provided. Whether you are using the Common Core, the Next Generation Science, or other rigorous standards, it is essential for all students, including English learners, to have appropriate, scaffolded instruction that leads to eventual independence.

Three Types of Scaffolding

Three types of scaffolding can be used effectively with English learners: Verbal, Procedural, and Instructional.

1. **Verbal Scaffolding.** Teachers who are aware of English learners' existing levels of language development use prompting, questioning, and elaboration to facilitate students' movement to higher **levels of language proficiency**, comprehension, and thinking. The following are examples of verbal scaffolding:
 - ◆ Paraphrasing: Restating a student's response in another form or in other words to clarify and model correct English usage aids students' language development and comprehension.
 - ◆ Using think-alouds: These structured models of how effective strategy users think and monitor their understandings usually are provided by the teacher, but they can also be modeled by other students.
 - ◆ Reinforcing contextual definitions: An example is "Aborigines, the people native to Australia, were being forced from their homes." The phrase "the people native to Australia" provides a partial definition of the word "Aborigines" within the context of the sentence.
 - ◆ Providing correct pronunciation by repeating students' responses: When teachers repeat English learners' correct responses, enunciating carefully and naturally, students have an additional opportunity to hear the content information, pronunciation, and inflection. Saunders and Goldenberg (2010) also suggest that dedicating time to work on pronunciation may be beneficial.
 - ◆ Eliciting more language and information from students: Rather than accepting one- or two-word responses, ask students to add on, tell more, or explain their ideas more fully, giving them the chance to advance their language skills.
2. **Procedural Scaffolding.** Effective teachers also incorporate instructional approaches that provide *procedural scaffolding*. Examples include:
 - ◆ Using an instructional framework, such as GISI (Figure 5.1) that includes explicit teaching, modeling, and guided and independent practice, with an expectation of eventual student independence.
 - ◆ Small-group instruction, in which students practice a newly learned strategy with another more experienced student.
 - ◆ Partnering or grouping students for reading and content activities, with more experienced readers assisting those with less experience.
3. **Instructional Scaffolding.** Teachers use *instructional scaffolding* to provide English learners with access to content and language concepts. Examples include:
 - ◆ Graphic organizers are used as a prereading tool to prepare students for the content of a textbook chapter. The organizer can also be used to illustrate a chapter's text structure, such as comparative or chronological order (Vogt & Echevarría, 2008).

- ◆ Models of completed assignments are instructional scaffolds, too. Teachers can show students sample products, such as posters, booklets, podcasts, and the like, to give them a clear picture of their goal.

As you begin to write SIOP lesson plans, keep this in mind: *A scaffold is a temporary structure for helping students complete a task that would otherwise be too difficult to do alone.* The release of verbal, procedural, and instructional scaffolds is gradual until student independence has been achieved. Resist the temptation to keep scaffolding in place beyond the point that students need it. Current assessments related to the Common Core State Standards require that students complete assessment tasks without teacher scaffolding, so stay alert to students' increasing independence with learning tasks.



SIOP® FEATURE 15:

A Variety of Questions or Tasks That Promote Higher-Order Thinking Skills

Another way that effective SIOP teachers can promote strategy use is by asking questions and providing tasks that promote critical thinking. Sixty years ago, Benjamin Bloom and colleagues (1956) introduced a now-familiar taxonomy of educational objectives that includes six levels, listed here from lowest to highest: *Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation*. This taxonomy was formulated on the principle that learning proceeds from concrete knowledge to abstract values, or from the denotative to the connotative. For decades, educators adopted this taxonomy as a hierarchy of questioning that, when used effectively in the classroom, elicited varied levels of student thinking.

Subsequently, D. R. Krathwohl, who originally worked with Bloom and his colleagues, published a revised taxonomy (see Anderson & Krathwohl, 2001). In the revised taxonomy, the six levels are, again from lowest to highest: *Remember, Understand, Apply, Analyze, Evaluate, and Create*. Webb (1997) developed a similar, but more complex system and criteria for aligning **standards**, teaching, and **assessment**, called Depth of Knowledge (DOK).

Whichever taxonomy teachers choose to use when designing lessons, it is important to carefully plan higher-order questions and tasks prior to lesson delivery. It is just too difficult to think of these questions on the spot when you're teaching.

In fact, of the approximately 80,000 questions the average teacher asks annually, 80% of them are at the literal level (Gall, 1984; Watson & Young, 1986). This is especially problematic with English learners. As students are acquiring proficiency in English, it is tempting to rely on simple questions that result in yes/no or other one-word responses. It is possible, however, to reduce the linguistic demands of responses while still promoting higher levels of thinking. For example, in a study of plant reproduction, the following question requires little thought: "Are seeds sometimes carried by the wind?" A nod or one-word response is almost automatic if the question is understood. However, a higher-level question such as the following requires analysis, though not a significant language demand: "Which of these seeds would be more likely to be carried by the wind: the rough one or smooth one? Or this

Watch this video to see a middle school science lesson with teacher Brian Fireng. What are some of the higher-order thinking skills and learning strategies that his students are using during this lesson?

one that has fuzzy hairs? Why do you think so?” Encouraging students to respond with higher levels of thinking requires teachers to consciously plan and incorporate questions and tasks at a variety of levels.



Teaching Ideas for Strategies

In the section that follows, you will find some teaching ideas to help you with preparing SIOP lessons.

- **Digital Storytelling** (Sylvester & Greenidge, 2009). A digital story combines old and new literacies as students speak, write, and create a multimedia text consisting of still images and a narrated soundtrack. Especially appealing to students who struggle with writing, including some English learners, digital stories provide an exciting, hands-on, and innovative way to create stories. In their stories, students focus on elements such as point of view, emotional content, pacing, and music to hold the viewer’s interest (Sylvester & Greenidge, 2009). Note that creating and sharing digital stories requires students to engage with cognitive, metacognitive, and language learning strategies.
- **Directed Reading-Thinking Activity (DR-TA)** (Ruddell, 2007; Stauffer, 1969; Vogt & Echevarría, 2008). DR-TA is a very effective activity for encouraging strategic thinking while students are reading or listening to narrative (fiction) text. It’s effective in all grades with the steps given below; only the difficulty level of the text changes for older students. The text to be read should be rich, interesting, and, if possible, have a surprising or unanticipated ending. Throughout the reading of the story, stop periodically and have students contemplate predictions about what might follow logically in the next section of the text. Begin the DR-TA lesson with a question about what the class members think the story or book will be about, based on the title. As students respond, include a variety of probes, such as:
 - ◆ “With a title like . . . , what do you think this story will be about?”
 - ◆ “Let’s read to find out.”
 - ◆ “Did . . . happen? If not, why not?” (revisit predictions)
 - ◆ “What do you think is going to happen next? What makes you think so?”
 - ◆ “Where did you get that idea?”
 - ◆ “What made you think that?”
 - ◆ “Tell me more about that . . .”

It is important that you revisit previously made predictions after chunks of text are read so that students come to understand how predictions (and their confirmation or disconfirmation) impact their comprehension. Students can “vote” on which predictions are most likely as they focus their thinking on character and author motivations, problems characters face, reasons for characters’ behaviors, and how the plot unfolds. Note that a somewhat adapted DR-TA is also effective in the upper grades for longer novels, with chapter-to-chapter discussions focusing on what students think will happen, what really happened, and why. (In Chapter 3, Mrs. Ornelas’s lesson vignette includes a DR-TA activity.)

- **SQP2RS (“Squeepers”)** This instructional framework for teaching content with expository texts includes the following steps (Vogt, 2000, 2002; Vogt & Echevarría, 2008):
 1. **Survey:** Students preview and scan the text to be read for about one minute to determine key concepts that will be learned. For children in grades pre-K–2, preview an informational Big Book with your students.
 2. **Question:** In groups, students generate questions likely to be answered by reading the text. Post student questions, one by one on chart paper, and mark an asterisk by the question for each group that had the same or similar question. This is a great opportunity to model for beginning English speakers how questions are formed in English.
 3. **Predict:** As a whole class, students come up with three or four key concepts they think they will learn while reading; the predictions are based on the previously generated questions, especially those marked with asterisks. Model this step with younger children.
 4. **Read:** While reading (with partners or small groups, or with you in a small group), students search for answers to their generated questions and confirm or disconfirm their predictions. Use sticky notes or sticky strips to mark answers to questions and to indicate spots where predictions have been confirmed.
 5. **Respond:** Students answer questions (not necessarily in writing) with partners or group members and formulate new ones for the next section of text to be read (if the text is lengthy); then, lead a discussion of key concepts, clarifying any misunderstandings.
 6. **Summarize:** Orally or in writing, alone or with a partner or group, students summarize the text’s key concepts, using key vocabulary where appropriate.

Read Mr. Montoya’s lesson later in this chapter to see Squeepers in action. For math, see the adaptation of the Squeepers process in Figure 5.2. For more information on Squeepers, see Vogt and Echevarría (2008).
- **GIST (Generating Interactions between Schemata and Texts)** This summarization procedure assists students in “getting the gist” from extended text (Cunningham, 1982; as cited in Muth & Alvermann, 1999). Together with students, read a section of text (150 to 300 words) displayed on a whiteboard, in a PowerPoint presentation, or in a handout. After reading, assist students in underlining 10 or more words or concepts that are deemed “most important” to understanding the text. List these words or phrases on the board. Without the text, together write a summary sentence or two using as many of the listed words as possible. Repeat the process through subsequent sections of the text. When finished, write a topic sentence to precede the summary sentences; the end result can be edited into a summary paragraph. This technique is also useful when viewing video clips. Students watch, record 10 key words or phrases, and then create summary sentences.
- **Graphic organizers** Graphic organizers provide scaffolding for students in the form of a visual representation of language (August & Shanahan, 2010). They are schematic diagrams of key concepts and other information, and students use them to organize the information they are learning. Examples include Venn diagrams,

FIGURE 5.2 SQP2RS (“Squeepers”) for Math

Note that this Squeepers adaptation works well for math lessons. The steps are the same, but how they work in the lesson is slightly different.

SURVEY Before you read, ask yourself: What will this lesson be about? Look at the types of problems you will solve.

QUESTION After your text survey, write 1–3 problems you may be able to solve by the end of this lesson.

PREDICT Predict 1–3 math skills you might use to solve the problems in this lesson. What prior knowledge or new knowledge is necessary?

READ Read the lesson.

RESPOND After you read, try to answer the sample questions and confirm your predictions about the necessary math skills.

SUMMARIZE After you read, write a 4-sentence summary:

Sentence 1: The big idea of the lesson.

Sentences 2–4: How would you explain how to solve the problems in this lesson to a classmate who was absent?

(SQP2RS math adaptation created by Karlin LaPorta and Melissa Canham, Downey Unified School District. Used with permission.)

timelines, flow charts, semantic maps, and so forth. See Buehl (2013) and Vogt and Echevarría (2008) for many examples of effective graphic organizers.

- **Reciprocal Teaching** (Oczkus, 2010; Palinscar & Brown, 1984) Reciprocal Teaching incorporates four metacognitive strategies that teachers and students practice to improve comprehension of text:
 - ◆ Predicting
 - ◆ Questioning
 - ◆ Clarifying
 - ◆ Summarizing

After students have learned each of the strategies, they meet in small groups to discuss which strategies they are using while reading. We have learned through teaching both techniques that when students learn to use the SQP2RS (Squeepers) steps first, they more readily engage in Reciprocal Teaching in small groups. (For detailed lesson plans, task cards, and other RT resources, see Oczkus, 2010).
- **Question-Answer Relationships (QAR)** (Raphael, 1984; Raphael, Highfield, & Au, 2006; Vogt & Echevarría, 2008). Students can become more strategic readers when they learn how to determine the levels of questions they are asked. Some questions can be answered by looking “In the Book” (*Right There* or *Think and Search*). Other questions need to be answered with prior knowledge and experience, and they’ll be found “In My Head” (*Author and Me* or *On My Own*).
- **Pre-Questioning** Burke (2002) explains the importance of older elementary students writing their own research questions *before* they use the Internet to find information, so that they steer, rather than surf for answers. In science, students could also use this technique prior to making a hypothesis.
- **Questioning the Author (QtA)** (Beck & McKeown, 2006) Successful learners know how to use question-asking to help them construct meaning while they read (Taboada & Guthrie, 2006). They ask questions and challenge what the author says if something does not make sense to them. Beck and McKeown (2002, 2006) recommend using the instructional approach known as Questioning the Author (QtA)

to develop students' comprehension of textbook material because it sometimes can be disjointed and lacking in connections between ideas and key concepts. QtA values the depth and quality of students' interactions with texts, and their responses to authors' intended meanings. It assists students in developing the ability to read text closely, as if the author were there to be questioned and challenged.

■ Differentiating Ideas for Multi-level Classes

Within the Strategies component, scaffolding is a focus, and by definition, scaffolding leads to **differentiated instruction**. One way to scaffold for English learners' varied language development needs while teaching learning strategies is through Strategic Sentence Starters (Olson, Land, Anselmi, & AuBuchon, 2011, p. 251). Giving students sentence starters or frames provides the support many need to be able to participate in literature and content area discussions. The following examples could be printed on small "cue cards" that students select and use as needed.

- *Planning and goal setting*
 - ◆ My purpose is . . .
 - ◆ My top priority (or most important job) is . . .
 - ◆ I will accomplish my goal by . . .
- *Tapping prior knowledge*
 - ◆ I already know . . .
 - ◆ This reminds me of . . .
 - ◆ This relates to . . .
- *Asking questions*
 - ◆ I wonder why . . .
 - ◆ What if . . . ?
 - ◆ How come . . . ?
- *Making predictions*
 - ◆ I'll bet that . . .
 - ◆ I think . . .
 - ◆ If _____, then . . .
- *Visualizing*
 - ◆ I can picture . . .
 - ◆ In my mind, I see . . .
 - ◆ If this were a movie, . . .
- *Making connections*
 - ◆ This reminds me of . . .
 - ◆ I experienced this once when . . .
 - ◆ I can relate to this because once . . .

- *Summarizing*
 - ◆ The basic gist is . . .
 - ◆ The key information is . . .
 - ◆ In a nutshell, this says that . . .
- *Monitoring*
 - ◆ I got lost here because . . .
 - ◆ I need to reread the part where . . .
 - ◆ I know I'm on the right track because . . .
- *Clarifying*
 - ◆ To understand better, I need to know about . . .
 - ◆ Something that is still not clear is . . .
 - ◆ I'm guessing that this means _____, but I need to know . . .
- *Reflecting and relating*
 - ◆ So, the big idea is . . .
 - ◆ A conclusion I'm drawing is . . .
 - ◆ This is relevant to my life because . . .
- *Evaluating*
 - ◆ I like/don't like _____ because . . .
 - ◆ My opinion is _____ because . . .
 - ◆ The most important message is _____ because . . .

(For more examples of SIOP lesson and unit plans in language arts, see Vogt, Echevarría, and Short, 2010.)

■ The Lesson

The Rain Forest (Middle School)

The three classrooms described in the teaching scenarios in this chapter are heterogeneously mixed with **native English speakers** and English learners who have mixed levels of fluency. The middle school is in a suburban community, and Hispanic English learners make up approximately 75% of the student population.

The following teaching scenarios take place during the first day of a multi-day unit on the interdependence of organisms in an ecosystem. Mrs. Fletcher, Miss Lee, and Mr. Montoya are each using the same article about the depletion of the rain forests taken from a science news magazine designed for middle school students. This lesson focuses on the rain forest as an ecosystem under attack and the resulting impact on organisms. The following middle school standard from the Next Generation Science Standards (NGSS Lead States, 2013), guided the development of the following lessons:

MS. Interdependent Relationships in Ecosystems. Students who demonstrate understanding can:

- Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

Common Core State Standards Connections (Reading, Grades 6-8; CCSS, 2010) include:

- Cite specific textual evidence to support analysis of science and technical texts.
- Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

■ Teaching Scenarios

To demonstrate how Mrs. Fletcher, Miss Lee, and Mr. Montoya planned instruction for their students, including their English learners, we look at how each designed a lesson on the rain forest, using the magazine article to introduce the topic to students.

Mrs. Fletcher

Mrs. Fletcher began her lesson by distributing the rain forest article to the students and asking them to read together the title, “The Deforestation of our Rain Forests.” She then directed them to predict from the title and opening photograph what they thought the article would be about. Several students had difficulty with the word *deforestation*, so Mrs. Fletcher reminded the class that the prefix *de-* means *removal* or *take away*. Mrs. Fletcher then began reading the article, stopping once to ask the class, “What do you think will happen to the plants and animals in this rain forest? What evidence did you hear to support your predictions?” When she had finished orally reading the article, she asked the students if they had any questions.

One of the students asked, “Why do people burn the rain forests if it’s so bad?” Mrs. Fletcher replied that the wood is very valuable and people want to make money from the sale of it. Because there were no further questions, she asked each student to write a letter to the editor of the local newspaper explaining why we, as humans, should save the rain forest ecosystem. She also reminded students to give specific examples from the article. Several of the students began writing, while others reread the article to find information to include in their letters. A few appeared confused about how to start, and Mrs. Fletcher helped them individually. When the class had finished writing their letters, Mrs. Fletcher asked for volunteers to read their papers aloud. After a brief discussion of the letters, Mrs. Fletcher collected them and dismissed the students for lunch.

Check your understanding: On the SIOP form in Figure 5.3, rate Mrs. Fletcher’s lesson on each of the Strategies features.

FIGURE 5.3 Strategies Component of the SIOP® Model: Mrs. Fletcher's Lesson

4	3	2	1	0
13. Ample opportunities provided for students to use learning strategies		Inadequate opportunities provided for students to use learning strategies		No opportunity provided for students to use learning strategies
4	3	2	1	0
14. Scaffolding techniques consistently used, assisting and supporting student understanding (e.g., think-alouds)		Scaffolding techniques occasionally used		Scaffolding techniques not used
4	3	2	1	0
15. A variety of questions or tasks that promote higher-order thinking skills (e.g., literal, analytical, and interpretive questions)		Infrequent questions or tasks that promote higher-order thinking skills		No questions or tasks that promote higher-order thinking skills



Reflect and Apply

Click here to explain your ratings for Mrs. Fletcher's lesson on each of the Strategies features.

Miss Lee

Miss Lee introduced the magazine article by presenting a 15-minute lecture on the rain forest and by showing a variety of photographs of the rain forest ecosystem. She then divided the students into groups of four or five, and asked one person in each group to read the magazine article to the other group members. When the students were finished reading, Miss Lee distributed worksheets. The students were first instructed to define words from the article, including *deforestation*, *biome*, *ecosystem*, and *organisms*. While Miss Lee circulated and provided assistance, students independently wrote answers to the following questions:

1. How much of the Earth's surface is covered by rain forests?
2. What percent of the Earth's species are found in the rain forest?
3. What are three products that come from the rain forests?
4. Why are the rain forests being burned or cut?
5. Who are the people that are doing the burning and cutting?
6. One of the birds found in the rain forest is a _____.
7. Global warming is believed to be caused by _____.
8. I hope the rain forests are not all cut down because _____.

FIGURE 5.4 Strategies Component of the SIOP® Model: Miss. Lee's Lesson

4	3	2	1	0
13. Ample opportunities provided for students to use learning strategies		Inadequate opportunities provided for students to a use learning strategies		No opportunity provided for students to use learning strategies
4	3	2	1	0
14. Scaffolding techniques consistently used, assisting and supporting student understanding (e.g., think-alouds)		Scaffolding techniques occasionally used		Scaffolding techniques not used
4	3	2	1	0
15. A variety of questions or tasks that promote higher-order thinking skills (e.g., literal, analytical, and interpretive questions)		Infrequent questions or tasks that promote higher-order thinking skills		No questions or tasks that promote higher-order thinking skills



Reflect and Apply

Click here to explain your ratings for Miss Lee's lesson on each of the Strategies features.

In addition to the rain forest article, Miss Lee encouraged students to use the class computers to search the Internet for the answers to these questions. She told them to type in “rain forest” on a search engine to begin their search, and to keep track of the electronic Web sites they explored.

When the students had finished writing their responses, they were to compare them to those of their group members. Miss Lee directed the class to use the article to fix any answers the group thought were incorrect. She explained that they needed to come to agreement and record their group answer on a clean handout. For question #8, students were to determine the best answer of the group members' responses.

Check your understanding: On the SIOP form in Figure 5.4, rate Miss Lee's lesson on each of the Strategies features.

Mr. Montoya (see Figure 5.5 for a complete lesson plan)

Mr. Montoya began his lesson by orally reviewing his lesson's content and language objectives, and by introducing the unit theme, Interdependence of Organisms in an Ecosystem. After distributing the magazine article on the tropical rain forest to his class, he engaged his students in a SQP2RS activity (“Squeepers,” p. 134). First,

FIGURE 5.5 SIOP® Lesson: Tropical Rain Forests (Science) Grade 7

Key: SW = Students will; TW = Teacher will; SWBAT = Students will be able to . . . ; HOTS = Higher-Order Thinking Skills

Content Standards:

Next Generation Standards

- Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
- Cite specific textual evidence to support analysis of science and technical texts.
- Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

Physical Science

- Students know how light can be reflected, refracted, transmitted, and absorbed by matter.

Key Vocabulary: Vocabulary Self-Collection Strategy (VSS); students will select key vocab after reading; teacher choices for VSS: *rain forest*; *deforestation*; *ozone layer*

Visuals/Resources: Article on deforestation of tropical rain forests; photographs from space depicting hole in the ozone layer; chart paper and markers

HOTS:

1. Why are we dependent on the rain forests for our survival on Earth?
2. Compare and contrast the arguments of foresters and environmentalists. With which argument do you most agree? Why?
3. Imagine the Earth in one hundred years. How would you describe it if the present rate of deforestation continues?
4. Pretend you are the president of the U.S. Write a letter to the president of the lumber company that is responsible for the overseas burning of many acres of rain forest. Try to convince her to stop destroying the rain forest and practice sustainable lumber development.

Connections: Prior Knowledge/Building Background/Previous Learning

TW review previously taught steps to SQP2RS including how to effectively survey expository text. In small groups, SW list responses to the following: “Based on our reading and discussions from last week, what are three reasons why some animals and plants have become extinct over time?” SW review notes and text for answers, if necessary.

<i>Content Objectives</i>	<i>Meaningful Activities: Lesson Sequence</i>	<i>Review/Assessment</i>
SW analyze the impact of deforestation of tropical rain forests on the environment.	TW post and orally explain content and language objectives. TW review SQP2RS process for reading expository texts.	Summative assessment of content objective will be: answers to student-posed questions; class discussion; summary sentences; selection of question for oral debate of HOTS questions; tomorrow’s debate

(continued)

FIGURE 5.5 SIOP® Lesson: Tropical Rain Forests (Science) Grade 7 (*continued*)**Language Objectives**

SW ask questions and predict key concepts prior to reading about tropical rain forests. SW select and define 2–3 key vocabulary words related to deforestation and rain forests. SW write summary sentences about deforestation, tropical rain forests, and the impact on the environment. SW orally defend a position on deforestation of the rain forests.	SW work in partners to survey rain forest article to generate 2–3 questions they think will be answered by reading article; TW post questions using asterisks to indicate multiple group responses. Class will predict 4–5 key concepts that will be learned by reading article. TW begin reading; SW read to confirm/disconfirm predictions. SW use sticky notes to find answers to posted questions; SW mark in text answers and confirmed and disconfirmed predictions (+ or –). SW with partners find and define VSS words that are important to the topic of deforestation and the rain forests. TW lead discussion of VSS words, clarifying meanings, while SW explain why the selected VSS words related to the rain forest are important to know. SW write summary sentences on the impact of deforestation of rain forests, using key vocabulary selected during VSS. SW select a HOTS question to take home and discuss with parents or caretaker in preparation for informal discussion tomorrow. TW review rules of informal debate.	Questions and predictions about the rain forest posted on chart paper SW show in text answers to questions; where predictions are confirmed. SW in small groups compare answers marked by sticky notes. VSS words and definitions Summary sentences and use of key vocabulary Selected questions
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Wrap-up: Check for understanding of key vocabulary and clarify questions about the debate questions; review content and language objectives. Hold up fingers for level of understanding for each objective: 1 = I can do it; 2 = I think I can do it, but I still have questions; 3 = I need more information or review.

Lesson plan format created by Melissa Castillo & Nicole Teyechea. Used with permission.

students were directed to preview the article, starting with the title. He asked them to take one to two minutes individually or with a partner to page through the article, examining illustrations, photographs, bold or italicized print, charts, and bolded questions (Survey). They were also directed to use their survey information to figure out one of the words in the title: *deforestation*. Surveying a text was a familiar strategy for his students because Mr. Montoya had previously taught and modeled how to do it. After about one minute, Mr. Montoya stopped the survey and directed the students to work with a partner to write two or three questions they thought they would find answers to by reading the article (Question). When finished, the partners shared their questions with another pair and then with the class. As the groups shared their questions, Mr. Montoya wrote them on chart paper and marked with asterisks those that were generated by more than one group; repeated questions were not rewritten. From the student-generated questions, the class predicted the five most important things they thought they would learn from the article (Predict), and Mr. Montoya recorded them on chart paper, next to the list of questions.

Mr. Montoya asked students the meaning of two words in the title: *deforestation* and *ecosystem*. While the first word was new to most students, *ecosystem* was a recent vocabulary word. Therefore, he had students ask group members what strategy they would use to figure out these two words. Most groups recommended “dividing the words into syllables.” Mr. Montoya confirmed their responses and wrote on the board:

de + forest + ate + ion
eco + system

Together, the class informally defined each of the words, using the words’ structure, and students were reminded to enhance these definitions after they read the entire article.

Mr. Montoya then read aloud the first two paragraphs of the article while the students followed along in their copies of the text. At the end of each paragraph, students were asked to take a moment to go back into the paragraph to find sentences with key concepts and/or key vocabulary. They were to underline these for later use. Mr. Montoya repeated the process for two more paragraphs, and then referred students back to the list of predictions on the chart paper. As students read each of the class’s predictions and used the sentences they had earlier underlined, they determined if each prediction had been confirmed thus far in the article, or disconfirmed. Next to each prediction that had been confirmed by the text reading, a plus (+) was marked; one prediction that was disconfirmed was marked with a minus (−). One prediction that was unlikely to be discussed in the remainder of the article was marked with a question mark (?). A few additional questions and predictions were then generated by the class prior to Mr. Montoya’s directions to quietly read the next section of the text (about six paragraphs) with a partner or a triad (Read). Again, students were encouraged to underline or circle key content concepts and vocabulary that could be used as supportive evidence. In their small groups, students ascertained whether their earlier predictions, as posted on the chart paper, were

confirmed or disconfirmed. They also shared the evidence they had found in the article while reading.

When students finished the group reading activity, they were directed to find two or three vocabulary words they thought were important to the topic of the rain forest (VSS [Vocabulary Self-Collection Strategy]; see p. 84). Mr. Montoya led the class in a brief discussion of the vocabulary words, including clarification of *deforestation* and *ecosystem*, and the class voted on 10 words or phrases that they felt were most important. These were posted on the chart for future discussion during the unit.

In groups, the students then reviewed the questions that had been posted earlier to see if they had found answers during their reading, and they used sticky notes and strips to indicate in the article where the answers were found. They checked their predictions according to the process Mr. Montoya had previously modeled (**Respond**). Next, students individually wrote summary sentences about what they had read, using their generated questions and predictions as a guide, and the VSS words (**Summarize**).

Toward the end of the class, Mr. Montoya displayed on the whiteboard the following questions:

1. Why are we dependent on the rain forests for our survival on Earth?
2. Compare and contrast the arguments of foresters and environmentalists, as described in the article. With which argument do you most agree? Why? What in the text convinced you of one position or the other?
3. Imagine the Earth in one hundred years. How would you describe it if the present rate of deforestation continues?
4. Pretend you are the president of the United States. Write a letter to the president of the lumber company that is responsible for the overseas burning of many acres of rainforest. Try to convince her to stop destroying the rain forest and to practice sustainable lumber development.

After reading the questions aloud, Mr. Montoya briefly clarified them, and asked each student to select one. For homework, he asked students to copy the question they chose and to discuss it, along with the article, with parents or caregivers that evening. Students were asked to jot notes as to how they would answer the question, using the information from the article, their discussions at home, and the VSS words. He announced that these questions would be discussed further during the next day's class.

Check your understanding: On the SIOP form in Figure 5.6, rate Mr. Montoya's lesson on each of the Strategies features.

FIGURE 5.6 Strategies Component of the SIOP® Model: Mr. Montoya's Lesson

4	3	2	1	0
13. Ample opportunities provided for students to use learning strategies		Inadequate opportunities provided for students to use learning strategies		No opportunity provided for students to use learning strategies
4	3	2	1	0
14. Scaffolding techniques consistently used throughout lesson, assisting and supporting student understanding (e.g., think-alouds)		Scaffolding techniques occasionally used		Scaffolding techniques not used
4	3	2	1	0
15. A variety of questions or tasks that promote higher-order thinking skills (e.g., literal, analytical, and interpretive questions)		Infrequent questions or tasks that promote higher-order thinking skills		No questions or tasks that promote higher-order thinking skills



Reflect and Apply

Click here to explain your ratings for Mr. Montoya's lesson on each of the Strategies features.

Discussion of Lessons

13. *Ample Opportunities Provided for Students to Use Learning Strategies*

Mrs. Fletcher: 3

Miss Lee: 2

Mr. Montoya: 4

- **Mrs. Fletcher's** lesson received a "3" for the inclusion of learning strategies. She began the lesson by asking her students to make predictions from the title of the article. After accepting some predictions, Mrs. Fletcher moved on, rather than probing the responses to elicit deeper thinking about the topic. Often, teachers ask for predictions, accept them, and move on without expanding on them or coming back to revisit them later in lesson. For example, Mrs. Fletcher might have asked, "What made you think that?" or "How did you come up with that idea? Tell us more." In addition to the predictions, the teacher also modeled a language strategy, using word structure (the prefix *de-*) to help determine the meaning of *deforestation*, and encouraged students to confirm and expand their understandings of the topic on the Internet.

Mrs. Fletcher's lesson would have been more effective had she included attention to other learning strategies, and perhaps a graphic organizer or other means for students to organize the information they were learning. She also could have periodically stopped her oral reading to reinforce important concepts, clarify confusing points, and discuss predictions that were confirmed or disconfirmed. Even though Mrs. Fletcher had the students write a letter to the editor at the end of the reading—providing students with a chance to demonstrate their understanding—she missed the opportunity to model summarizing as a language learning strategy. This would have made the letter-writing activity more accessible to English learners and struggling readers.

- **Miss Lee's** lesson received a “2” for the inclusion of strategies. She encouraged her students to evaluate and determine importance during the discussions of the answers to the questions on the worksheet. Students were required to support their responses, clarify misunderstandings, and reach consensus on the answers before turning in their papers. However, rather than presenting all the information orally, she could have discussed the photographs and generated student predictions and questions about the content of the pictures.
- **Mr. Montoya's** lesson received a “4” for the inclusion of strategies. He began the lesson by asking students to recall a language learning strategy he had taught them earlier, using word structure to determine word meaning. He then provided practice with several metacognitive strategies when he engaged his students in the SQP2RS/Squeepers activity for the expository text selection: prediction, self-questioning, monitoring and clarifying, evaluating, and summarizing. As Mr. Montoya led his students through the activity, he modeled and provided support in how to survey text, generate questions, make predictions, confirm or disconfirm predictions based on text information, and summarize information. Further, he incorporated the Vocabulary Self-Collection Strategy (VSS), during which students carefully select and discuss vocabulary that is key to the topic being studied (Ruddell, 2007). Evidence shows that when students are guided in how to select important vocabulary (another language learning strategy) and in how to apply strategies through SQP2RS, their comprehension is enhanced (Blachowicz & Fisher, 2000; Shearer, Ruddell, & Vogt, 2001; Vogt, 2002).

14. *Scaffolding Techniques Consistently Used, Assisting and Supporting Student Understanding*

Mrs. Fletcher: 2

Miss Lee: 3

Mr. Montoya: 4

- **Mrs. Fletcher's** lesson received a “2” for scaffolding. Mrs. Fletcher attempted to scaffold by reading the entire article to the students. This reduced the reading

demands of the text, but the scaffolding could have been more effective if she had begun reading the article to the students, and then had them complete the reading with a partner or small group. Also, there may have been some students who would have benefitted from reading with the teacher in a small group. Further, Mrs. Fletcher missed opportunities to scaffold when she simply assigned the letter to the editor without showing sample letters, providing words and phrases that might be found in such letters, and allowing students to work with partners on their letters. Another scaffolding technique is to encourage students to work with an “editing partner,” who can look over a piece of writing before it’s shared publicly. Including a “practice run” before a read-aloud helps pronunciation, increases fluency, allows for simple editing help from another student, and reduces stress for the readers.

- **Miss Lee’s** lesson received a “3” for scaffolding. She effectively scaffolded student learning in three ways. First, the photographs she displayed during her brief lecture provided support for students who had little background knowledge about the topic of rain forests. Second, by having the students complete the reading in their groups, the reading demands were reduced. Depending on the length of the article, she might have encouraged the reading involvement of more than one student in each group if she had suggested, for example, a “Page, Paragraph, or Pass” approach. With this activity, each student decides whether he or she wishes to read a page, a paragraph, or pass on the oral reading. English learners and reluctant readers may feel more comfortable having the option of choosing whether and how much they’ll read aloud to their peers.

Miss Lee also scaffolded the students’ answering of the questions on the handout. They had to answer the questions independently, but then were allowed to compare their responses to those of the other students and decide on the correct answers together. This provided students the opportunity to demonstrate individual learning of the rain forest material, and also gave them the chance to negotiate their understandings with their peers (a language learning strategy).

- **Mr. Montoya’s** lesson received a “4” for scaffolding. He incorporated a variety of techniques that provided support with the expectation that his students eventually would be able to apply the various strategies independently. He used several grouping configurations during the lesson, including whole class, small groups, triads, and partners. Students had the opportunity to confer with each other, receiving support and assistance if necessary. Mr. Montoya also carefully modeled the strategies for the students prior to requiring application. The reading demands of the article were reduced when students were allowed to read it in pairs or triads. Choice also played a critical role in this lesson when students were encouraged to select key vocabulary and the question for homework that most interested them.

15. *A Variety of Questions and Tasks That Promote Higher-Order Thinking Skills*

Mrs. Fletcher: 1

Miss Lee: 1

Mr. Montoya: 4

- **Mrs. Fletcher's** lesson received a "1" for higher-order thinking. She missed several opportunities to use higher-order questioning to engage her students' thinking. After students made some predictions, she could have probed with questions such as, "What made you think that?" or "Tell me more about that." Toward the end of the lesson, when one student asked why people still burn the rain forests, Mrs. Fletcher could have used the student's question to develop inquiry skills in her students, and these questions could then have motivated the letters to the editor. Instead, the letter-writing activity, while potentially meaningful and thought provoking, seemed somewhat removed from the article and brief discussion the class had about the rain forests. It's important to remember that assigning a higher-order thinking task is just the first step for this SIOP feature. Enabling all students to accomplish the task meaningfully is the goal.
- **Miss Lee's** lesson received a "1" for questioning. Although she incorporated questioning into her lesson by using the handout, the questions were mostly written at the literal level, with answers that could be found easily in the rain forest article. The activity would have required greater cognitive work on the part of the students if Miss Lee had written questions at various levels. Question 8 was the only one that required actual application and evaluation of the content concepts.

In addition, although Miss Lee tried to incorporate technology into her lesson, she did not provide enough guidance to help students find the information they needed in a timely fashion. She could have worked with students who were interested in using the Internet to refine their search procedures; generate some of their own questions about the rain forest; and use several key words to yield the information they were seeking while narrowing the field of potential Web sites.



Watch this video and see Sarah Russell continue the lesson on *The Cask of Amontillado* (see Chapter 2, Summary). Using the SIOP protocol, see if you can recognize which of the three features of the Strategies component are apparent this video.

- **Mr. Montoya's** lesson received a "4" for questioning. He incorporated questioning throughout the lesson, first during the SQP2RS (Squeepers) activity, when students generated their own questions based on the text information, and then with the discussion questions. Note the varied levels of the questions at the end of the lesson plan: The first is a literal-level question, the second requires analysis and evaluation, the third requires application and synthesis, and the fourth requires synthesis and evaluation. Mr. Montoya effectively reduced the text's difficulty through the SQP2RS activity, not by lowering the cognitive demand of the questions (see Figure 5.5 for the lesson plan).

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Student Selector and Question Stems. One afternoon, Ms. Palacios was at the middle school working with the science teacher, Miss Lee, to update her laptop computer. On Miss Lee's desk, Ms. Palacios spotted a large can filled with sticks (such as tongue depressors) that were labeled with students' names. She asked the teacher if she could borrow the can for that week's after-school tech workshop.

Ms. Palacios, while a strong proponent of technology in the classroom, often reminds teachers when adopting a new technology tool to assess whether the tools are actually improving learning. To begin the workshop, Ms. Palacios put the can with the labeled sticks on the table in front of her, and asked the teachers in the room if they were using a similar technique with sticks, index cards, or another analog tool. She then challenged them to consider their tool and to evaluate if a tech tool might be better. Ms. Palacios then showed them *StickPick*, an app available for iOS, Android, or laptops.

To demonstrate the benefits of *StickPick*, Ms. Palacios connected her iPad to the classroom projector, allowing all of the participating teachers to see her screen and observe the process of using the app. She asked Miss Lee to tell her the names of a few of her students and then entered them into the app. Ms. Palacios then asked about their approximate levels and which ones were English learners. Within a few moments they put together a class profile for the small group.

Ms. Palacios gently shook the iPad and the teachers noticed that one of the students was randomly picked. The student screen showed the pre-set questions with stems. After choosing a stem and hearing the student's response to that question, the app allowed the user to assess the student's response with a quick rubric that Ms. Palacios demonstrated. She repeated the process, inputting scores for hypothetical student answers. The teachers then saw that data from these responses were compiled as simple statistics in student reports. After seeing the app in action, the teachers were excited to try the new tool that could not only replace cans of sticks or stacks of index cards, but also enhance their classroom discussions.

Miss Lee decided to test it out on one section of her middle school science class. To launch a review for the rain forest unit, she posted two questions on the board and asked the students to discuss them with a partner, informing them that there would be follow up questions after turn-and-talk time. After allowing the partners to work for a few moments, Miss Lee started using the app in her phone to help her call on students and prompt them with questions. Reflecting on the discussion portion of the lesson, Miss Lee found the app to be helpful. She looked forward to seeing trends in students' responses, but also felt the tool would encourage her to maintain consistency when asking various types and levels of questions.

Other terms for this type of tool: random student generator, random name picker

Related Tools: *Pick Me!* app for iOS, *Make My Groups* iOS

Other tools worth exploring: *Group picker*



Check Your Understanding

[Click here to check your understanding of Chapter 5, Strategies.](#)

■ Summary

As you reflect on this chapter and the impact of learning strategies, scaffolding, and higher-order thinking questions and tasks, consider the following main points:

- In this chapter, we have described how to promote critical and strategic thinking for all students, but most especially for English learners. Learning is made more effective when teachers actively assist students in developing a variety of learning strategies, including those that are cognitive, metacognitive, and language based. Learning strategies promote self-monitoring, self-regulation, and problem solving.
- Students with developing English proficiency should be provided with effective, creative, and generative teaching while they are learning the language. Therefore, it is imperative that all teachers provide them with sufficient scaffolding, including verbal supports such as paraphrasing and frequent repetition; procedural supports, such as teacher modeling with think-alouds, one-on-one teaching, and opportunities to work with more experienced individuals in flexible groups; and instructional supports such as the appropriate use of graphic organizers and content and text adaptations. Through appropriate and effective scaffolding, English learners can participate in lessons that involve strategic and critical thinking.
- We frequently remind teachers, “Just because the students don’t read well doesn’t mean they can’t think!” A similar adage to this might be said of English learners: “Just because they don’t speak English proficiently doesn’t mean they can’t think!” Therefore, SIOP teachers include in their lesson plans a variety of higher-order thinking questions and tasks.

■ Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
 - a. Select student learning strategies that are appropriate to a lesson’s objectives?
 - b. Incorporate explicit instruction and student practice with learning strategies when planning lessons?
 - c. Identify techniques for verbal, procedural, and instructional scaffolding?
 - d. Identify language learning strategies to include in lessons?
 - e. Write lesson plans that include varied techniques for scaffolding student understandings?
 - f. Write a set of questions or tasks on a chosen topic with increasing levels of cognition?
2. Describe a learning situation you participated in or observed in which the teacher modeled how to do something. Describe a recent lesson in which you modeled a process, gave directions for students to follow, or provided steps for an experiment. What did you have to do to ensure that students could follow

your instruction? What worked and what didn't? How could you have made things more clear?

3. If the concept of scaffolding is somewhat new for you, the definition in the glossary may be helpful, as may be the following construction analogy. Picture a high-rise building as it is under construction. As new floors are added, scaffolding is built along the outside of the previously constructed floor (or level). This scaffolding allows access for the construction workers—they need to be able to get into the upper stories in order to continue the building process.

Now, think of a content topic that you must teach that is challenging to students acquiring English as a second (or multiple) language. What types of scaffolds must you put in place for your students to successfully access the lesson's content and language objectives?

4. Here's a factual question a teacher might ask based on a social studies text: "Who was the first president of the United States?" Given the topic of the presidency, what are several additional questions you could ask that promote higher-order thinking? Why is it important to use a variety of questioning strategies with English learners? Use one of the taxonomies (Bloom's [1956] or Anderson & Krathwohl, 2001), or the Depth of Knowledge levels (Webb, 1997) to guide you.
5. The answers to higher-order thinking questions may involve language that is beyond a student's current level of English proficiency. Discuss the advantages and/or disadvantages of allowing English learners to use their **native language** for part of the lesson, if doing so enables them to participate at a higher cognitive level.
6. Using the SIOP lesson you have been developing, add meaningful activities that augment learning strategies. Determine how to scaffold English learners' access to your objectives. Write several higher-order thinking questions or tasks for your lesson.

Interaction

Learning Outcomes

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

Select a variety of activities that promote interaction and incorporate them into lesson plans.

Design grouping structures that support lesson content and language objectives.

Identify techniques to increase wait time.

List ways that CCSS collaborative conversations and discussions are aligned with the Interaction component.

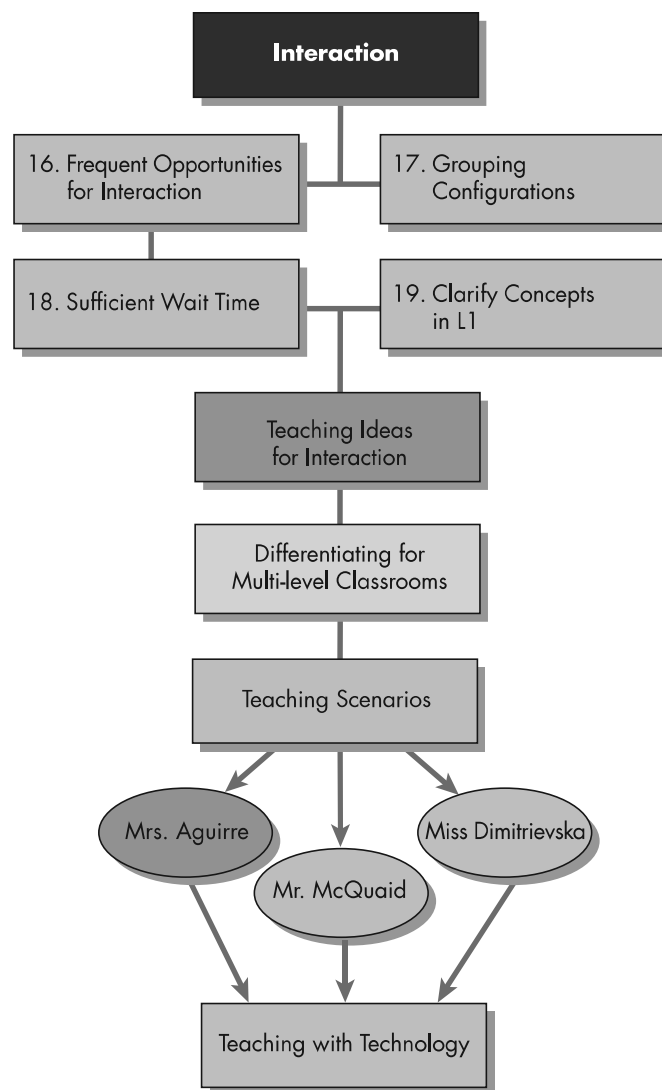
Identify resources to support student clarification in the native language.

Language Objectives

Explain in writing the purpose of student–student interaction for language development.

Describe techniques to reduce the amount of teacher talk in a lesson.

Practice asking questions that promote student elaboration of responses.



Talking, matters for

learning. In fact, talking, listening, and thinking are a powerful combination of processes associated with learning, and each strengthens the others (City, 2014). It has never been more important to provide students with opportunities for talking, listening, and thinking in class about concepts, ideas, and information. At the same time that CCSS and other state standards have expectations that students will **engage** in substantive, collaborative discussions around text and concepts, outside of the classroom, stu-

dents are increasingly communicating with electronic devices rather than face to face, and they aren't as exposed to extended discourse as they might have been a few years ago. The style of communication used is typically abbreviated messages that lack pragmatics (linguistic context clues such as nonverbal cues, turn-taking, and negotiating meaning) and are delivered while multitasking rather than focusing on the discussion (Rosen, 2012). The only opportunity many students have for quality talk around texts and topics is in the classroom. ●



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Short and Echevarría (2016) discuss a number of benefits of collaborative academic discussions. As students talk about a topic, they have the opportunity to try out new words, grammatical structures, and language functions (see Chapter 2 for examples of language functions). They also learn from peers who have more advanced language proficiency, those “more capable others” who provide support for **English learners’** understanding (Vygotsky, 1978). Participation in discussions with peers provides the language practice time that English learners need. When working with the whole group, students have few opportunities for practice, but conversation time increases significantly when working in partners or groups of 3–4 students.

For English learners to understand and use academic English, they need to be provided with structured opportunities for practice in all subject areas throughout the school day, not just during a designated time. With the CCSS and other state standards’ emphasis on high levels of language use, *all* teachers are teachers of English language development, even if students also have access to excellent **ESL** specialists. The integration of language development across the curriculum is vital

and is recognized by some states as part of their instructional framework (California Department of Education, 2014). As students are learning in and through a new language—English—teachers must create ample opportunities to practice using **academic language**, not just **social English**. It is recommended that English learners have daily opportunities to talk about content in pairs or small groups, practicing and extending material already taught (Baker, et al., 2014). Unfortunately, this is typically not the case. In a classroom observation study, there was evidence of “academic dialog and discussion” in only .5% of the 1,500 classrooms observed (Schmoker, 2006).

For many teachers it may be challenging to move from presenting whole-class instruction to providing the kinds of small-group opportunities needed for students to have high-quality discussions. Sharing responsibility for learning with students working in small groups or with partners is an adjustment for many teachers, but it can make a significant impact on learning. Researchers have found that English learners were more engaged academically when working in small groups or with partners than they were in whole-class instruction or individual work (Brooks & Thurston, 2010). For students to connect with school and engage in learning at a level that will result in high achievement, we need to provide them with opportunities to interact with one another, to discuss and “puzzle over” genuine problems (Wiggins & McTighe, 2008). In this chapter, we present ways that teachers can use interaction to launch students to higher levels of English proficiency, improve academic outcomes, and meet standards including the **Common Core State Standards**.

 Watch this video as Dr. MaryEllen Vogt discusses the importance of interaction. What does she say about ensuring sufficient time for students to interact with one another? How might you provide more time for interaction with your students?

■ Background

“Use it or lose it” is a saying that conveys what we know from our own experience in learning a second language. If one doesn’t practice using the language, it is difficult to maintain it. But what about learning a language in the first place—does speaking it help to develop the language? The answer is a resounding “Yes!” The role that conversation plays in the process of second language teaching and learning is clear. But discussion also offers important benefits for learning in general. As Gerald Graff puts it, “Talk—about books and subjects—is as important educationally as are the books and subjects themselves” (2003, p. 9).

The issue is, why are there so few opportunities for students to interact in typical classrooms? Studies indicate that in most classrooms, teachers dominate the linguistic aspect of the lesson, leaving students severely limited in terms of opportunities to use language in a variety of ways (Cazden, 2001; Goodlad, 1984; Marshall, 2000). In a study with English learners (Porath, 2014), the teacher learned that by talking less and listening more, she was able to gain deeper insight into her student’s learning needs and strengths. In our own work, we observe teachers doing a significant amount of talking rather than providing the impetus for a discussion and then listening to what students have to say, to the teacher or one another.

There are many benefits to having students actively engaged in interaction around subject matter. Some include:

- **Deeper understanding of text, including vocabulary learning.** When teachers use thoughtful questioning to promote discussion, it encourages students to think

critically about the passage. In doing so, students also think more deeply about the meaning of the words they encounter. (Echevarría, 1995; Saunders & Goldenberg, 1999; Wasik & Iannone-Campbell, 2012). Also, new understandings are co-constructed through interactions (Fisher & Frey, 2013; McIntyre et al., 2010).

- **Oral language development.** Being exposed to and interacting with language that is just beyond their independent speaking levels move students to higher **levels of language proficiency**. However, these interactions must be carefully planned and carried out to yield gains in oral language (Saunders & Goldenberg, 2010).
- **Brain stimulation.** Interesting, engaging activities, including discussions, play an important role in learning. When students are engaged and their brains are activated, more of the pleasure structures in the brain fire than when students are simply asked to memorize information (Jensen, 2008; Poldrack et al., 2001).
- **Increased motivation.** Interaction with others is an important component of reading instruction that increases motivation and comprehension (Guthrie & Ozgungor, 2002).
- **Reduced risk.** The typical question-answer sessions in which teachers call on students may be threatening to students, particularly those unprepared to respond. Some students cannot focus on the content in this setting because it triggers the brain's "threat response" (Jensen, 2005, 2008). Having young students talk in pairs or in small groups minimizes the risk and allows ideas to flow more easily.
- **More processing time.** Students need time to process after learning. Direct instruction should be limited to short increments followed by time for discussion.
- **Increased attention.** Use of pairs or teams can heighten attention levels. Students may be asked to work together to compare/contrast material learned, group and regroup the material, resequence it, or retell it from another point of view (Marzano, Pickering, & Pollock, 2001).

We find that it is both interesting and helpful to analyze actual transcripts from lessons to demonstrate the kind of teacher dominance that is so common in classrooms. The following transcripts are from a pilot SIOP study (Echevarría, Greene, & Goldenberg, 1996) in sixth-grade social studies classes. The teachers were videotaped teaching the same content about consumerism to English learners, with the first using a typical approach found in general education classes and the other using SIOP. Both classes had approximately 25 students, and in this lesson students were learning how to read labels on clothing and on a bottle of antiseptic.

Typical Lesson

TEACHER: Look at the piece of clothing at the bottom. It says (*he reads*), "This shirt is flame-resistant," which means what?

STUDENT: Could not burn.

STUDENT: Won't catch fire.

TEACHER: It will not burn, won't catch fire. Right (*continues reading*).

"To retain the flame-resistant properties"—what does "to retain" mean?

STUDENT: *(unintelligible)*

TEACHER: To keep it. All right. *(He reads)* “In order to keep this shirt flame-resistant wash with detergent only.” All right *(he reads)*. “Do not use soap or bleach. Tumble dry. One hundred percent polyester.” Now, why does it say, “Do not use soap or bleach”?

STUDENT: 'Cause it'll take off the ...

TEACHER: It'll take off the what?

STUDENTS: *(fragmented responses)*

TEACHER: It'll take off the flame-resistant quality. If you wash it with soap or bleach, then the shirt's just gonna be like any old shirt, any regular shirt, so when you put a match to it, will it catch fire?

STUDENT: No.

TEACHER: Yes. 'Cause you've ruined it then. It's no longer flame-resistant. So the government says you gotta tell the consumer what kind of shirt it is, and how to take care of it. If you look at any piece of clothing: shirt, pants, your shirts, um, your skirts, anything. There's always going to be a tag on these that says what it is made of and how you're going to take care of it. Okay. And that's for your protection so that you won't buy something and then treat it wrong. So labeling is important. All right. Let's review. I'll go back to the antiseptic. What did we say indications meant? Indications? Raise your hands, raise your hands. Robert?

STUDENT: What's it for.

TEACHER: What is it for, when do you use this? Okay. What do directions, what is that for, Victor?

STUDENT: How to use ...

TEACHER: How to use. Okay, so indications is when you use it *(holds one finger up)*, directions is how you use it *(holds another finger up)*, and warnings is what?

STUDENTS: *(various mumbled responses)*

TEACHER: How you don't use it. This is what you don't do.

The teacher in this case tended to finish sentences for the students and accept any form of student comment without encouraging extended expression. In examining the exchanges, what did the teacher do when students gave partial or incorrect answers? He answered the question himself. Students learn that they can disengage because the teacher will continue with the “discussion.”

SIOP[®] Lesson

TEACHER: Most clothing must have labels that tell what kind of cloth was used in it, right? Look at the material in the picture down there *(points to picture in text)*.¹ What does it say, the tag right there?

¹ The teacher explained then that they would be doing an activity in which they would read labels for information.

- STUDENT: The, the, the ...
- TEACHER: The tag right there.
- STUDENT: (*Reading*) “Flame-resis ...”
- TEACHER: Resistant.
- STUDENT: “Flame-resistant. To retain the flame-resistant properties, wash with detergent only. Do not use soap or bleach. Use warm water. Tumble dry.”
- TEACHER: “One hundred percent ...”
- STUDENT: “Polyester.”
- TEACHER: Now, most clothes carry labels, right? (*pointing to the neck of her sweater*). They explain how to take care of it, like dry clean, machine wash, right? It tells you how to clean it. Why does this product have to be washed with a detergent and no soap or bleach?
- STUDENT: Because clothes ...
- TEACHER: Why can’t you use something else?
- STUDENTS: (*several students mumble answers*)
- STUDENT: (*says in Spanish*) Because it will make it small.
- TEACHER: It may shrink, or (*gestures to a student*) it may not be ... what does it say?
- STUDENT: It’s not going to be able to be resistant to fire.
- TEACHER: Exactly. It’s flame-resistant, right? So, if you use something else, it won’t be flame-resistant anymore. How about the, uh, look at the *antiseptic* (*holds hands up to form a container*)—the picture above the shirt, the antiseptic?
- STUDENT: Read it?
- TEACHER: Antiseptic (*Teacher reads*) and other health products you buy without a prescription often have usage and warning labels. So what can you learn from this label? Read this label quietly please, and tell me what you can learn from the label. Read the label on that antiseptic. (*Students read silently.*)
- TEACHER: What can you learn from this label?
- STUDENT: It kills, oh I know.
- TEACHER: Steve?
- STUDENT: It kills germs.
- STUDENT: Yeah, it kills germs.
- TEACHER: It kills germs. You use it for wounds, right? What else?
- STUDENTS: (*various enthusiastic responses*)
- TEACHER: One person at a time. Okay, hold on. Veronica was saying something.
- STUDENT: It tells you in the directions that, you could use it, that like that, ’cause if you use it in another thing, it could hurt you.
- TEACHER: It could hurt you. Okay, what else? Ricardo?
- STUDENT: If you put it in your mouth, don’t put it in your mouth or your ears or your eyes.

TEACHER: Very good. Don't put it in your mouth, ears, and eyes. Okay, for how many days should you use it? No more than what?

STUDENT: No more than 10 days.

STUDENT: Ten days.

TEACHER: So don't use it—you have to follow what it says—so don't use it more than 10 days. Now, the next activity you're going to do ...

The SIOP teacher allowed for a balance of teacher-to-student talk and encouraged student participation. She asked questions, waited for students' responses, and restated or elaborated on the responses. In this case, what did the teacher do to elicit answers to the question? She **scaffolded** the answer by encouraging the students to think about it, prompting them to give their responses.

The features of **SIOP** within the Interaction component are designed to provide teachers with concrete ways of increasing student participation and developing English **language proficiency**. When implemented consistently, these practices will facilitate students' ability to meet the Common Core State Standards and other state standards, especially in the areas of listening and speaking.



SIOP® FEATURE 16:

Frequent Opportunities for Interaction and Discussion Between Teacher/Student and Among Students, Which Encourage Elaborated Responses About Lesson Concepts

Oral Language Development



Watch this video about academic language. You will see two teachers talking about the importance of opportunities for discussion and interaction. How does the teacher describe “intentional noise”?

This SIOP feature emphasizes the importance of balancing linguistic turn-taking between the teacher and students, and among students. It also highlights the practice of encouraging students to elaborate their responses rather than accepting yes/no and one-word answers, even from the youngest learners. As noted in the CCSS, “students must have ample opportunities to take part in a variety of rich, structured conversations” (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010a).

The findings of the National Literacy Panel on Language Minority Students and Youth (August & Shanahan, 2006) revealed the important relationship between oral proficiency in English and reading and writing proficiency. Specifically, reading comprehension skills and writing skills are positively correlated with oral language proficiency in English (Geva, 2006); these two areas are particularly challenging for English learners and are reflected in the Common Core State Standards. Solid reading comprehension is the foundation for achievement in nearly every subject area in school, and writing proficiency in English is an essential skill as well. Some other important findings include:

1. There has long been recognition that language, cognition, and reading are intimately related (Tharp & Gallimore, 1988). As one acquires new language, new concepts are developed. Think about your own language learning with respect to understanding computer functions. Each new vocabulary word and term you learn and understand (e.g., *cloud*, *flash drive*, and *terabyte*) is attached to a concept that in turn expands your ability to think about how a computer works. As your own system of word-meaning grows in complexity, you are more capable of using the self-directed speech of verbal thinking (“Don’t forget to save it on the flash drive to take to work.”). Without an understanding of the words and the concepts they represent, you would not be capable of thinking about (self-directed speech) or discussing (talking with another) computer functions.
2. Language proficiency is a precursor to effective reading comprehension. Because an understanding of language makes acquiring knowledge possible, deriving meaning from texts in English will be challenging for English learners who may have difficulty reading unfamiliar words or comprehending their meaning.
3. Researchers who have investigated the relationship between language and learning suggest that interactive approaches—where there is more balance in student talk and teacher talk—are effective in promoting meaningful language learning opportunities for English learners (Cazden, 2001; Echevarría & Short, 2010; Fisher & Frey, 2013; McIntyre, et al, 2010; Saunders & Goldenberg, 2010; Tharp & Gallimore, 1988; Toth, 2013; Walqui, 2006). Called *collaborative conversations* (grades K–2) or *collaborative discussions* (grades 3–6) in the Common Core State Standards, teaching approaches that emphasize oral language development and promote meaningful discussions around academic topics and texts have also been called ***instructional conversations (ICs)*** (Goldenberg, 1992–93) and *academic conversations* (Zwiers & Crawford, 2009). This mode of instruction has some of the following characteristics:
 - Emphasizes active student involvement and meaningful language-based teaching.
 - ◆ Uses extended expression around text and topics so that students develop content knowledge and language proficiency simultaneously.
 - Differs from typical teaching because most instructional patterns in classrooms involve the teacher asking a question, the student responding, and the teacher evaluating the response and asking another question (Cazden, 2001). In contrast, in the typical format of an IC:
 - a. The teacher begins by briefly introducing the group to a theme or idea related to the text, and then relating the theme to students’ background experiences.
 - b. Next, the teacher shows the text to be read and asks prediction questions.
 - c. As the text is read, the teacher “chunks” the text into sections to provide maximum opportunity for discussion, constantly relating the theme and background experiences to a text-based discussion.
 - d. Students are asked to support their comments with evidence from the text.

Figure 6.1 illustrates the contrast in approaches.

FIGURE 6.1 Contrast Typical Instructions with IC

Typical Instruction	Instructional Conversation
Teacher-centered Exact, specific answers evaluated by the teacher No extensive discussion	Teacher facilitates Many different ideas encouraged Oral language practice opportunities using natural language
Skill-directed Easier to evaluate Check for understanding Mostly literal level thinking and language use	Extensive discussion and student involvement Draw from prior background knowledge Student level of understanding transparent Fewer black and white responses Mostly higher-level thinking and language use

A conversational approach is particularly well suited to English learners who frequently find themselves significantly behind their peers in most academic areas, usually due to low reading levels and underdeveloped language skills. ICs provide a context for learning in which language is expressed naturally through meaningful discussion. Further, the skills developed through ICs meet the Common Core State Standards in the area of *Comprehension and Collaboration* in English Language Arts, *Speaking and Listening*. The following examples are taken from grades 11–12, but are similar across grade levels leading up to this level.

SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

- ◆ Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- ◆ Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
- ◆ Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
- ◆ Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

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A rich discussion, or conversational approach, has advantages for teachers as well and contributes to a culturally responsive classroom. Through discussion teachers can more naturally activate the class's background knowledge as they encourage students to share their knowledge of the world and ideas about how language works. When teachers and students interact, it fosters a supportive environment and builds teacher–student rapport. Also, when working in small groups with each student participating in the discussion, teachers are better able to determine individual levels of understanding; weak areas are made transparent.

As mentioned previously, however, teachers typically do most of the talking in class. Of course, teachers have knowledge to share and discuss with students, but consistent teacher dominance reduces the opportunities students have to participate fully in lessons by discussing ideas and information, and practicing English as they express their ideas, opinions, and answers.

Effective SIOP teachers:

- Explicitly teach students rules for engaging in high-quality discussions to ensure that they take turns, stay on topic, actively listen, build on one another's comments, and are respectful (Short & Echevarría, 2016).
- Structure their lessons in ways that promote student discussion. They also strive to provide a more balanced linguistic exchange between themselves and their students. It can be particularly tempting for teachers to do most of the talking when students are not completely proficient in their use of English, but these students are precisely the ones who need opportunities to practice using English the most.
- Encourage extended expression from students when discussing the lesson's concepts. The teacher elicits more elaboration from students by using a variety of techniques that will take students beyond simple yes or no answers and short phrases (Fisher & Frey, 2013; Saunders & Goldenberg, 2007; Toth, 2013). Some of these techniques include asking students to expand on their answers by saying, "Tell me more about that"; and by asking direct questions to prompt more language use such as, "What do you mean by ... ?" Another technique is to provide further information through questions such as "How do you know?" "What are the facts that support your ideas?" "Why is that important?"
- Use techniques such as offering restatements to scaffold replies: "In other words . . . is that accurate?" and frequently pausing to let students process the language and formulate their responses. If an English learner is obviously unsure about what to say, teachers call on other students to extend the response: "Vesna said . . . can you add to that?"

 Watch this video and think about a technique that you might use to encourage interaction with your students.

It takes time and practice for these techniques to become a natural part of a teacher's repertoire. The teachers with whom we've worked report that they had to consciously work at overcoming the temptation to speak for students or to complete a child's short phrase. The preceding transcript shows how the first teacher spoke for students instead of encouraging students to complete their thoughts. The following segment from the transcript provides another example.

TEACHER: What do "directions" ... what is that for, Victor?

STUDENT: How to use ...

TEACHER: How to use. Okay, so “indications” is when you use it, “directions” is how you use it, and “warnings” is what?

STUDENTS: (*various mumbled responses*)

TEACHER: How you don’t use it. This is what you don’t do.

In this segment, the non-SIOP teacher could have encouraged a more balanced exchange between himself and the students. First, he did not encourage students to completely express their thoughts; he accepted partial and mumbled answers. Second, he answered for the students, dominating the discussion. It is easy to imagine how students could become uninterested, passive learners in a class in which the teacher accepts minimal participation and does the majority of the talking.

The SIOP teacher approached students–teacher interaction differently:

TEACHER: What can you learn from this label?

STUDENT: It kills, oh I know.

TEACHER: Steve?

STUDENT: It kills germs.

STUDENT: Yeah, it kills germs.

TEACHER: It kills germs. You use it for wounds, right? What else?

STUDENTS: (*various enthusiastic responses*)

TEACHER: One person at a time. Okay, hold on. Veronica was saying something.

STUDENT: It tells you in the directions that, you could use it, that like that, ‘cause if you use it in another thing, it could hurt you.

TEACHER: It could hurt you. Okay, what else? Ricardo?

STUDENT: If you put it in your mouth, don’t put it in your mouth or your ears or your eyes.

TEACHER: Very good. Don’t put it in your mouth, ears, and eyes. Okay, for how many days should you use it? No more than what?

STUDENT: No more than 10 days.

STUDENT: Ten days.

TEACHER: So don’t use it—you have to follow what it says, so don’t use it more than 10 days. Now, the next activity you’re going to do ...

The SIOP teacher let the students have time to express their thoughts (e.g., student says, “It kills ... It kills germs.”). The teacher could have completed the sentence for the student, but she waited for him to finish his thought. Also, the SIOP teacher encouraged and challenged the students more than the non-SIOP teacher did by asking twice, “What else?” Finally, the SIOP teacher nominated students who volunteered to talk and repeated what they said so that the class could hear a full response (e.g., Veronica).

Culturally responsive SIOP teachers plan instruction so that students have opportunities to work with one another on academic tasks, using English to

communicate. Through meaningful interaction, students can practice speaking and making themselves understood. That implies asking and answering questions that probe for evidence, negotiating meaning, clarifying ideas, giving and justifying opinions, making well-reasoned statements, and more. Students may interact in pairs, triads, and small groups. Literature circles, think-pair-share, Jigsaw readings, debates, and science experiments are only a sample of the types of activities teachers can include in lessons to foster student–student interaction and discussion. An interactive approach has been shown to improve the achievement of English learners with learning disabilities (Echevarría, 1995) as well as typically developing English learners (Dockrell, Stewart, & King, 2010; Saunders & Goldenberg, 2007; Van de Pol, Volman, & Beishuizen, 2010).



SIOP® FEATURE 17:

Grouping Configurations Support Language and Content Objectives of the Lesson

In order to meet the Common Core standards especially for Speaking and Listening, teachers provide a variety of grouping configurations including whole class, partners, and small group. The intent of CCSS and other state standards is to engage students more directly in learning by having a balance of teacher presentation and productive group work by students. The benefits of a balanced approach include the following:

- Varying grouping configurations—by moving from whole class to small group, whole class to partners, and small group to individual assignments—provides students with opportunities to learn new information, discuss it, and process it. Organizing students into smaller groups for instructional purposes provides a context that whole-class, teacher-dominated instruction doesn't offer.
- Allowing students to work together to critique or analyze material, create graphic representations of vocabulary terms or concepts, or summarize material makes information more meaningful and increases learning.
- Changing grouping structures and activities enhances learning. It is recommended that when working with young learners, content, lectures, and cognitive activities should be limited to 5–10-minute periods each. With adolescents, content sessions should be limited to 10–15 minutes. These focused learning periods should be followed by interactive activities such as pair-shares or model building (Jensen, 2008).

In Chapter 5 of this book we present a process for teaching that slowly and purposefully shifts the workload from teacher to students and requires a variety of grouping configurations. As seen in Figure 5.1, “Scaffolding: Gradual Increase of Student Independence,” the teacher uses a variety of groupings such as presenting information to the whole class and explicitly teaching part of the lesson, followed by a different grouping configuration in which students are given an opportunity to collaborate (students discuss ideas and information they learned during explicit teaching and guided instruction—not new information—and practice using

academic English). Then, when students have acquired sufficient background knowledge and language, they apply the information individually. Varying grouping structures provides more interaction, and students have more opportunities to participate actively in the lesson. In contrast, when students aren't learning, it is often because there has not been the critical scaffolding that Figure 5.1 represents. That is, teachers go directly from "I do it ... you watch" to "You do it alone."

In small, guided instruction groups, the teacher naturally differentiates instruction as she works on focused skill instruction, language development, and/or **assessment** of student progress. Small-group instruction provides more opportunity to discuss text (Saunders & Goldenberg, 2007, 2010) and increases reading achievement (Vaughn et al., 2003). While the teacher is working with one group, the other students can work on familiar material in small groups, with a partner, or individually, either at their desks or at workstations. Activities may include listening to recorded stories (at listening centers, on computers, or via electronic notebooks), reinforcing skills with computer games, creating graphic representations of vocabulary terms or concepts, summarizing material, practicing word sorts, or reading self-selected leveled readers. These activities are purposeful and meaningful, and they lead to increased learning. In our work, we have seen this type of grouping work successfully from kindergarten through high school. In their book, Gibson and Hasbrouck (2008) provide a wealth of ideas for grouping effectively, including how to organize the classroom and schedule activities, and how to use a rotation chart for flexible grouping.

But not just any kind of grouping works well. It is important to acknowledge the following information about grouping and think about it as you work with instructional groups.

- Grouping by ability, which divides students for instruction based on their perceived capabilities for learning (low group, average group, high group) has serious academic and social effects for students who are not in the top group (Callahan, 2005; Hiebert, 1983; Lucas, 1999). Futrell and Gomez (2008) make this point: "We cannot ignore the fact that for more than five decades, ability grouping has resulted in separation of students by race, ethnicity, and socio-economic status. Many studies have confirmed that minority and low-income students of all ability levels are overrepresented in the lower tracks and underrepresented in the higher tracks" (p. 76).
- English learners, who learn from exposure to good language models, are often shut out of the groups with rich academic learning opportunities. In fact, in some schools, it has become common practice to group English learners with low-achieving students regardless of their academic ability and performance. This practice deprives English learners of the opportunity to learn grade-level academic skills and language.
- When working with low-achieving groups, teachers have been found to talk more, use more structure, ask lower-level questions, cover less material, spend more time on skills and drills, provide fewer opportunities for leadership and independent research, encourage more oral than silent reading, teach less vocabulary, and allow less wait time during questioning. In addition, they spent twice as much time on behavior and management issues (Oakes, 1985; Vogt, 1989).

- All students, including English learners, benefit from instruction that frequently includes a variety of grouping configurations. Whole-class groups are beneficial for introducing new information and concepts, modeling processes, and review. Flexible small groups promote the development of multiple perspectives and encourage collaboration. Partnering encourages success because it provides practice opportunities, scaffolding, and assistance from classmates (Flood, Lapp, Flood, & Nagel, 1992; Tompkins, 2006).

Effective SIOP classes are characterized by a variety of grouping structures, including individual work, partners, triads, small groups of four or five, cooperative learning groups, and whole class. Groups also vary because they may be homogeneous or heterogeneous by gender, language proficiency, language background, and/or ability. The decisions teachers make about how to group students should be purposeful, not arbitrary.

A case can be made for grouping students by how well they speak English during literacy instruction (Uribe & Nathenson-Mejía, 2008), but the teacher needs to be aware of each student's individual skill profile. For example, when working on fluency, English learners with strong decoding skills would not read the same text as an English learner who is still working on mastering phonics. Advantages of grouping English learners together are that teachers can target specific language instruction, and students are more apt to take risks in their second language. However, grouping students from very different grade levels (i.e., second through fifth grade) together based on language proficiency should be discouraged because these learners have very different social and academic needs (Uribe & Nathenson-Mejía, 2008).

There are other times that grouping by language proficiency level is useful. For example, if a teacher's goal is for students at beginning levels of English proficiency to practice using a particular language structure such as the present progressive (*-ing*) form within the context of a social studies lesson, then those students may be grouped together for that lesson. Likewise, when developing the skills of students with low levels of literacy, it makes sense to have those with similar ability grouped together for a particular lesson. Assigning all English learners to the same group regularly is *not* good practice, especially when total responsibility for teaching is turned over to a paraprofessional. In SIOP classes, English learners are given the same access to the curriculum and the teacher's expertise as native-English speaking students.

Using a variety of grouping configurations facilitates learning in a number of ways.

- It helps to maintain student interest because it is difficult for some students to stay focused when the teacher relies almost exclusively on whole-class instruction or having students work individually.
- Moving from whole class to small groups or partners adds variety to the learning situation and increases student involvement in the learning process.
- It provides much-needed movement for learners. When students are active, their brains are provided with the oxygen-rich blood needed for highest performance. Movement may be especially important for learners with special needs (Jensen, 2005).

It is recommended that at least two different grouping structures be used during a lesson, depending on the activity and objectives of the lesson.

In every case, peer discussions need to be structured so that students know their roles and responsibilities, and they need to be supervised appropriately. As more teachers move to implementing small group structures to address CCSS standards, we've noticed that in some classes, students are put into groups for collaborative work but little is accomplished. Groups are given a worksheet or other activity and are expected to complete it without much teacher input or oversight. Group work requires structure with the teacher circulating, checking for understanding, prompting, questioning, and clarifying. Also, tasks should be assigned a specific amount of time so that students stay engaged and the pace of the class moves along.



SIOP® FEATURE 18:

Sufficient Wait Time for Student Responses Consistently Provided

Wait time is the length of time between utterances during an interaction. In classroom settings, it refers to the length of time a teacher pauses between asking a question and soliciting a response. A review of studies on wait time revealed that after a teacher asks a question, students must begin a response within an average time of one second. If they do not, the teacher repeats, rephrases, asks a different question, or calls on another student. Further, when a student makes a response, the teacher normally reacts or asks another question within an average time of 0.9 second (Rowe, 2003). Rather than filling the silence created by wait time, teachers should see the silence as an opportunity for students to process what is being asked of them. But, teachers may need to practice using wait time so that they become comfortable allowing students the time they need (Wasik & Hindman, 2013/2014).

Wait time varies by **culture**. It is appropriate in some cultures to let seconds, even minutes, lag between utterances, while in other cultures utterances can overlap one another. In U.S. classrooms, the average length of wait time is clearly *not* sufficient. Imagine the impact of wait time on English learners who are processing ideas in a new language and need additional time to put their thoughts into words. Research supports the idea of wait time and has found it to increase student discourse and enhance student-to-student interaction (Honea, 1982; Rowe, 2003; Swift & Gooding, 1983; Tobin, 1987).

Effective SIOP teachers are culturally responsive and consciously allow students to express their thoughts fully, without interruption. Many teachers in U.S. schools are uncomfortable with the silence that follows their questions or comments, and they immediately fill the void by talking themselves. This situation may be especially pertinent in SIOP classes where English learners need extra time to process questions in English, think of an answer in their second language, and then formulate their responses in English. Although teachers may be tempted to fill the silence, English learners benefit from a patient approach to classroom participation, in which teachers wait for students to complete their verbal contributions.

While effective SIOP teachers provide sufficient wait time for English learners, they also work to find a balance between wait time and moving a lesson along. Some youngsters may become impatient if the pace of the class lags. One strategy for accommodating impatient students is to have them write down their responses while waiting, and then they can check their answers against the final answer.



SIOP® FEATURE 19:

Ample Opportunity for Students to Clarify Key Concepts in L1 as Needed with Aide, Peer, or L1 Text

Best practice indicates that English learners benefit from opportunities to clarify concepts in their first language (**L1**). In fact, the National Literacy Panel on Language Minority Students and Youth found that academic skills such as reading taught in the first language transfer to the second language (August & Shanahan, 2006). Although SIOP instruction involves teaching subject-matter material in English, students are given the opportunity to have a concept or assignment explained in their L1 as needed. Significant controversy surrounds the use of L1 for instructional purposes, but we believe that clarification of key concepts in students' L1 by a bilingual instructional aide, peer, or through the use of materials written in the students' L1 provides an important support for the academic learning of those students who are not yet fully proficient in English.

This feature on the SIOP may have “N/A” circled as a score because not all SIOP classes need to use students' L1 to clarify concepts for them (especially for advanced English learners).

However, with Web sites and apps offering word translation capabilities and bilingual dictionaries available in book and computer program formats, all SIOP classrooms have access to resources in most of the students' **native languages**.



Teaching Ideas for Interaction

In the section that follows, you will find some teaching ideas to help you with preparing SIOP lessons.

- In math lessons, plan for targeted discussions in which students are taught a variety of discussion structures such as explaining their thinking, justifying the problem-solving strategy they used, and troubleshooting and revising their work (Kazemi & Hintz, 2014); these skills are reflected in the Common Core standards for Mathematical Practice.
- With appropriate supervision, students can interact with each other through a class electronic list, shared research files on a school network, or a planned pen pal e-mail or video camera exchange on the computer with another class elsewhere in the world.

- Expose high school students to real-world business experiences, the basics of entrepreneurship, and charitable donation by selling items on eBay as a class or club project. Students interact with one another as they collect items to sell, write descriptions of the items, download pictures, determine price, and work together to pack and ship the items. They also interact with customers through e-mail. The classroom setting provides supervision of the project, and the process is structured and documented through use of forms students complete along the way. Proceeds made are donated to charities selected by students. For English learners, this type of activity allows for full participation due to the context and hands-on nature of the project. Support may be provided by others in the group, as needed.
- In a discussion of the importance of movement for learning at all ages, Jensen (2005) suggests a number of games such as rewriting lyrics to familiar songs in pairs or teams as a content review, and then performing the song; playing Simon Says using content such as “Point to Rome. Point to the first country the Romans conquered,” etc.; or role-plays, charades, or pantomime to review main ideas or key points.
- Students may interact by sharing their expertise. In an Expert Stay & Stray activity, students work in small groups on an assignment, such as completing a chart summarizing the steps to solving math problems or key points from a unit of study. Students in the group number off. The teacher calls a number, e.g., #4, and student #4 takes his or her group’s chart and goes to another table and shares the information with the new group. Then the student remains with the new group as the teacher calls another number, e.g., #1. Student #1 takes the chart of the student who shared (#4)—which encourages students to listen carefully—and goes to a new group and shares the information from the chart. This activity provides students with an opportunity to discuss the information while completing the chart, then to share the information orally while others listen attentively, and to paraphrase someone else’s explanation of the chart. It can be adapted to any content area or grade level.
- Start the class each day with students in pairs and have them tell each other the day’s content objective in a Partner Share. Then they move to find another partner and tell them the language objective.
- An activity appropriate for all levels and most content areas is called Dinner Party (or Birthday Party for K–2). For instance, during reading instruction, students would respond to the prompt: “Suppose you could have a dinner party for authors or poets that we have studied. Whom would you invite? Why would you select them? What would be the seating order of the guests at your table, and why would you place them in that order? What do you think the guests would talk about during dinner? Include specific references to the authors’ lives and works in your response.” The purpose is for students to act out the questions by assuming personas, such as characters in novels, scientists, historical figures, or artists. During each Dinner Party, specific content from texts must be included and the characters must respond to each other as realistically and accurately as possible (Vogt & Echevarria, 2008).



Watch this video to see how students can work together to collect data, graph it, and present their findings. Notice how each student has a specific role to ensure participation and engagement.

- The time-tested activity of using Dialogue Journals provides students with an opportunity to interact through writing about topics of interest or those related to lessons. In elementary classes, journaling is typically between teacher and child as they share ideas. Students learn from teachers as they model appropriate written text, and teachers learn about their students' ideas and ways of expressing themselves. In secondary classes, students may be partnered with one another, if needed. The teacher participates in the dialogue every so often to monitor students' writing and to model correct writing.
- To support English learners, allow the techniques made popular by a television show: "50–50" and "phone a friend." Students who are unsure of an answer or are unable to articulate it well might ask to choose between two possible responses provided by the teacher (50–50) or ask a classmate for help (phone a friend). However, to ensure practice with the language, the original child must give "the final answer" to the teacher.

■ Differentiating Ideas for Multi-level Classes

We know that most classes with English learners are made up of students with multiple proficiency levels. Even those students designated as Emerging, for example, may have stronger listening skills than writing skills or stronger reading skills than speaking skills. Teachers have at their disposal a variety of ways to differentiate spoken English to make it comprehensible for our diverse English learners. The Interaction component lends itself well to meeting the variety of instructional needs and proficiency levels of students in your classrooms. Several considerations include the following:

- Use sentence frames for both oral and written answers. "It has often been said that teachers, rather than students, use academic language in the classroom. However, our students won't learn academic vocabulary solely by listening to us; they need to practice using it themselves" (Donnelly & Roe, 2010, p. 135). Sentence frames have been mentioned several times in this book as effective ways to scaffold English learners while they are acquiring their new language. Donnelly and Roe (2010, p. 132) suggest that teachers write sentence frames according to their students' English proficiency by:
 1. Writing sentences that express a language function (e.g., compare/contrast), and replacing target language with blanks.
 2. Replacing target words with blanks.
 3. Creating a word bank or a list of words that were eliminated from the original sentences.

What is left are sentence frames with fill-in spaces that are **differentiated** for different language levels. Lower level frames are not as complex as those for more English-proficient students. For example: The expected outcome for students at levels 2, 3, and 4 working with comparison/contrast might be:

Level 2. Sentence frame with vocabulary underlined: *Carrots are orange. Peas are green.* (simple sentence)

Sentence frame with vocabulary removed: _____ are _____.

Level 3. Sentence frame with vocabulary underlined: *Carrots and peas are both vegetables, but carrots are root vegetables and peas grow on vines.* (comparative sentence)

Sentence frame with vocabulary removed: _____ and _____ are both _____, but _____ are _____ and _____.

Level 4. Sentence frame with vocabulary underlined: *The main difference between carrots and peas is that carrots are root vegetables while peas grow on vines.* (complex comparative sentence)

Sentence frame with vocabulary removed: The main difference between _____ and _____, is that _____ are _____, while _____.

Sentence frames can use familiar content such as illustrated above, or they can use specific topics that are being studied. Other language functions, such as cause/effect, problem/solution, and so forth can serve as the basis of the differentiated sentence frames.

As you can see, less proficient students will use sentence frames to participate in discussions, Dialogue Journals, and written work. More proficient speakers have a model of correct syntax to assist their contributions.

- Allow older students to choose between two or more assignments to complete. When students have options, they are more engaged, feel more confident, and perform better (Sparks, 2010). Some students may opt for an oral presentation to demonstrate their knowledge rather than a written assignment. Lower proficiency students may be more comfortable with a different mode of assignment than more proficient students, and having some control over their learning may increase their achievement.
- Pair students with more proficient speakers to scaffold their participation. More proficient speakers have an opportunity to practice using academic English and negotiating meaning with peers while less proficient students have the support needed to complete academic tasks.
- Differentiate wait time by becoming accustomed to allowing more wait time for beginning English speakers and those students who require more time for processing information. More advanced speakers will require less wait time. However, don't forget that all students benefit from time to think about questions or new information.
- Partner students together who speak the same **primary language** for native language support as needed.

■ The Lesson

Addition and Subtraction (First Grade)

The first-grade teachers in this chapter, Mrs. Aguirre, Mr. McQuaid, and Miss Dimitrievska, work in a suburban school that has a 33% English learner population. Their classes have an even distribution of English learners, each with approximately 10% in their class. Although most of these students are at the intermediate to advanced levels of English proficiency, they still benefit from having teachers use SIOP techniques to increase their understanding of concepts and participate fully in lessons.

The teachers in this school plan math units around the Common Core State Standards. In the math lessons described, all classes are working on Operations and Algebraic Thinking Standard 6: *Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).* (© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.)

The lessons described are part of a unit and students have already learned and practiced the mechanics of addition and subtraction. In these lessons, the emphasis is on being aware of the most efficient strategy to use in solving word problems. The teachers co-plan lesson objectives each week so that they are teaching essentially the same content across the classes. In the scenarios that follow, the objectives are:

Content Objectives (CO): Students will solve addition and subtraction problems efficiently using strategies.

Language Objectives (LO): Students will orally express their reasoning when solving problems.

As you will see, although the objectives are the same, the teachers each have their own ways of teaching the lessons.

■ Teaching Scenarios

Mrs. Aguirre

As was her practice, Mrs. Aguirre began by reading to the children the content and language objectives for the lesson that were written on the board. She told the class that they would use counting strategies to solve addition and subtraction problems. She asked them to think about how objects can be used to find solutions.

Using an interactive whiteboard, Mrs. Aguirre put up 2 rows of circles. The circles were in groups of 5, each group a different color. She began by placing

5 red circles and 3 blue circles on the top line (8). Below she placed 5 red circles and 4 blue circles (9). She asked the students how many circles there were all together (17). A number of children raised their hands and she called on two to give their answer. After showing several more problems on the board (e.g., $7 + 7$ and $9 + 6$), she asked students how they were able to figure out the answers. She drew sticks with students' names on them from a can and called on those students to explain. If a student didn't respond right away, Mrs. Aguirre didn't want to put him or her on the spot so she drew another name. Most students were able to articulate a process such as adding the groups of 5 red circles first, then adding the blue circles (e.g., $5 + 5$, then add $10 + 3$ and $13 + 4 = 17$). She asked the class repeatedly if anyone had a question.

Once Mrs. Aguirre thought that students knew how to complete addition problems, she repeated the procedure with subtraction problems; e.g., she showed 17 circles and asked what the amount would be left if she took away 5. She demonstrated taking away on the interactive whiteboard.

Next she called on individuals to play the role of "teacher." Four students were selected for this part of the lesson. Each took a turn putting up circles on the interactive whiteboard and adding to or taking away a certain number to create a problem. The class had to solve the problem.

For the final twenty minutes of the lesson, students took out their math texts and solved a variety of addition and subtraction problems found in the book. At the end of the lesson, they turned in their written work.

Check your understanding: On the SIOP form in Figure 6.2, rate Mrs. Aguirre's lesson on each of the Interaction features.

Mr. McQuaid

The lesson began with Mr. McQuaid having the class chorally read the content and language objectives. Mr. McQuaid asked students to turn to their partner and tell each other 3 counting strategies that they had learned. Then he asked several groups which ones they identified. Groups reported out the strategies using doubles ($2 + 2$), counting by 5s or 10s, and counting on.

After reviewing strategies, Mr. McQuaid showed a counting rack on the document viewer that had two parallel rods with 10 beads, 5 red and 5 white. There was space on each rod to move the beads back and forth. He moved the beads to form groups and said, "This is how many I have on my rack (8 on top and 9 below). Talk to your partner about how many are on the rack." Then he asked how they solved the problem. One group said that they used their double facts. He asked the class, "What is this double fact?" and they replied together that $8 + 8 = 16$. He pointed out that they would then add 1 to make 17.

Mr. McQuaid continued with several more problems on the screen, showing a variety of combinations of beads and asking the class to solve the problems efficiently in pairs and explain how they arrived at their solutions. With each problem he called on different pairs to report out how they arrived at their solution, which provided accountability for the pairs. If a group had difficulty articulating the

FIGURE 6.2 Interaction Component of the SIOP® Model: Mrs. Aguirre's Lesson

4	3	2	1	0	
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts		Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts	
4	3	2	1	0	
17. Grouping configurations support language and content objectives of the lesson		Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives	
4	3	2	1	0	
18. Sufficient wait time for student responses consistently provided		Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses not provided	
4	3	2	1	0	N/A
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text		Some opportunities for students to clarify key concepts in L1		No opportunities for students to clarify key concepts in L1	



Reflect and Apply

Click here to explain your ratings for Mrs. Aguirre's lesson on each of the Interaction features.

strategy used, he asked, "Who can help your friends?" and another student would explain the strategy.

Then Mr. McQuaid told the class that they would use the racks with a partner and solve word problems together. He called a student to the front of the room, and they modeled the procedure for working together. The student held the rack, and the teacher took a card out of a plastic bag and read the problem: "I have 9 people on the bus and 10 get on. How many are there?" The student put 9 beads on the top row and 10 on the bottom and said, "19." The teacher asked her how she solved it, and she said that $9 + 9$ is a double fact so she had 18 and added 1 more. Then the teacher and student switched roles so that the teacher had the rack and the student selected a card. Mr. McQuaid reminded the students that this wasn't a winning game; it was a

game for working together. They needed to share and help each other figure out the most efficient way to solve the problems.

For this activity, Mr. McQuaid paired English learners with native English speakers. While partners worked on the game, Mr. McQuaid circulated and assisted students as needed with prompts such as “How many are on the bus? How many got on? How many total? How did you figure it out?” He used a technique of counting to himself to be sure he allowed enough wait time for students to process the question or information. Some of the English learners spoke with their partner in their home language to express their ideas.

After all students had had a chance to solve about a dozen problems between them, they followed the same process with subtraction problems. Mr. McQuaid modeled the first problem: “There are 20 on the bus and 8 get off. How many are left? What is a good way to take 8 away?” When the partners had practiced subtraction problems for a while, Mr. McQuaid called them to whole-class formation. He asked for volunteers to come up and explain their reasoning. Various students said that they counted by 5, used double facts, and used counting on.

Finally, Mr. McQuaid gave the students a worksheet that had a number chart and addition and subtraction problems to solve. Students worked individually and finished at their own pace. At the conclusion of the lesson, Mr. McQuaid reviewed the content and language objectives and asked students to hold thumbs up if they met the objectives.

Check your understanding: On the SIOP form in Figure 6.3, rate Mr. McQuaid’s lesson on each of the Interaction features.

Miss Dimitrievska

Known to her students as Miss D, she began her lesson by saying, “Who can tell me a strategy we know that helps us add and subtract numbers efficiently?” A few students raised their hands, and she called on each one to elicit an answer. She wrote the strategies they named on an interactive whiteboard. Also written on the board were the content and language objectives for the lesson. Miss D read the objectives and, pointing to the strategies listed, said that they would be using those strategies in the lesson.

Miss D had each table captain distribute clicker responders. Then she put a line of 7 cars on the interactive whiteboard (5 yellow and 2 blue) and another line of 5 yellow cars below. She asked the class to figure out how many total cars were on the board. She reminded them to do it efficiently as she pointed to the list of strategies on the board. After a minute she told the students to enter their answers using the clickers. Each student responded and she could see who did and who did not have correct answers. She then told the students to explain to their partner how they arrived at the answer and asked for volunteers to share out. Several students named strategies such as counting on and using doubles. She repeated this process a number of times until nearly every clicked answer was correct.

Then Miss D introduced subtraction in the same way. She showed 2 lines of balls, took some away and asked the students to solve the problem and enter their answers. Again she had partners articulate their reasoning. She continued with this process until students were solving problems with a high degree of accuracy.

FIGURE 6.3 Interaction Component of the SIOP® Model: Mr. McQuaid's Lesson

4	3	2	1	0	
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts		Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts	
4	3	2	1	0	
17. Grouping configurations support language and content objectives of the lesson		Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives	
4	3	2	1	0	
18. Sufficient wait time for student responses consistently provided		Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses not provided	
4	3	2	1	0	N/A
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text		Some opportunities for students to clarify key concepts in L1		No opportunities for students to clarify key concepts in L1	



Reflect and Apply

Click here to explain your ratings for Mr. McQuaid's lesson on each of the Interaction features.

Although students enjoyed using the clickers, at times Miss D asked for the response before some of the English learners had processed the language associated with the problems, especially determining if it was an addition or subtraction problem. Also, they felt a bit rushed when explaining to their partner what strategy they used.

For the next part of the lesson, Miss D gave students plastic bags of beads and written addition and subtraction problems. Working with partners, each pair used the beads to represent the problems and solve them. Miss D circulated to make sure pairs were working cooperatively, solving the problems, and explaining which strategy they used. Some English learners spoke in their native language with their partner and Miss D gently asked students to speak in English.

Finally, students were given a worksheet with both addition and subtraction problems to solve independently. Miss D concluded the lesson by reviewing the

FIGURE 6.4 Interaction Component of the SIOP® Model: Miss Dimitrievska's Lesson

4	3	2	1	0	
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts		Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts	
4	3	2	1	0	
17. Grouping configurations support language and content objectives of the lesson		Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives	
4	3	2	1	0	
18. Sufficient wait time for student responses consistently provided		Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses not provided	
4	3	2	1	0	N/A
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text		Some opportunities for students to clarify key concepts in L1		No opportunities for students to clarify key concepts in L1	



Reflect and Apply

Click here to explain your ratings for Miss Dimitrievska's lesson on each of the Interaction features.

content and language objectives and had students respond with their clickers if they had met each one.

Check your understanding: On the SIOP form in Figure 6.4, rate Miss Dimitrievska's lesson on each of the Interaction features.

Discussion of Lessons

16. *Frequent Opportunities for Interaction and Discussion between Teacher/Student and Among Students Which Encourage Elaborated Responses About Lesson Concepts*

Mrs. Aguirre: 1

Mr. McQuaid: 4

Miss Dimitrievska: 4

There is growing awareness about the importance for students to be actively engaged in learning and to have opportunities to interact productively with peers and teachers. However, many teachers struggle to relinquish “sage on the stage” type of teaching where most often the teacher talks and students listen. In the lessons, the teachers varied in the opportunities they provided to their students for interaction.

- **Mrs. Aguirre’s** lesson received a “1” because the format of her lesson was teacher controlled and did not provide sufficient interaction among the students. Student participation was individual response to teacher prompt and was largely based on volunteering. This practice tends to mask struggling students and those who do not understand since they are unlikely to volunteer. Usually the students who least need practice using English or help with concepts volunteer to participate in lessons. It is very difficult to determine the needs of students and gauge their understanding when teaching the way Mrs. Aguirre did.

Although Mrs. Aguirre made use of technology, she used the interactive whiteboard just as she would a chalkboard. It was essentially a fancy way of writing problems on a chalkboard, calling on students individually to answer questions or to pose problems for classmates. She made the assumption that all students understood the lesson’s objectives about using strategies to solve problems efficiently based on the participation of a few students.

- **Mr. McQuaid’s and Miss D’s** lessons received a “4” because they both encouraged lots of student-to-student and teacher-to-student interaction. By having the students explain to one another the process they used to solve problems, their thinking was made transparent and the teachers could readily ascertain who understood the strategies and was able to apply them and who needed more support.
- **Miss D** used clickers to make sure that each student was engaged and interacting with her in problem solving. It also gave her immediate feedback about how much practice was needed before moving to the next part of the lesson.

17. *Grouping Configurations Support Language and Content Objectives of the Lesson*

Mrs. Aguirre: 0

Mr. McQuaid: 4

Miss Dimitrievska: 4

Whole-class instruction has a role to play, but it should not be used extensively since it limits opportunities for students to ask questions, discuss ideas, and clarify information. The stated language objective for this lesson was that students would orally express their reasoning when solving problems.

- **Mrs. Aguirre’s** lesson used whole-class instruction or individual work exclusively, which did not support the objectives, especially the language objective. Therefore, her lesson received a “0.” Only once during the lesson did students have an opportunity to explain the strategies they used to solve problems, and the lack of grouping configurations limited opportunities for students to identify and discuss how they solved problems efficiently. English learners and those students

who struggle academically may find whole-class instruction intimidating, as undoubtedly was the case with Mrs. Aguirre's lesson. Although she asked if students had questions, nobody was willing to speak up in the whole-class setting.

- **Mr. McQuaid** planned a lesson that used a balance of whole-class instruction for introducing the concepts and modeling expectations, and partner work that allowed students to create and solve problems and to articulate their reasoning. Varying grouping structures allowed for deeper understanding of the concept and also provided practice using academic English.
- **Miss D's** lesson also provided optimal opportunity for interaction. She used whole-class instruction, individual response using clickers, and partner work. Both Mr. McQuaid's and Miss D's lessons received a "4" on this feature.

18. *Sufficient Wait Time for Student Responses Consistently Provided*

Mrs. Aguirre: 0

Mr. McQuaid: 4

Miss Dimitrievska: 2

- The whole-class, teacher-dominated format of **Mrs. Aguirre's** lesson encouraged those students who were quick to respond (usually native speakers of English) to set the pace. Students who required more time to process information or to think of the words in English were essentially left out of the lesson, however unintentional this was on Mrs. Aguirre's part. When she called on students individually, she tried to spare them embarrassment when they didn't answer promptly by choosing someone else. It would have been more effective to scaffold the student's response with prompts and provide the wait time needed.
- **Mr. McQuaid** interacted with students in a way that allowed time for students to formulate their thoughts and express them in English. Also, working with partners and then sharing out gave additional time to students. Mr. McQuaid recognized that English learners need to have a little extra time when participating in class.
- Although English was **Miss D's** second language and she understands English learners' needs, she felt pressure to move the lesson along and didn't always provide sufficient wait time.

19. *Ample Opportunity for Students to Clarify Key Concepts in L1 as Needed with Aide, Peer, or L1 Text*

Mrs. Aguirre: 0

Mr. McQuaid: 4

Miss Dimitrievska: 2

- Again, the format of **Mrs. Aguirre's** instructional delivery did not allow students the opportunity to clarify concepts or information with others in their home language even if it would have improved their understanding. Therefore, her lesson received a "0" on this feature.
- **Mr. McQuaid's** lesson, on the other hand, provided lots of opportunity for student-to-student interaction, and students could use their native language

when needed. Students were encouraged to discuss the math problems as well as their thinking when arriving at solutions. Participation in either language was accepted.



Watch this video to see Dr. Jana Echevarría discuss the importance of Interaction and the features in the Interaction component. What did the first-grade teacher say about the benefit of the SIOPI Model for her students, and what struck you most about how the students interacted? What did teachers do to facilitate interaction?

- **Miss D's** lesson also provided opportunities for students to work together and they naturally used their L1 when needed. Use of the native language wasn't forbidden; however, Miss D believed that she was helping students by encouraging English. Young learners, and beginning English speakers in particular, benefit from having opportunities to discuss and clarify concepts in the language they understand best. Miss D's lesson received a "2" because opportunities to use L1 were limited, even when it was clear that students needed that support.

(For more examples of lesson and unit plans in mathematics for grades K–12, see Echevarría, Vogt, & Short, 2010c.)

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Book Creator: Before beginning the unit on addition and subtraction, Mrs. Aguirre sent an e-mail to Ms. Palacios on behalf of her first-grade team of Mr. McQuaid and Miss Dimitrievska. The elementary wing of the school recently received an iPad cart for shared use and they were curious about ideas for using the new tablets. In order to explore options, the three first-grade teachers and the tech integrator planned a workshop during an afternoon inservice. To start, the teachers explained the objectives of their current unit on addition and subtraction. Ms. Palacios listened carefully, gave each of the teachers an iPad, and then walked them through some options. They all agreed that they wanted a tool that would enhance their unit, yet also one that would be feasible for first graders to use. The team discussed screencasting as a possible option, but decided on *Book Creator*, an app for making e-books.

Ms. Palacios walked the teachers through the app, showing them how to create their own books by adding photos, making text boxes, editing the text, and adding voice recordings. Mrs. Aguirre brought some of the manipulatives from the unit to the table and the teachers explored ways to include the regular classroom materials in photos. Mr. McQuaid thought the students could take photos of their manipulatives and write captions for the photos to demonstrate their understanding of number sentences.

Before launch day, Ms. Palacios arranged the apps on the home screen of the iPad, placing unneeded apps into folders on another screen. Students only needed to use the *Book Creator* app and the camera. Because it was the first time that many of the students would be using an iPad, Ms. Palacios recommended letting them have some unstructured time with the device before the lesson. This gave the students a chance to explore the tablet.

During math time, each teacher set up a center where a small group of students would learn how to use the app. Then, working in pairs, the students used the app to take photos of different combinations of

(continued on the next page)

manipulatives. They used the *Book Creator* app to import photos and create captions for each photo, including an equation. The app facilitated discussion among the students. To avoid arguments, Ms. Palacios recommended that the teachers to set up a timer at five-minute intervals. Each student took turns managing the iPad for five minutes and then would allow the partner to take over.

To extend the activity and challenge her students, Mrs. Aguirre also had some students create word problems for other students to solve. For additional oral language practice, Miss Dimitrievska showed students how to use the voice recording option to narrate the process of solving equations. After the lessons, Ms. Palacios came to check in on the teachers and assisted them with transferring the student-created e-books into the *iBooks* app, which allowed them to share the student work with parents during conferences.

Other terms for this type of tool: e-book creator, book creator app

Related Products: *iBooks Author*, *My Story*, *Scribble Press*

Blogging for Students: A number of tools are available that allow educators to offer opportunities for student interaction beyond the classroom walls and after the school day. Blogging is one such tool. While blogs may prove challenging for the first graders described in this chapter's teaching scenarios, they are tools worth exploring for a number of reasons. Class blogs offer a safe playground for preparing our students to be responsible digital citizens while offering them chances to interact, read, write, and give meaningful feedback.

Platforms like *Kidblog* allow students to share their voices with a larger audience than just the teacher. Blogging platforms meant for children have multiple layers of built-in security features. The teacher can set controls to preview all posts and comments before they are published. Student information such as names and posts can be kept private behind a password. With regard to academic interaction, a blogging platform can be used to teach how to provide constructive feedback, and how to write for a specific audience. Often, publishing for peers—whether within the same school or to an international pen pal—adds extra motivation for students to improve their writing skills.

Other terms for this type of tool: student blogs, blogs for children, blogs for classroom

Related Products: *Write About*, *Edublogs*, *Blogger* by Google.



Check Your Understanding

Click here to check your understanding of Chapter 6, Interaction.

Summary

As you reflect on this chapter and the benefits of interaction for English learners, consider the following main points:

- You should create ample opportunities for English learners to practice using academic English among themselves and with you, the teacher. Students should elaborate and extend their comments and responses, not provide one- or two-word answers.
 - ◆ The Common Core and other state standards require that students have ample opportunities to take part in a variety of rich, structured discussions—as part of a whole class, in small groups, and with a partner.

- Incorporating a number of grouping configurations into lessons facilitates using English in ways that support the lessons' objectives and develop students' English proficiency.
- Using a Gradual Increase of Student Responsibility approach ensures that a variety of groups are used in a lesson.
- For most teachers, it is challenging to balance the amount of teacher talk and student participation. Effective SIOP teachers plan for and incorporate structured opportunities for students to use English in a variety of ways.
- It may be beneficial for students to use their native language to clarify directions and express their ideas. However, the teacher may need to help them articulate their ideas in English, particularly as they advance in their proficiency levels.

■ Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
 - a. Select a variety of activities that promote interaction and incorporate them into lesson plans?
 - b. Design grouping structures that support a lesson's content and language objectives?
 - c. Identify techniques to increase wait time?
 - d. Identify resources to support student clarification in the native language?
 - e. Explain in writing the purpose of student–student interaction for language development?
 - f. Describe techniques to reduce the amount of teacher talk in a lesson?
 - g. Practice asking questions that promote student elaboration of responses?
2. Think of a content concept that you might be teaching. Describe three different grouping configurations that could be used for teaching and learning this concept. How would you organize the students in each group? How would you monitor student learning? What would you want students to do while working in their groups? How would the grouping configurations facilitate learning for English learners?
3. Either film your own classroom while you're teaching a lesson or observe another teacher's classroom for a 15-minute segment. Estimate the proportion of teacher talk and student talk. Given the ratio of teacher–student talk, what are some possible ramifications for English learners in the class?
4. What are some ways that collaborative conversations and discussions are aligned with the Interaction component?
5. Productive discussions are usually the result of careful planning and preparation. What are some rules of discussion presented in this chapter that you would need to teach or reinforce with your students? What might be an appropriate language objective for a lesson on rules of discussion?
6. Using the SIOP lesson you have been developing, add activities and grouping configurations to enhance interaction.

Practice & Application

Learning Outcomes

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

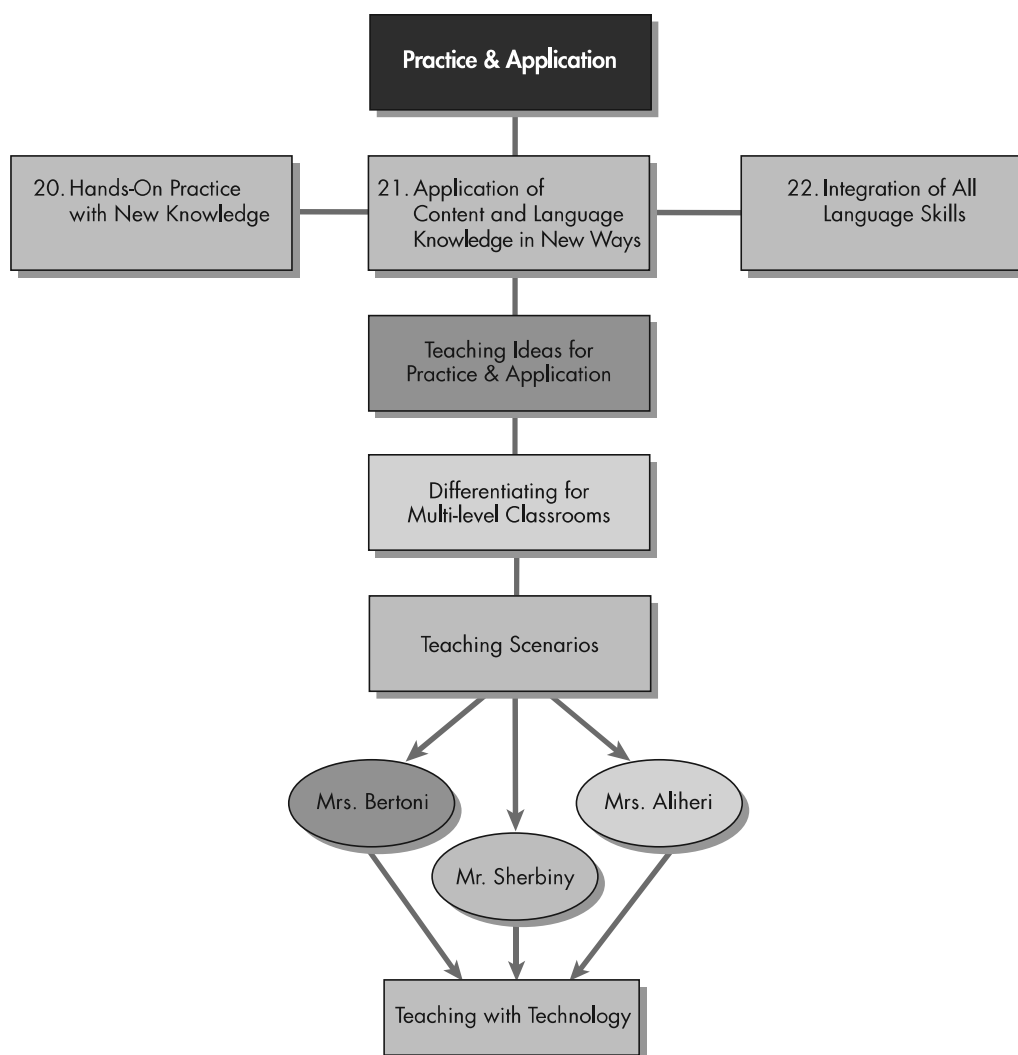
Identify a variety of ways for students to enhance their learning through hands-on practice.

Create application activities that extend the learning in new ways and relate to content or language objectives.

Language Objectives

Enhance typical lesson tasks so that different language skills are integrated.

Discuss the importance of linking practice and application activities to specific lesson objectives.



One common memory that most adults share is of learning to ride a full-sized bike. Even after riding smaller bicycles with training wheels, most of us were unprepared for the balancing act required for us not to fall down when riding a regular bike. If you had a parent or older brother or sister who talked you through the process, showed you how to balance, and perhaps even held on to the bike while you were steadying yourself, your independent practice time with the big bike was probably enhanced. Talking about the experience, listening to someone else describe it, observing other riders, and then practicing for yourself all worked together to turn you into a bicycle rider. That feeling of accomplishment, of mastering something new through practice and applying it to a bigger bike, or perhaps a motorcycle in later years, is a special feeling that most of us have experienced as learners. ●



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■ Background

Up to this point in a **SIOP** lesson, a teacher has introduced content and language objectives, built background or activated prior knowledge, introduced key vocabulary, identified a learning **strategy** and higher-order questions for students to focus on, developed a **scaffolding** approach for teaching the new information, and planned for student interaction. In the Practice & Application component, the teacher gives the students a chance to practice with the new material, and, with careful teacher oversight, demonstrate how well they are learning it. In the same lesson or a subsequent one, the teacher plans a **task** so students can apply this new knowledge in various ways. It is well established that practice and application help one master a skill (Dean, Hubbell, Pilter, & Stone, 2012; Fisher & Frey, 2008a; Marzano, 2007). For SIOP instruction, however, both the practice and application tasks should also aim for practice of all four language skills: reading, writing, listening, and speaking.



Watch this video interview with Andrea Hunley, a tenth-grade language arts teacher, about the practice and application activities in her lesson on similes and metaphors in poems. Why does she find whiteboards useful for English learners? How do her activities allow students to engage with the curriculum while strengthening their language skills?

For **English learners**, this stage of a SIOP lesson is very important, especially for **academic language** development. As Saville-Troike (1984) pointed out, both language and academic learning occur through language use in the classroom. Second language acquisition research has shown repeatedly that for an individual to develop a high level of proficiency in a new language, he or she must have opportunities not only for comprehensible input (Krashen, 1985) but also for targeted output (Swain, 1985), namely oral and written practice. In a synthesis of 20 years of research on oral language development, Saunders and O'Brien (2006) conclude that English learners “are most likely to use the language used to deliver instruction in their interactions with peers and teachers” (p. 41). They further explain:

[W]hile use and exposure are necessary conditions, they may not be sufficient conditions, especially when it comes to achieving higher levels of proficiency involving more academic uses of language. The content and quality of L2 exposure and use are probably of equal, if not greater, importance than L2 exposure and use per se (p. 41).

For SIOP teachers, this means that we need to carefully choose the activities we include in our lessons.

- Some activities may build foundational language knowledge, especially for young learners who enter school with few pre-academic experiences or newcomers to the United States who have had significant interruptions in their educational backgrounds.
- Some activities must strengthen the students' progress in meeting or mastering the content and language objectives. Suppose a language objective calls for a fifth grader to write a conclusion that supports the argument he or she made, and the language arts teacher instructs on ways to write a strong conclusion. Then a practice or application activity might have the students write a letter to the editor of a local newspaper on a topic related to the class reading, such as ways to support refugee families in the community.
- Some activities must advance student proficiency in using English. Zwiers and Crawford (2009) and Seidlitz (2008) recommend teaching sentence stems and language frames to help students articulate their thoughts and ideas. These frames link to language functions, and activities can be created to encourage more sophisticated use of these frames over time. For example, students may progress from expressing an opinion simply, as in “I believe that____” to the more detailed “In my opinion, ____is right/wrong because____,” and finally to the complex form “The scientist cited in this article claims____, but I would argue that____.” Short and Echevarría (2016) present a range of stems organized by language function.

If the class includes students with multiple **language proficiency** levels, the Practice & Application component of the SIOP Model is the ideal place to differentiate instruction. In the language arts lesson mentioned above, the teacher might facilitate a whole-class brainstorming of ways to support refugee families. Students share ideas, some of which may come from their home or country backgrounds, and the teacher generates a list. Next, the class selects one idea as a model and discusses

reasons in favor of the idea as well as possible counter-arguments they might want to oppose. The teacher might review language frames and key words to use in a conclusion. Then, some advanced-level students might write individual letters, intermediate-level students might write with one partner or two, and beginners might work with the teacher to prepare a group letter.

Indeed, it is within this component that teachers can incorporate project-based learning (Seidlitz & Perryman, 2011) or other differentiated activities that explore learning styles, multiple intelligences, and cultural perspectives (Nieto & Bode, 2008) to meet the language needs of students (Tomlinson, 2014; Vogt & Echevarría, 2008; Vogt, Echevarría & Washam, 2015). As teachers plan these practice and application activities, they should consider the structure of the task and degree of difficulty for the resulting product, the grouping configurations, the type of feedback that will be provided so it is geared to proficiency level, and the expectations for student achievement (Vogt, 2012).

In this chapter, we discuss how sheltered language and content teachers provide English learners with the types of hands-on experiences, guidance, and practice that can lead to mastery of content knowledge and higher levels of language proficiency. The teaching vignettes demonstrate how three high school **ESL** science teachers, who each have classes with newly arrived students with limited formal schooling, designed and delivered lessons on rotation and revolution.



SIOP® FEATURE 20:

Hands-On Materials and/or Manipulatives Provided for Students to Practice Using New Content Knowledge in the Classroom

As previously mentioned, riding a bike is usually preceded by practicing with training wheels and working with a more experienced bike rider. Obviously, the more practice one has on the bike, the more likely one is to become a good bike rider. Now think about learning to play a musical instrument.

Some years ago, an entrepreneur decided to market a piano-teaching course that included a cardboard sheet printed with piano keys. Students were supposed to practice the piano on the paper keyboard by following the directions printed in the course manual. The black-and-white keys on the keyboard were printed, and dotted lines showed students where to place their fingers during practice sessions. It was little surprise that the paper keyboards didn't catch on even though the course manual clearly described in incremental steps how to play the piano, because even with hours of practice on the paper keyboard, students were still unable to play the piano well. In this case, it wasn't just the *practice* that was important. Without hearing the sounds during practice, learning to play the piano was an artificial and nearly impossible task.

When learning to ride a bicycle, play the piano, or use probeware during a science experiment and interpret the resulting data charts, students have a greater chance of mastering content concepts and skills when they are given multiple opportunities to practice in relevant, meaningful ways. When this practice incorporates “hands-on” experiences including manipulatives, practice sessions are enhanced.

Madeline Hunter (1982), a renowned expert in teaching methods, coined the term *guided practice* to describe the process of the teacher leading the student through practice sessions prior to independent application. In her lesson design, new material should be divided into meaningful parts. After each part is introduced to students, they should have short, intense practice periods with the content. Previously learned materials should be reviewed periodically with additional practice periods. Throughout, Hunter recommended, teachers should give students specific feedback so they know how well they are doing.

Although all students benefit from guided practice as they move to independent work, English learners make more rapid progress in mastering content objectives when they are provided with multiple opportunities to practice with hands-on materials and/or manipulatives. These may be created, counted, classified, stacked, experimented with, observed, rearranged, dismantled, and so forth. We would also include kinesthetic activities in a broad definition of this feature. Manipulating learning materials is important for English learners because it helps them connect abstract concepts with concrete experiences. Furthermore, manipulatives and other hands-on materials reduce the language load for students. Students with beginning proficiency in English, for instance, can still participate and demonstrate what they are learning.

Obviously, the type of manipulative employed for practice depends on the subject being taught. For example, in a math class in which students are learning how to draw geometric shapes, content objectives might justify paper-and-pencil practice. However, if it is possible to incorporate hands-on practice with manipulatives (e.g., tangrams in this example), students' learning will probably be enhanced.

Being told how to ride a bike or play the piano, reading about how to do so, or watching a video of someone else engaged in bike riding or piano playing is much different from riding down the sidewalk or listening to musical sounds you have produced yourself. Whenever it is possible and appropriate, use hands-on materials for practice.



Watch this video of an upper elementary math lesson on equivalent fractions to see how manipulatives help the students learn the content concept. How do the manipulatives engage the students? In what way does the teacher's demonstration build knowledge?



SIOP® FEATURE 21:

Activities Provided for Students to Apply Content and Language Knowledge

We all can recall our own learning experiences in elementary, middle, and high school, and the university. For many of us, the classes and courses we remember best are the ones in which we applied our new knowledge in meaningful ways. These may have included activities such as writing a diary entry from the perspective of a character in a novel, creating a semantic map illustrating the relationships among complex concepts, or completing comprehensive case studies on learners we assessed and taught. These concrete experiences forced us to relate new information and concepts in a personally relevant way. We remember the times when we “got it,” and we remember the times when we gave it our all but somehow still missed the target. Hunter (1982) recognized this: “The difference between knowing how something should be done and being able to do it is the quantum leap in learning ...” (p. 71).

For students acquiring a new language, it is critically important that they have opportunities to apply the new information because discussing and “doing” make the abstract concepts more concrete. We must remember that we learn best by involving ourselves in relevant, meaningful application of what we are learning. Application can occur in a number of ways:

- Students can organize new information on a graphic organizer and then use that for review.
- Students can be asked to generate solutions to real-life problems. These solutions may represent multicultural viewpoints.
- Students can plan for and hold a debate on a current event.
- Students may discuss a scientific theory in class (e.g., “Life existed on Mars in the past”) and then write their opinion on the topic in a journal.

For English learners, application must also include opportunities for them to practice language knowledge in the classroom. For example, it is appropriate, depending on students’ language proficiency, to ask them to explain a process to a peer using a newly learned sentence structure or to explain the steps in their solution to a math word problem using key terms. Activities such as retelling a story but with a different ending, acting out a science experiment, or creating an ad campaign for a presidential candidate all help English learners produce and practice new language and vocabulary, as long as they are in a supportive environment. These activities are also appropriate for struggling learners and other students.

In Chapter 5 we presented a model for scaffolding that shows how a teacher can gradually increase the students’ responsibility for learning and doing, and we argued that collaborative practice and structured conversations along with recursive teaching are important bridging steps between guided practice and independent work. Through collaborative learning, students support one another in practicing or applying information while the teacher assists as needed. Some students may be able to move on to independent work, but others may need some targeted reteaching by the teacher.



SIOP® FEATURE 22:

Activities Integrate All Language Skills

Reading, writing, listening, and speaking are complex cognitive language processes that are interrelated and integrated. As we go about our daily lives, we move through the processes in a natural way, reading what we write, talking about what we’ve read, and listening to others talk about what they’ve read, written, and seen. Most young children become grammatically competent in their home language by age five, and their continuing language development relates primarily to vocabulary, more sophisticated grammar usage (e.g., using relative clauses and noun phrases), and functional as well as sociocultural applications of language (e.g., adjusting one’s language to a particular audience, developing rhetorical styles) (Peregoy & Boyle, 2013). Proficiency in reading and writing is achieved much later, and differences exist among individuals in levels of competence. Students especially need to learn academic language for school settings where the use of the forms and functions of

social language (e.g., simple sentence and question structures) diminish while academic forms and functions (e.g., sentences with embedded clauses and abstract concepts) escalate (see Chapter 1 for a detailed discussion).

Some English learners may achieve competence in the written domains of a second language earlier than in the oral language domains; others may become proficient speakers before they read and write well (August & Shanahan, 2006). But it is important to realize that the language processes—reading, writing, listening, and speaking—are mutually supportive. Although the relationships among the processes are complex, practice in any one promotes development in the others (Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Hinkel, 2006). Research shows that oral and written language can be successfully developed in content area classrooms (Baker et al., 2014).

Effective SIOP teachers understand the need to create many opportunities for English learners to practice and use all four language processes in an integrated manner. Throughout the day, these teachers offer their students varied experiences such as:

- Linking oral discussions of essential questions to reading selections
- Structuring interaction with peers
- Guiding students to use sentence starters and signal words
- Providing students with the chance to listen and react to peers' ideas
- Asking students to write about what is being learned

We do want to clarify two things about language development as part of the Practice & Application component:

1. Although all identified language objectives in a lesson need to be practiced and applied as the lesson advances, not all language skills that are practiced need to be tied to an objective. In other words, a language objective represents a key skill, language structure, or strategy the teacher plans to teach and intends for students to learn. In a SIOP lesson, the teacher teaches to this objective and assesses, formally or informally, how well students are meeting it. The objective may focus on one language domain, such as writing, but in the course of the lesson, students may have additional opportunities to read, speak, and listen. These should be carefully planned, but need not be assessed in the same way an objective would be.
2. Teachers are sometimes unsure about whether to correct English learners' language errors during practice time (Peregoy & Boyle, 2013). In general, consider students' stages of **English language development** when deciding whether to correct them. For beginning English speakers, errors may be developmental and reflect students' native language use (e.g., not remembering to add past tense inflected endings to English verbs). Other errors may deal with placement of adjectives, sentence structure, plurals, and so forth. Research on error correction indicates that impromptu corrections are less effective than setting aside a portion of a lesson to focus on the grammatical forms or usage issues that arise (Ellis, 2008).

 Watch this video of Ms. Atristain's first-grade class to see how she builds multiple opportunities for language practice. Consider the different activities planned. What language skills are practiced in each? What is the benefit of planning different activities? How did the teacher accommodate English learners?

If errors impede oral communication, you can gently correct students by restating the sentence in proper form. Otherwise, leave the errors alone. If errors are in a written product that is to be displayed, you may want to work with the student to edit it. If you notice, however, that many students make the same error and it does not seem to be due to the language acquisition process, it is reasonable to plan a minilesson on the issue for a later class period. What is most important is that you must be sensitive to errors that might confuse communication; corrections usually can be modeled in a natural and nonthreatening way.



Teaching Ideas for Practice & Application

In the section that follows, you will find some teaching ideas to help you develop practice and application activities for SIOP lessons:



Watch this video of an Algebra 2 lesson in which students physically represent points on a coordinate graph. Notice how the movement taps into student learning styles and engages the class. How does the teacher involve the class in assessing the result of the activity?

- **Manipulatives and Movement.** Have students manipulate objects or themselves instead of doing paper-and-pencil tasks for practice. For example, have students form a physical timeline about the Women's Suffrage Movement with their bodies rather than complete a timeline worksheet. Some students might have a card displaying a date; others would have one displaying an event. The students would organize themselves, first pairing the dates and events, and then forming the human timeline in the front of the room.
- **Hands-on Games.** Educational, engaging, and fun games provide opportunities to practice or apply new content and language learning. For example, depending on the students' language levels, bingo could be played in the typical manner—the students hear a number or word said aloud and then mark its written form on the bingo card. Or definitions, synonyms, or antonyms could be read aloud, and students would find the corresponding term. In *Piece O' Pizza*, individual students or small groups create a pizza slice with information on it that differs from what is on their peers' slices. They put their slices together to address the main points of a key topic. See *99 Ideas and Activities for Teaching English Learners with the SIOP® Model* (Vogt & Echevarría, 2008) for more games.
- **Electronic Games.** Use PowerPoint slides or Web sites to build electronic game boards for *Jeopardy!*, *Who Wants to Be a Millionaire?*, or similar games. These games allow for differentiation as less proficient or less knowledgeable students can choose easier questions in the *Jeopardy* game or choose to “take the money” and stop advancing in the *Millionaire* game.
- **Foldables and Flip Charts.** Foldables and flip charts involve folding paper and offer a hands-on way for students to organize information. They can be made in various ways. With one type, a sheet of paper is held in a landscape orientation and then folded in half lengthwise (hot dog fold). The front half is then cut into a number of flaps (e.g., three), with the cut going up to the fold. On the outside front, a key word (e.g., *element*, *compound*, *mixture*) may be placed on each flap. When each is lifted, a definition may be written on the top half and a picture may be placed on the bottom half. (For numerous examples, see Zike, 2000a, 2000b, 2003, 2004a, 2004b.)

- **Character Diaries.** Students take the role of a character from a novel, an historical figure, a person in the news, or an object, such as a piece of legislation seeking to become a law. They create several entries in a diary, writing in the voice of that person/item, and including key events. Teachers may add other requirements to apply specific language objectives such as use of descriptive language, use of past tense or if-then clauses, or use of a key language frame.
- **Reader's Theater, Role-Plays, and Simulations.** Students can build oral fluency, reinforce content knowledge, and practice language structures and academic vocabulary through Reader's Theater (Short, Vogt, & Echevarría, 2011a, pp. 58–60). Teachers create scripts on particular topics to be performed by small groups of students. The teacher may model the script before the students are assigned roles and perform. Role-plays are more informal, with students taking roles and deciding what they want to say while acting out a fictional, historical, or current event. Simulations may place students in real-life situations and have them work together to solve problems or attain a goal.
- **Numbered Heads Together** (Kagan, 1994). Students form equal-size groups and then number off. The teacher poses a question and the members in each group work together to determine an answer. Each member should know the answer, but the teacher calls only one number and that individual responds.

■ Differentiating Ideas for Multi-level Classes

The Practice & Application component offers teachers a relatively easy way to meet the needs of students with different abilities or proficiency levels in their classrooms. Consider the five options below when you want to adjust activities for your multi-level classes (Echevarría, Short, & Vogt, 2008; Tomlinson & Imbeau, 2010; Vogt, 2000).

1. **Group with a purpose.** Arrange students by language proficiency, learning style or multiple intelligences, demonstrated ability, perceived ability, or another reasoned way. Mix groups from time to time. Rotate roles so the more proficient students produce work or perform first and thus act as peer models for others.
2. **Differentiate the tasks.** Give each group a similar, yet specifically designed and equivalent task. Explain each group's assignment clearly, making sure it is as demanding as the others. An "easy" task may be as cognitively demanding to lower proficiency students as a "hard" task is to native English speakers.
3. **Use motivational strategies.** Learn what will motivate your students to perform to their ability. The following may be considered:
 - ◆ *Extrinsic:* Actual, physical rewards (points, homework passes, etc.) for accomplishing a task
 - ◆ *Intrinsic:* The mental and emotional "reward" for accomplishing a task
 - ◆ *Task engagement:* Positive feeling from being part of something that is stimulating, interesting, and do-able
 - ◆ *Cooperative, competitive, individualistic:* The three most common classroom goal structures; each has a role, but cooperative goal structures tend to be the most motivational for students
 - ◆ *Ego involvement:* Positive feeling about self when able to complete a task



Watch this video of a middle school social studies lesson that uses primary sources and real objects to differentiate an application activity. Listen to the teacher describe how she organized her groups and selected resources. What ideas can you apply to your own classroom?

4. **Use leveled questions to engage all learners.** As mentioned previously in Chapter 5, teachers tend to ask higher-level questions more frequently to high-performing students, and more literal-level questions to low-performing students. Instead, know your students' language levels (beginning, intermediate, etc.). Prepare a hierarchy of questions so that students of all proficiency levels are able to participate—simplify word choice and structure in questions for newcomers and beginners. Allocate turns, monitor turn-taking, and make sure you allow enough wait time for less proficient students to respond. Be sure all students are given the chance to be involved.
5. **Select resources for differentiation.** Find leveled readers on the same or related topics. Bookmark Web sites and utilize **native language** Web sites or translations. Check the readability of texts you ask students to read. Use wordless books or photo journals with newcomers. Design activities at multiple levels of difficulty, such as the scaffolded cloze shown in Figure 7.1, a vocabulary worksheet with a word bank and a companion one without, or a writing assignment with different required lengths or research sources.

A few specific examples of activities follow:

- **Scaffolded Cloze Activities.** Consider a mixed class with **native English speakers** and English learners. For a listening cloze dictation, the native English speakers might record what the teacher says as a regular dictation. The English learners might have two different dictation forms with more or fewer words already written down. (See Figure 7.1.) All the students listen to the paragraph the teacher reads on Gregor Mendel and the study of genetics, and all participate in the listening task, but the task format is differentiated to the students' English abilities.

FIGURE 7.1 Scaffolded Listening Cloze Dictation Forms

More Proficient Students	Less Proficient Students
Fill in the blanks with the missing words while the teacher reads a passage aloud. You will hear the passage twice. Gregor Mendel _____ _____ from parent to _____. This _____ is called _____. _____. Mendel used _____ _____ in his _____ experiments. _____ always _____ with the same form of a _____. In one of his experiments, _____ _____. He put the _____ of tall pea plants on the _____ _____ of the short pea plants. He discovered that _____ _____.	Fill in the blanks with the missing words while the teacher reads a passage aloud. You will hear the passage twice. Gregor Mendel studied how _____ are passed on from parent to _____. This passing on of traits is called _____. Mendel used _____ pea plants in his heredity experiments. _____ plants always produce _____ with the same form of a trait as the parent. In one of his experiments, he _____ _____ pea plants. He put the pollen from the _____ of tall pea plants on the _____ of the flowers of the short pea plants. He _____ that none of the _____ were short.

Cloze activities can be in writing, too, where students fill in words they generate or draw from a word bank.

- **Information Gap Activities.** These activities, which include Jigsaws, problem solving, and simulations, are set up so each student (generally in a group) has one or two pieces of information about a topic or event, or to help solve a puzzle, but not all the necessary information to get the full picture. Students must work together, sharing information while practicing their language, negotiating, and critical thinking skills. Teachers differentiate by assigning the amount and complexity of the specific pieces of information to students according to their language proficiency, background knowledge, and interests.
- **Read and Respond Paper Toss.** In this quick but engaging activity, students practice all four language skills (See Vogt, Echevarría & Washam, 2015, pp. 128-129). The teacher asks students in table groups to write down on a scrap of paper two quiz questions about the lesson's topic using key vocabulary, a grammar point, and/or written language function they have studied. When done the students scrunch the paper into little balls, stand up at their table, and toss the paper balls in the center. They then take turns picking up one ball (not their own), reading the questions aloud, and trying to answer it. The writer agrees or disagrees with the response. If the writer thinks the response is wrong, another student can answer, or the writer explains the answer. The teacher can differentiate by giving question frames to some students, asking some to write only one question, or giving students who answer a question the option to confer with a table mate before responding.

■ The Lesson

Solar System (Ninth Grade Newcomers)

This lesson is for newcomer students in an ESL Science Concepts class. The students have experienced limited formal schooling in their home countries (less than six years of instruction), have limited literacy in English and Arabic, and range in age from 15 to 18. They are immigrants and refugees to the United States from Yemen, Lebanon, Sudan, Syria, and Iraq. They have entered high school but have been placed in a specialized, full-day newcomer program for one year. The goal of this class is to develop science academic language and basic middle school science concepts found in the **Next Generation Science Standards** so that they can take a high school lab science class next year. They are all considered ninth graders because they have no high school credits yet.

The unit being studied is Space Systems. Students have already learned about the planets and the sun in our solar system. This lesson focuses on the locations and movement of the moon and Earth, particularly revolution and rotation. The next day's lesson will extend this basic understanding so students will be able to explain how the Earth's and moon's motions affect the seasons and the tides.

■ Teaching Scenarios

Mrs. Bertoni

The lesson agenda on the board reads: (1) Check homework. (2) Vocabulary: *moon, revolution, revolve, rotation, rotate, axis*. (3) Read chapter pages 83–84. (4) Discussion. (5) Homework assignment. As the students enter, she asks them to take out their notebooks so she can check their homework. As she circulates, the students talk quietly to one another in Arabic.

The teacher then turns off the lights in the room. She asks students what this makes them think of. Several students say “night.” She agrees and asks them what they see at night. They say “stars” and “moon”; some in English, others in Arabic. She explains that today they will learn how the moon moves and how the Earth moves. “If it is night, point to the sky and show me where you see the moon.” Most students point straight up. She asks if the moon is always there, gesturing up too. One student responds in Arabic and a classmate interprets, “No, it goes around.”

Mrs. Bertoni draws a semicircle on the board. She draws a full moon at one end and adds arrows to the arc to show that the moon moves to the left. She draws a circle to represent the Earth centered below the semicircle. She says, “The moon moves around the Earth” while pointing to the moon and Earth. She asks the class to repeat the sentence and they do. Then she says, “This movement is called *revolution*. The moon *revolves* around the Earth.” She points to the words *revolution* and *revolve* written on the board and asks the students to repeat “The moon revolves around the Earth.” She asks one student with more English proficiency to interpret the sentence into Arabic so all understand. She then draws a sun on the board and makes a circle around it that begins and ends with Earth. “The Earth revolves around the sun,” she says and students repeat.

Next, she draws a line down the middle of the circle that represents Earth to indicate the axis (from 1 o’clock to 7 o’clock if this figure were a clock). She explains the Earth leans to the side a little bit (leaning herself as she says so) and turns around an axis. She gestures to the line and indicates the written word *axis* on the board. This turning she says is called *rotation*. She has the students repeat the word *rotation*, and they do while she points to it on the board. She says, “So the Earth rotates around its axis” and points to the word *rotate* as well. Students repeat, “The Earth rotates around its axis.” She again asks the student with more English proficiency to interpret this sentence into Arabic so all understand.

Next Mrs. Bertoni asks the students some comprehension questions like “What revolves around the Earth?” and “What does the Earth do?” She accepts brief answers from her newcomer students, like “moon” and “goes around sun.” She asks them to copy the drawings from the board into their notebooks. She adds key vocabulary as labels on the drawings.

After several minutes, Mrs. Bertoni tells the students to open their Earth Science textbooks to page 83. She describes the photo of the moon and Earth on the page to them. She then reads the first paragraph aloud and explains it more simply to the class. She reads the next six paragraphs in the same manner. When done with the

FIGURE 7.2 Practice & Application Component of the SIOP® Model: Mrs. Bertoni's Lesson

4	3	2	1	0	N/A
20. Hands-on materials and/or manipulatives provided for students to practice using new content knowledge		Few hands-on materials and/or manipulatives provided for students to practice using new content knowledge		No hands-on materials and/or manipulatives provided for students to practice using new content knowledge	
4	3	2	1	0	N/A
21. Activities provided for students to apply content and language knowledge in the classroom		Activities provided for students to apply either content or language knowledge in the classroom		No activities provided for students to apply content and language knowledge in the classroom	
4	3	2	1	0	
22. Activities integrate all language skills (i.e., reading, writing, listening, and speaking)		Activities integrate some language skills		Activities do not integrate language skills	



Reflect and Apply

Click here to explain your ratings for Mrs. Bertoni's lesson on each of the Practice and Application features.

text, she poses comprehension questions and calls on students who raise their hands to answer.

For homework, she tells the students to reread pages 83 and 84 in the text and write down one thing they learned in their notebook.

Check your understanding: On the SIOP form in Figure 7.2, rate Mrs. Bertoni's lesson on each of the Practice and Application features.

Mr. Sherbiny

The lesson's objectives are on the board. The teacher reads them in English and the class chorally repeats. The teacher then explains them in Arabic, his native language.

Content Objective: I will be able to enact, model, and draw examples of revolution and rotation using the Earth, sun, and moon.

Language Objective: I will be able to explain the movement of the Earth and moon orally and in writing using the language frames: "The ____ revolves around the ____." and "The ____ rotates on its axis."

The teacher introduces key terms on the word wall: *revolve* (v)/*revolution* (n), *rotate* (v)/*rotation* (n), *axis* (n), *move* (v)/*movement* (n), *tilt* (n/v), and *moon* (n). Each word or word pair is written in Arabic and English with the part of speech on a large card, and there is a picture associated with each one as well. Using the visuals

he explains the meaning of the words and has students pronounce them aloud. He then asks students for real-life examples of *revolve*, *rotate*, and *move*. He explains why three cards list a verb and a noun, pointing out the suffixes *-tion* and *-ment* and the root connection between the words. He associates *axis* to math graphs they have studied. He has students think-pair-share what they know about how the Earth moves and how the moon moves.

Using three different sized balls to represent the sun, Earth, and moon, he guides three students in demonstrating revolution and rotation. First, one student holds the sun at the front of the room and a second revolves around the sun, as Earth. The class chorally repeats: *The Earth revolves around the sun. One trip around is a revolution.* Then, a third student revolves around Earth as the moon. The class chorally repeats: *The moon revolves around the Earth. One trip around is a revolution.*

Next Mr. Sherbiny shows them how the Earth rotates on its axis and introduces the term, *tilt*. The class chorally repeats: *The Earth rotates on its axis. The Earth is tilted. One turn around the axis is a rotation.* He has the moon revolve while the Earth rotates with the axis at a slight angle. Finally, he guides the moon to revolve around the Earth while it rotates and revolves around the sun. The students repeat the demonstrations one at a time, and Mr. Sherbiny asks some comprehension questions of the class, some of which tap prior knowledge. For example, he asks how long it takes for the Earth to revolve around the sun and for the Earth to rotate. The three students perform each demonstration a final time while the teacher leads the class in choral explanations, such as “The moon revolves around the Earth” to model the language frames.

Mr. Sherbiny gives each student group a plastic bag with cut-out pictures of the sun, moon, and Earth. He tells the groups to manipulate the objects to show revolution and rotation. He asks students to take turns saying the explanation aloud to their group. He circulates and listens in, sometimes asking comprehension questions, sometimes asking students to stand and act out the movements.

The class next reads about rotation and revolution from a section of a science textbook written for low literacy students. Before they start, Mr. Sherbiny tells them to raise their hand when they say or hear *revolution*, *revolve*, *rotation*, or *rotate*. One student reads the first paragraph aloud. A second student reads that same paragraph a second time. The teacher asks a question or two after each second reading. Most of the students remember to raise their hands when the key words are read aloud.

After the reading, the teacher asks each group to create a drawing to show the movement of the Earth, sun, and moon. He asks them to write some sentences using the frames in the language objective. He circulates to check their work, and when he approves it, the students copy the drawing and sentences into their notebooks.

Students are then asked to think of things in real life that rotate or revolve. They talk in their groups. After several minutes, Mr. Sherbiny asks the students to draw their example on the board or act it out. They need to explain it aloud, and some use English, others Arabic. Some examples that students share are dances, race cars, running around the gym, and a fan. As a review, students volunteer to stand in front of the room and act out the key concepts and terms. The other students guess what is being demonstrated and share with a partner.

Check your understanding: On the SIOP form in Figure 7.3 on the following page, rate Mr. Sherbiny’s lesson on each of the Practice and Application features.

FIGURE 7.3 Practice & Application Component of the SIOP® Model: Mr. Sherbiny's Lesson

4	3	2	1	0	N/A
20. Hands-on materials and/or manipulatives provided for students to practice using new content knowledge		Few hands-on materials and/or manipulatives provided for students to practice using new content knowledge		No hands-on materials and/or manipulatives provided for students to practice using new content knowledge	
4	3	2	1	0	N/A
21. Activities provided for students to apply content and language knowledge in the classroom		Activities provided for students to apply either content or language knowledge in the classroom		No activities provided for students to apply content and language knowledge in the classroom	
4	3	2	1	0	
22. Activities integrate all language skills (i.e., reading, writing, listening, and speaking)		Activities integrate some language skills		Activities do not integrate language skills	



Reflect and Apply

Click here to explain your ratings for Mr. Sherbiny's lesson on each of the Practice and Application features.

Mrs. Aliheri

After the students enter Mrs. Aliheri's classroom, she turns on the interactive whiteboard and projects a video clip. The students watch the Earth revolve around the sun and the moon revolve around the Earth while a voice explains what they are seeing. Mrs. Aliheri pauses the clip and writes *revolve* and *revolution* on the side of the smartboard. She then continues the clip and the students watch the Earth rotating and listen to the explanation. After that, the teacher writes *rotate* and *rotation* on the board. Next, the video shows scenes depicting the four seasons and day and night while the voiceover explains how these phenomena are the result of the Earth's revolution and its rotation. Mrs. Aliheri adds *seasons*, *day*, and *night* to the board as well.

"I'm going to play this clip again without the sound," Mrs. Aliheri says. "When you see a revolution, I want you to raise one finger. When you see a rotation, raise two fingers." She replays the clip and students indicate their understanding. Several are confused between rotation and revolution so she plays the clip again with the sound on.

Next, the class opens the textbook to read the section on the topic. Mrs. Aliheri uses a book from the elementary school because the reading level is lower. Although

some illustrations depict young children, she believes the text is better for the students who lack literacy. She asks students to read the assigned pages with a partner. She circulates, listens, and occasionally corrects pronunciation. After 15 minutes of the partner reading, she asks some comprehension questions.

To wrap up the lesson, she distributes one word card each to nine students: *moon, Earth, sun, rotates, revolves, seasons, day, night, around*. She asks them to come to the front of the room and use some of their cards to make a sentence. This proves confusing, so she has certain students put their cards on the board: *Earth, sun, revolves, around*. She moves the cards into the following order: *Earth, revolves, around, sun* and models how to turn that into a sentence orally: “The Earth revolves around the sun.” She then writes out the sentence. She calls up more students to place cards: *night, day, rotates, Earth*. She asks the class for help forming a sentence, but no one is able to perform the task. She asks one student to move the cards into an order she dictates: *Earth, rotates, day, night*. She states: “Because the Earth rotates, we have day and night.” She writes this and has the class copy both sentences into their notebooks.

Check your understanding: On the SIOP form in Figure 7.4, rate Mrs. Aliheri’s lesson on each of the Practice and Application features.

FIGURE 7.4 Practice & Application Component of the SIOP® Model: Mrs. Aliheri’s Lesson

	4	3	2	1	0	N/A
20. Hands-on materials and/or manipulatives provided for students to practice using new content knowledge			Few hands-on materials and/or manipulatives provided for students to practice using new content knowledge		No hands-on materials and/or manipulatives provided for students to practice using new content knowledge	
	4	3	2	1	0	N/A
21. Activities provided for students to apply content and language knowledge in the classroom			Activities provided for students to apply either content or language knowledge in the classroom		No activities provided for students to apply content and language knowledge in the classroom	
	4	3	2	1	0	
22. Activities integrate all language skills (i.e., reading, writing, listening, and speaking)			Activities integrate some language skills		Activities do not integrate language skills	



Reflect and Apply

Click here to explain your ratings for Mrs. Aliheri’s lesson on each of the Practice and Application features.

■ Discussion of Lessons

20. *Hands-On Materials and/or Manipulatives Provided for Students to Practice Using New Content Knowledge*

Mrs. Bertoni: 0

Mr. Sherbiny: 4

Mrs. Aliheri: 1

- Although **Mrs. Bertoni** visually modeled the movements, rotation and revolution, she did not have the students use manipulatives or do a kinesthetic task. The one time they used a gesture (pointing to the ceiling to indicate the moon's location) was actually a connection to their prior knowledge. The students were mostly passive while they copied her illustration from the board. Listening to a teacher read is not a practice activity. They had no opportunities to practice using the new words orally or to engage in something with the new knowledge the teacher wanted them to acquire. Mrs. Bertoni tried to scaffold the information for the students, using the diagram on the board and paraphrasing the text, but she failed to give them any guided or independent work to strengthen their learning. For newcomers with limited English skills, hands-on activities would have made the new information more concrete and more meaningful. This lesson received a “0” for providing hands-on materials or manipulatives for practice.
- **Mr. Sherbiny** planned and implemented several hands-on practice activities in this lesson. For example, students used manipulatives in small groups to demonstrate revolution and rotation and practiced language frames to explain the concepts. Later, each group made a drawing to show the movements and shared it with the class. Mr. Sherbiny also asked students to listen for key words and to raise their hands when they heard them. Therefore, Mr. Sherbiny's lesson received a “4” for this feature. Through multiple repetitions and **informal assessments**, Mr. Sherbiny was able to determine whether students mastered the content and key vocabulary concepts. Such meaningful practice made concrete what could have been abstract for the English learners.
- **Mrs. Aliheri** tried to involve students through movement by having them signal with fingers when they recognized *rotation* and *revolution* in the video clip. She also tried to have students manipulate word cards to make sentences, but her planning was poor, as was the execution of the task. If she had narrowed the focus, included cards for all the words needed to make a sentence, distributed cards for only one sentence at a time, and modeled for the students from the start, these newcomers may have had a chance at success. Instead, she assumed too much. These low literate students were not ready to form sentences that she alone had in mind with only a partial set of words and the need to add words, such as *because*. Her lesson was rated a “1” for providing hands-on materials or manipulatives for practice.

21. *Activities Provided for Students to Apply Content and Language Knowledge in the Classroom*

Mrs. Bertoni: 0

Mr. Sherbiny: 3

Mrs. Aliheri: 0

- This feature can sometimes be scored N/A when a multiday lesson has several content concepts to cover and practice and application are divided across two days. In this case, however, the concepts of rotation and revolution were fairly straightforward, and time was available for both practice and application. However, **Mrs. Bertoni's** lesson did not include either. As a result, the lesson also received a "0" on the SIOP protocol for applying content and language knowledge. It is doubtful that the English learners had a clear understanding of concepts or that students could apply what they had learned in any meaningful way on their own. The homework assignment—to read the chapter independently and to write one thing they learned—could have been viewed as an application activity, but it needed to be done in class where the teacher could support the emerging English literacy skills of these newcomers.
- **Mr. Sherbiny's** lesson received a "3" for applying content and language knowledge. After the students demonstrated their understanding of the newly learned concepts through practice, he had them apply that knowledge to a new situation. They had to think of real-life examples where something rotates or revolves. With these underschooled newcomers, it was fitting as well as culturally responsive to have them work in groups and discuss their ideas, even in their native language. The students had to generate a way to show their example to the class and explain it as well. By allowing the use of the native language, Mr. Sherbiny allowed for some differentiation here, especially since students might be using words and phrases they had not learned in English yet. If Mr. Sherbiny had taken some time to restate into English the ideas students gave in Arabic, this feature would have received a score of "4." In this way, he would have continued to act as a language model for the class and advance the students' language skills.
- **Mrs. Aliheri's** lesson did not have an application activity during the lesson and so received a "0" for this feature. There were very few opportunities for students to practice their language knowledge orally and none to apply it. The video clip introduced the concepts and the reading reinforced them, but students were not asked to apply the concepts in any new manner.

22. *Activities Integrate All Language Skills*

Mrs. Bertoni: 1

Mr. Sherbiny: 4

Mrs. Aliheri: 2

- **Mrs. Bertoni's** lesson on rotation and revolution was teacher directed and focused on information presentation. For the most part, the English learners listened to the teacher—when she was drawing on the board, asking questions, and reading aloud. Some students answered her questions, but she did not make sure each English learner had an opportunity to talk about the new concepts. Nor did they have a real academic discussion, just a teacher-dominated Q & A. Students may have followed along with the reading silently, but since she summarized each paragraph, they did not need to practice reading comprehension skills. The writing activity was assigned for homework. Because this class was composed solely of newcomers with major educational gaps, it was not a good idea to give a writing task for out-of-school performance without any practice or support in class first. Her lesson received a “1” on the SIOP protocol for integrating all language skills.
- **Mr. Sherbiny's** lesson received a “4” on the SIOP protocol for this feature. Throughout this lesson, English learners were listening, speaking, reading, and writing about rotation and revolution. Mr. Sherbiny gave his newcomers with limited formal schooling repeated practice hearing the new words, using the words and language frames while manipulating representative objects, listening for and reacting to key words when heard (raising their hands), reading the text, and writing sentences. The language processes were well integrated into the delivery of the space systems content. Although he used some Arabic to clarify information for these newly arrived adolescents, he made sure they practiced the English words and sentence frames. The teacher facilitated student–student interaction and modeled and checked on appropriate language use.
- In **Mrs. Aliheri's** lesson, students watched and listened to a video about rotation and revolution. They also did some partner reading from the textbook. She wanted students to manipulate word cards and make some sentences, but she did not scaffold the process, and so none of them were able to. However, they did copy two sentences in their notebooks. This lesson received a “2” for integrating all language skills. There were few opportunities for students to practice language and content concepts with each other.

 Watch this video of a middle school science lesson and note how the teacher incorporates hands-on and application activities. Afterward, discuss how the activities enhanced students' understanding of the content concepts. At what point did learning occur?

(For more examples of lesson and unit plans in science for grades K–12, see Short, Vogt, and Echevarría, 2011b.)

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Screencasting. Ms. Palacios suggested the teachers incorporate *screencasting* to enhance their lessons on revolution and rotation. Screencasting apps or programs, available on both computers and laptops, allow students to record their voices over images or other content on a screen. These programs also let the students annotate the images by drawing on them, in a way similar to how a television meteorologist might circle or highlight sections of a weather map. Ms. Palacios gave one caution—that the teachers consider using a larger room, the hallway, or the library for such an activity. The built-in microphones on many types of devices pick up a considerable amount of background noise that would include other students recording screencasts. Headsets with microphones were another option she pointed out.

Mr. Sherbiny adjusted his planned lesson for the next day to add the screencasting activity. Students would use the new technology tool to connect to the key concepts from the day before and also practice their oral explanations.

At the start of the next lesson, Mr. Sherbiny introduced the screencasting app on the classroom iPads. He showed students how to screencast, using a photo he had taken of the sun, moon, and Earth cut-outs and playing the audio he recorded. Mr. Sherbiny told the students they would take photos too and record their oral explanations using a screencasting app to describe the Earth's and moon's movements. He encouraged them to use the sentence frames still posted from the prior lesson and add to the explanations if they liked.

The students arranged the cut-outs on the table and began taking photos of them with the iPads. The photos were saved automatically to the devices and were easily accessed later within the screencasting app. After the photos had been taken, the student groups then spread out across the room to record their explanations.

During this process of recording screencasts, Mr. Sherbiny realized that the tool is valuable in numerous ways.

1. It offered students the opportunity for instant feedback. Immediately after recording, the students could listen to and evaluate their products. They could re-record. The students were motivated to improve not only their pronunciation and volume but also the quality of their explanations.
2. The tool was flexible. The students could take photos with the iPad's camera, save images from the Web, or create original illustrations using the built-in drawing tools.
3. Screencasting made assessment easier. Mr. Sherbiny could periodically evaluate his students' oral language abilities. He always wanted a way to listen to the students' speech multiple times and screen-casting allowed him opportunity to hear and assess his students with more than a single conversation.
4. The screencast could become part of an assessment portfolio where students could listen to various projects recorded throughout the year and discover how they improved over time.
5. Screencasting could also be leveraged to create instructional videos to be posted on a class Web site or shared with parents or other teachers.

Screencasting Products: *Explain Everything*, *DoodleCast Pro*, *ShowMe*, *ScreenChomp*, *Jing*, *Screencast-o-matic*, *Screencastify* (similar but worth mentioning: *Book Creator* app)

**Check Your Understanding**

Click here to check your understanding of Chapter 7, Practice and Application.

■ Summary

As you reflect on this chapter and the impact that practice and application has on learning, consider the following main points:

- With any type of new learning, students need practice and application of newly acquired skills to ensure mastery of content concepts.
- You should plan a variety of hands-on activities and materials, including manipulatives and movement, to enable students to forge connections between abstract and concrete concepts in a less language-dependent way.
- When you create application activities to extend learning, be sure to relate the activities to both the language and the content objectives.
- Because students have different preferred learning styles, when teachers use different modalities for instruction and encourage students to practice and apply new knowledge through multiple language processes, they have a better chance of meeting students' needs and furthering both their language and content development.

■ Discussion Questions

1. In reflecting on the learning outcomes in the content and language objectives at the beginning of the chapter, are you able to:
 - a. Identify a variety of ways for students to enhance their learning through hands-on practice?
 - b. Create application activities that extend the learning in new ways and relate to language or content objectives?
 - c. Design activities that integrate different language skills as students practice new content knowledge?
 - d. Discuss the importance of linking practice and application activities to specific lesson objectives?
2. Compare and contrast the following two teachers' approaches to teaching a lesson on coordinate planes and slope.
 - a. One teacher's approach involves a lecture, graphs of lines with differing slopes, and a formula to calculate slope. Students are then tested about their knowledge of slopes by drawing lines on graphs after being given a slope and y -intercept.
 - b. The other teacher's approach begins with students angling their textbooks to different heights and rolling their pencils down to determine how the angle affects speed. She introduces the word *slope* and asks students to describe bike riding up and down hills. Groups generate ideas as to why knowing a slope is important. She then has the students practice drawing some lines

on graphs and explains the formula, $y = mx + b$. Groups then use mapping software to view 3D images of a ski resort and determine the slopes of several ski runs.

Which approach to teaching this content concept is most appropriate for English learners? How do you know? Be as specific as you can.

3. One way to ensure practice and application of new knowledge is through project-based learning. Develop a unit project that students in one of your courses can build incrementally as the series of lessons progresses over several days or weeks. Identify the steps to completion that students will accomplish in each lesson of the unit. Try to collaborate across departments, such as ESL and history or physical education and science. Plan a culminating presentation or performance that will enhance language practice.
4. English learners benefit from the integration of reading, writing, listening, and speaking during a lesson. What adjustments and techniques can a teacher use to provide successful experiences for students with limited English language proficiency while they read, write, listen, and speak about new information they are learning? Include specific activities and examples in your answer.
5. English language arts, mathematics, and science teachers are responsible for incorporating rigorous state **standards**, such as the **Common Core** and Next Generation Science, in their instruction. How is it possible to provide direct application and hands-on practice for lessons? What can teachers do to alleviate the conflict between “covering the content” and giving English learners time to practice the language along with the content?
6. Using the SIOP lesson you have been developing, write some activities for students to practice and then apply the key language and content concepts.

Lesson Delivery

Learning Outcomes

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

Monitor lessons to determine if the delivery is supporting the objectives.

Determine how lesson preparation influences lesson delivery.

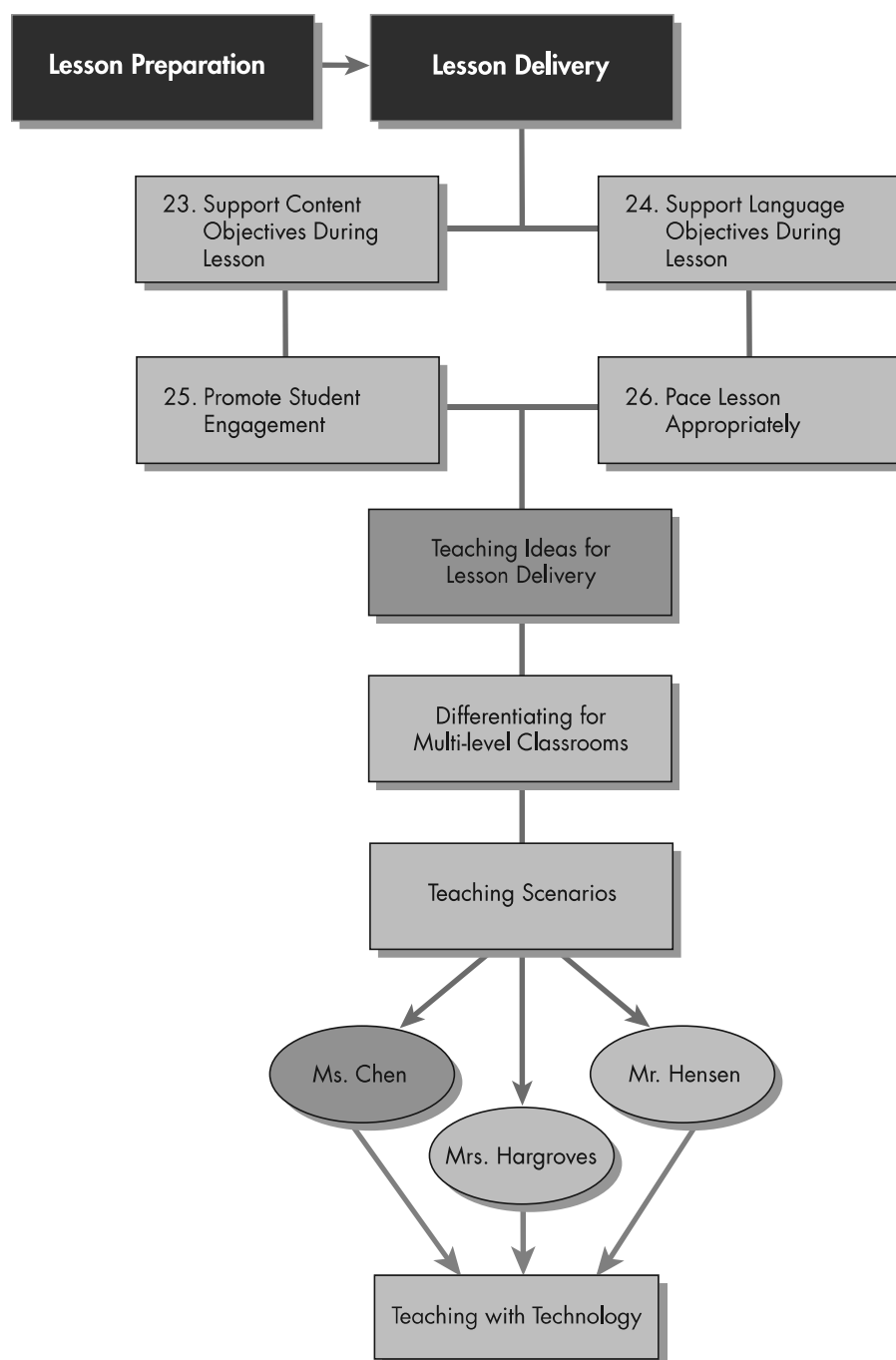
Generate activities to keep **English learners engaged**.

Language Objectives

Discuss characteristics of effective **SIOP** lesson delivery.

Explain how a focus on a lesson's objectives can aid in pacing.

Evaluate a situation in which a lesson plan is not enacted successfully and explain what might have gone wrong and what could be improved.





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■ Background

In Chapter 2, we explained the importance of carefully designing lessons with English learners in mind. Good preparation is the first step in delivering a lesson that leads to student learning, but those lessons need careful implementation as well. In the Lesson Delivery component, we monitor the success of a lesson in helping students meet objectives. Some lessons unfold as planned; however, some go awry, even if the plan is well written. Activities might be too easy or too difficult for the students. The lesson might be too long or too short. A student might ask an interesting but tangential question, and the ensuing class discussion consumes 10 unexpected minutes. The Lesson Delivery component of the SIOP Model reminds teachers to stay on track, and in this chapter we provide some guidance for doing so.

This chapter addresses the way a lesson is delivered, how well the content and language objectives are supported during the lesson, to what extent students are engaged in the lesson, and how appropriate the pace of the lesson is to students' ability levels. You will see that this chapter parallels Chapter 2, Lesson Preparation, because the two components are closely related. The effectiveness of a lesson's delivery—the level of student participation, how clearly information is communicated, students' level of understanding reflected in the quality of their work—often can be traced back to the preparation that took place before the students entered the classroom. We will meet the teachers from Chapter 2 again in the Teaching Scenarios and discuss how their level of preparation was executed in their lesson delivery.

Watch this video of Kendra Moreno, a third-grade teacher and SIOP coach, as she discusses how the SIOP Model has improved her planning and delivery of lessons for English learners.



SIOP® FEATURE 23:

Content Objectives Clearly Supported by Lesson Delivery

As we discussed in Chapter 2, content objectives must be stated orally, and they must be written and displayed for students and teachers alike to see, preferably in student-friendly language. The objectives serve to remind everyone of the focus of the lesson and to provide a structure to classroom procedures.

Since the No Child Left Behind Act raised the level of school accountability, teachers expect to post objectives tied to state **standards**, and principals expect to see them. We caution against any inclination to list the standard in an abbreviated form, like CC.W.2.2 (for a Grade 2 writing standard), as an objective. It would be meaningless to the students. For young learners it may appear as gibberish; for older students, it is something to ignore. Further, a standard is conceptualized at the level of knowledge broader than that taught in an individual lesson plan.

Schmoker (2011) calls for more focus in classroom instruction. He proposes “simplicity, clarity and priority” regarding learning goals. He recommends “whole class lessons focused on a clear learning objective in short instructional ‘chunks’ or segments, punctuated by multiple cycles of guided practice and formative **assessment** (‘checks for understanding’)” (pp. 20–21). We know that written objectives guide student learning and help them stay on task. SIOP teachers who attend to their lesson objectives make sure there are times during the lesson when some explicit instruction takes place that targets the objectives and other times when students have the opportunity to practice and make progress toward meeting those objectives. Throughout the lesson and at its conclusion, the teacher and learners can evaluate the extent to which the lesson delivery supported the content objectives.



SIOP® FEATURE 24:

Language Objectives Clearly Supported by Lesson Delivery

As you now know, language objectives are an important part of effective SIOP lessons. Teachers and students benefit from having a clear language objective that is written for them to see and that can be reviewed during the lesson. The objective may be related to a writing standard for literacy in history/social science such as “Students will write an explanatory text annotating events of the Great Depression” (*cf.* NGA, 2010a, p. 65); or it may be related to teachers’ scope and sequence of language skills that their own students need to develop, such as “Students will summarize the process of photosynthesis orally.”

No matter which language objective is written for a lesson, as we stated in Chapter 2, a teacher needs to address it explicitly during instruction. For example, if first graders in a language arts lesson have to “retell a story” as their language objective with *The Hungry Caterpillar* by Eric Carle, then we expect the teacher will spend some time teaching or reviewing *how to retell* with students, perhaps using a different, familiar story, and also reviewing the number words and names of the objects that the

caterpillar ate. In sum, we will not promote students' **academic language** development without explicit instruction in elements of academic language and without students having multiple opportunities to practice and use the language in a variety of contexts.



SIOP® FEATURE 25:

Students Engaged Approximately 90% to 100% of the Period

This feature in the Lesson Delivery component calls on teachers to engage students 90% to 100% of the class period. By this we mean that the students are paying attention and on task. It does not mean they need to be highly active (writing, reading, moving) the entire time, but they are following the lesson, responding to teacher direction, and performing the activities as expected. When students are in groups, all are participating. Lessons where students are engaged less than 50% of the time are unacceptable. This situation tends to occur when teachers have not provided clear explanations of the assignment or have not **scaffolded** the process well. If students don't know what to do, they will find something else to do, and then misbehavior or inattention ensues.

Engagement, motivation, and cultural responsiveness are important factors in successful lessons—for both **native** and **non-native English-speakers** (Nieto & Bode, 2008; Turner, 2007). When learners are actively engaged, they are involved in tasks that challenge them and allow them to gain confidence. Younger learners prefer tasks with objects they can manipulate or movements they can perform, as well as puzzles and learning games. They will listen to or try to read texts above their level in subject matter that captures their imagination. Adolescents prefer to see connections between school topics and their current or future lives, and they will engage with text above their reading level if it is relevant to them. Offering choices in tasks, texts, or partners, setting up learning centers, and differentiating instruction are key methods for accommodating classrooms with English learners of varying proficiency levels as well as those with both native English speakers and English learners. It is often through such modifications to a curriculum that student engagement can be enhanced (Buck, Carr, & Robertson, 2008; Tomlinson, 2005).



Watch this video of a kindergarten teacher who explains how she keeps her students engaged in class. In what ways are the challenges she faces similar to those found in classrooms with older learners? In what ways are they different?

English learners are the students who can least afford to have valuable time squandered through boredom, inattention, socializing, and other off-task behaviors. Time also is wasted when teachers are ill prepared, have poor classroom management skills, spend excessive amounts of time making announcements and passing out and collecting papers, and the like. The most effective teachers minimize these behaviors and maximize time spent actively engaged in instruction. English learners who are working to achieve grade-level competence benefit from efficient use of class time. Further, many of these learners have had uneven schooling experiences, missing time in school due to circumstances beyond their control, and are then further disadvantaged by inefficient use of class time. Investing in a slower pace in the first quarter of the year often pays off later because students then know the task procedures and classroom routines and have better academic language skills.

There are three aspects to student engagement that should be considered during a lesson: (1) allocated time, (2) engaged time, and (3) academic learning time (Berliner, 1984).

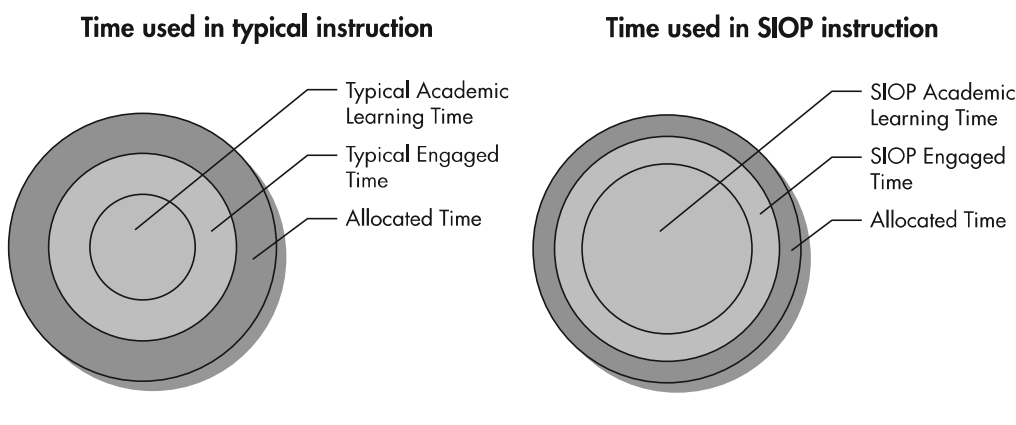
1. *Allocated time* reflects the decisions teachers make regarding the amount of time to spend studying a topic (e.g., math versus reading) and a given academic goal (e.g., how much time to spend on reading comprehension versus decoding skills). As we have discussed throughout this book, effective SIOP teachers plan for and deliver lessons that are balanced between teacher presentation of information and opportunities for students to practice and apply the information in meaningful ways.
2. *Engaged time* refers to the time students are actively participating in instruction during the time allocated. The engaged time-on-task research has consistently concluded that the more actively students participate in the instructional process, the more they achieve (Schmoker, 2006). Instruction that is understandable to English learners, that creates opportunities for students to talk about the lesson's concepts, and that provides hands-on activities to reinforce learning captures students' attention and keeps them more actively engaged.
3. *Academic learning time* focuses on students' time-on-task, when the task is related to the content and language objectives they will be tested on. Creative, fun activities are not effective if they are unrelated to the content and language objectives of the lesson. But equally, "skill and drill" exercises on discrete points (e.g., past tense verb endings) and endless multiple-choice practice tests are not engaging, thus reducing academic learning time. SIOP teachers maximize the academic learning time for their students, as shown in Figure 8.1.

Student engagement is also enhanced when students have a focus for their work. According to Leinhardt and colleagues (1982):

When teachers spend their time and energy teaching students the content the students need to learn, students learn the material. When students spend their time actively engaged in activities that relate strongly to the materials they will be tested on, they learn more of the material (p. 409).

SIOP teachers therefore need to be explicit in their expectations and make certain that their English learners understand which content and language objectives will be the focus of upcoming assessments.

FIGURE 8.1 Amount of Academic Learning Time in Typical Instruction and SIOP Instruction





SIOP® FEATURE 26:

Pacing of the Lesson Appropriate to Students' Ability Levels

Pacing refers to the rate at which information is presented during a lesson. The pace of the lesson depends on the nature of the lesson's content, as well as the level of students' background knowledge. When working with English learners, it can be challenging to find a pace that doesn't present information too quickly yet is brisk enough to maintain students' interest, especially when a variety of English proficiency levels are represented in the same classroom. Finding an appropriate pace requires practice, but becomes easier as teachers develop familiarity with their students' language and academic skills.



Watch this video of a teacher explaining how she paces her lessons to accommodate different learning needs and ability levels in a heterogeneous class of kindergarteners. What kinds of pacing concerns might a middle school or high school teacher confront? What might help a teacher who over- or under-plans a lesson?

- *Elementary teachers* know, for instance, that the attention span of a kindergartener or first grader is much shorter than that of a fifth grader, so they adjust their lessons accordingly. A practice activity may last only five to seven minutes in the primary grades, whereas in the upper grades it could last 20. Elementary teachers also chunk important information in smaller conceptual units and allot time for processing the material taught in the new language between the chunks. Because many elementary teachers have a less rigid bell schedule than secondary teachers (i.e., students do not typically switch classes at a set time per period), on some days, they may extend certain lessons beyond the normal time frame to cover the material.
- *Middle and high school content area teachers* are often constrained by the school's bell schedule and the district's curriculum pacing guide. However, teachers cannot move so quickly through the curriculum that they leave their English learners behind. They may need to carefully select the most important concepts to spend some extra time on and adjust their planning accordingly.
- *ESL teachers* can augment instructional time. When a grade-level or subject-area teacher collaborates with the ESL teacher, both language and content instruction benefit. The ESL teacher might introduce key vocabulary and build background on topics before they are covered in the content classroom, or provide additional practice and application activities afterward. This supports the student's content learning. It also supports the acquisition of academic English and motivates English learners because they cover grade-level material in the ESL class and understand more in the content class. (See Lacina, Levine, and Sowa, 2006 for examples of ESL–elementary classroom teacher partnerships.)

In classes with both native English speakers and English learners, it can take some effort and experience to pace the lessons well. Investing in instructional routines and teaching task procedures during the first quarter of the year are two strategies that will reap dividends later. Most learners enjoy working with peers, so collaborative learning projects with tasks geared to proficiency level and interest are beneficial. On occasion, interdisciplinary projects could be planned, such as a project

on Volcanoes Around the World that involves science (e.g., the steps in forming a volcano and leading to an eruption), math (calculating temperature of lava and rate of lava flow), geography (e.g., locations of active and dormant volcanoes), and reading (e.g., stories about volcanoes). Such projects not only spiral the content but also introduce and reinforce key language terms, functions, and sentence structures, allowing English learners time over the course of a unit and across several content areas to develop the academic English skills they need for success.

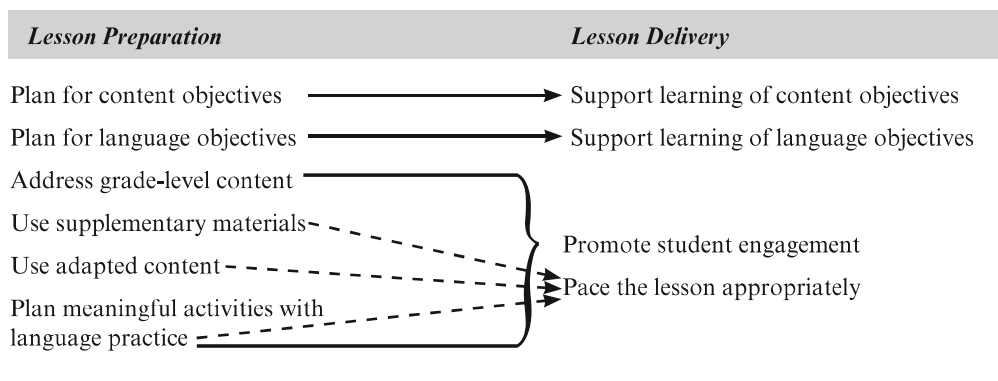
One important fact to remember is this: If a teacher wastes five minutes of a class period daily, perhaps by starting the lesson late or finishing early, over the course of 180 days, 15 hours of instructional time will be lost! Often, simple routines can help the pacing: a basket by the door where students deposit homework when they enter or class work when they leave, a materials manager for each group of desks who distributes books or worksheets to everyone in the group, routinized activities that do not need directions explained each time, and/or a classroom timer set to ring when an activity should end. If you finish a lesson early, don't let students chat or do homework; instead, play a game to review vocabulary or key concepts. We need to maximize the way we use time when we have English learners in the classroom.

■ Linking Lesson Preparation and Lesson Delivery

Now that you have read about the features of this component, you can see that strong, thoughtful lesson preparation is critical to effective lesson delivery. Without the planning necessary to make the content truly comprehensible for the diversity of learners in your class and without considering which aspects of academic English they need to learn or practice in a given lesson, your lesson may fly over their heads, and a day during which they could be learning may be wasted. Figure 8.2 shows how the features of Lesson Preparation influence the features of Lesson Delivery.

Supporting Content and Language Objectives. The content and language objectives written on a lesson plan need to be presented and practiced in a way to support student learning. Not all students may master the objectives the first day they encounter them, but all students should make progress toward mastery. Just writing

FIGURE 8.2 The Relationship Between Lesson Preparation and Lesson Delivery



a content and a language objective on your lesson plan is not sufficient; you have to “deliver” on those learning goals in class.

When presenting a SIOP lesson, remember the objectives should be:

- **Observable**—an observer can see or hear students participating in activities related to the learning targets.
- **Measurable**—there is a way to determine whether students met the objectives, or made progress toward meeting them.
- **Assessable**—the objectives are reviewed at the end of the lesson, and the class determines if they were met.

Some teachers fail to write out and discuss the objectives with the students because the process is time consuming. We acknowledge that it takes time to determine good objectives for every lesson, but the investment in writing them and then teaching to them pays off in student achievement (Short, Fidelman, & Louguit, 2012).

Some teachers complain they can’t write objectives in a manner that students will understand or fear that they will not complete all of the objectives for the full lesson. Both of these arguments are easily addressed by practice and support. A SIOP coach or a fellow SIOP teacher can give guidance on writing student-friendly objectives. The students themselves will confirm if they understand the objective when it is presented in class. And as a teacher gets to know his or her students, writing for their age and proficiency level becomes easier.

If the problem is that the objectives are not being met by the end of the lesson, then the teacher and students can discuss why as they review them. It may be that the activities took longer than planned or class discussions veered off track, but the presence of objectives can actually impose discipline on the pacing of each lesson. If a teacher consistently does not meet objectives, however, it may also be that too many objectives have been planned for the time frame of the lesson, or that time is lost during activity transitions or at the start or end of the period.

The following suggestions may help:

- Reread the objective chorally with the class during the lesson to re-focus the students.
- Ask students what they have done up to that point in the lesson that relates to the objective.
- Pause periodically and have students rate how well they are meeting the objective (e.g., Thumbs up ~ I got it. Thumbs down ~ I am lost. Thumbs sideways horizontally ~ I’m getting there).



Watch this video and decide if the students met the posted objectives. What activities did the teacher plan to address the objectives of this geometry lesson? How well did the tasks go? How did the teacher ensure all students were engaged?

Promoting Student Engagement. In Figure 8.2, you can see how student engagement depends in large part on what content you teach, how you adapt that content, what supplementary materials you include, and what activities you ask students to perform. English learners are motivated to learn what their English-speaking peers are learning. Sometimes, in order to provide that grade-level content in a comprehensible way, you will have to adapt it. You will decide whether the adaptation is through the texts

they are reading (e.g., utilizing a book with a lower reading level) or the tasks they are being asked to do, but if the material is at or a little above their level of understanding, they can be engaged with it. And of course, the planned lesson tasks play a critical role in student engagement. “Skill and drill” exercises turn everyone off—English speakers and English learners alike. Creative activities related to the objectives that include plenty of language practice do not.

Pacing SIOP Lessons. We can’t discount how the choices we make when planning a lesson affect the pacing. If students use supplementary materials and the content has been adapted to their levels, they are better able to move through the materials with occasional support from the teacher. If, however, those materials are above their level, the class discussions and activities will get bogged down. More time will be spent explaining what something means than applying or extending the information. Likewise, if the activities are not meaningful or clearly explained, students may exhibit off-task behavior or dawdle while trying to complete the assigned work.



Teaching Ideas for Lesson Delivery

The following ideas can help a teacher check on student progress toward meeting objectives and promote student engagement:

- **Think-Pair-Share** (Lyman, 1981). This tried and true technique is an excellent means for teachers to monitor student understanding of the content or language objectives. Instead of asking questions to the whole class and calling on two or three students to respond, the teacher asks everyone to think of an answer or respond to a prompt, and tell it to a partner. Then, the teacher calls on some students to share their responses with the whole class. This relatively simple and quick technique gives *all* of the students a chance to think and speak about the topic, instead of just two or three. A variation called **Think-Pair-Square-Share** asks partners to pair up (square = four students) before the whole-class sharing out.
- **Chunk and Chew** (see Vogt & Echevarría, 2008, p. 164 and Short, Vogt, & Echevarría, 2011a, pp. 66–68). To maintain the goal of chunking new information, this technique encourages teachers to pause after every 10 minutes of input to give students time to talk with a partner or in a small group about what they have just learned. In SIOP lessons, the student talk is carefully structured by the teacher in the lesson plan with specific prompts and/or sentence starters.
- **Roam and Review.** At the end of a lesson, the teacher may pose a reflection question (e.g., “What was the most important thing you learned today?” or “What surprised you in our studies today?”) and have students think silently, then stand and roam the classroom, discussing their ideas with classmates. This is unstructured; students can roam and talk to whomever they choose.
- **Podcasts.** Students prepare a two- to three-minute oral summary on a topic that they have selected or that the teacher has assigned. They rehearse and then record it on a podcast or an audio file for use on the class computer.
- **TV Talk Show.** A wonderful project that addresses content and language objectives (particularly listening and speaking ones) and engages students is

the TV talk show (Cloud, Healey, Paul, Short, & Winiarski, 2010; Herrell & Jordan, 2008). Small groups plan a talk show on a topic with multiple parameters that they have studied. One student is the host and interviewer; others are the guests. For example, after studying extreme weather phenomena, one guest might be an expert on hurricanes, another on blizzards, a third on earthquakes, and a fourth on tornadoes. The talk shows could be videotaped for later viewing and analysis by the teacher or the students. The analysis might look at how well the students spoke, used key vocabulary, responded to host questions, and so forth.

- **Writing Headlines.** By writing a newspaper headline, students try to capture the essence of a day's lesson, section of a text read, video watched, or information presented orally. Teachers can encourage students to use descriptive language and focus on word choice to create compelling headlines.
- **E-Journals and Wiki Entries.** The teacher can have students write in an e-journal daily or once a week to reflect on what they have been learning. At the end of a unit, the teacher might ask students to write an online entry for a class wiki that presents key information on a topic being studied.

■ Differentiating Ideas for Multi-level Classes

As teachers deliver their lessons, they need to be cognizant of the learning process all of their students experience. The following ideas will help teachers differentiate activities among multi-level students as well as gauge which students are meeting the objectives and which need more assistance.

- **Pro-Rate the Task.** The product of a task need not be exactly the same across all students. The more advanced students are in their knowledge or language skills, the more they can be asked to do. In classes with both English learners and English speakers, a teacher might explain to English speakers that even if an assigned task for the English learners seemingly has less required output, it still is as cognitively challenging (or more) as the task for English speakers because the English learners are doing the work in a language they are still mastering.
- **Radio Advice Line.** The teacher can select two or three of the more advanced learners to be the radio show host. Other students can draft questions they have on a topic, perhaps as a review or as a way to seek clarification. They “call in” to pose the questions to the radio hosts, who take turns responding. The teacher can monitor what questions are being asked and which students seem to have a good or poor sense of the lesson's objectives.
- **Projects.** One of the best ways for students to work at their own ability level, language level, and interest level is through projects. Projects also offer a meaningful way to determine whether students can apply information they are learning and can tap into their creativity, too.
- **Leveled Questions.** Teachers can modulate the questions they ask students according to their **levels of language proficiency**. If they plan them in advance,

they can still ask questions that generate higher-order thinking but the language of the question can be simplified.

- ◆ **Homogeneous Small Group Rotations.** Teachers can cluster their students into homogeneous small groups based on their ability with the skill or topic (e.g., solving math problems, reading grade-level text) and set up three centers in the class: one for teacher-directed instruction, one for independent work, and one for small group or partner activities. The teacher always starts with the group of students who need the most support, and the instruction provides the foundation for their later small group and independent work. The other groups, when working with the teacher, might have their independent and small group work reviewed, might have some skill clarified, or might have an enrichment opportunity. In this set-up, the teacher can offer more assistance to those who are struggling while letting the others work on their own. (See Vogt, Echevarría & Washam, 2015, pp. 158-159, for a detailed description of how the rotation process can be designed.)
- **Scale of Student Mastery.** The teacher can keep track of how students are progressing in mastering the language and content objectives of a unit. At set moments of time (e.g., Day 1, Day 3, Day 7), the teacher records a score for the students' progress. The score might be on a continuum of 1–5, with 5 being mastery, or it might be a symbol like –, √, and +.

■ The Lesson

The Gold Rush (Fourth Grade)

The classrooms described in the teaching vignettes in this chapter are all located in a suburban elementary school with heterogeneously mixed students. English learners represent approximately 30% of the student population, and the children speak a variety of languages. In the fourth-grade classrooms of teachers Ms. Chen, Mrs. Hargroves, and Mr. Hensen, the majority of the English learners are at the intermediate stage of English fluency.

As part of the fourth-grade social studies curriculum, Ms. Chen, Mrs. Hargroves, and Mr. Hensen planned a unit on the California Gold Rush. The school district requires the use of the adopted social studies series, although teachers are encouraged to supplement the text with primary source materials, literature, and **realia**. The content topics for the Gold Rush unit include westward expansion, routes and trails to the West, the people who sought their fortunes, hardships, settlements, the discovery of gold, the life of miners, methods for extracting gold, and the impact of the Gold Rush. The content of this lesson covers the Oregon Trail, the Overland Trail, and the Route around Cape Horn.

■ Teaching Scenarios

These scenarios review the lessons from Chapter 2. To refresh your memory about each lesson on westward expansion and the Gold Rush taught by Ms. Chen, Mrs. Hargroves, and Mr. Hensen, we summarize them in the sections that follow. (See Chapter 2, Teaching Scenarios, for a complete description of the three lessons.)

Ms. Chen

Ms. Chen began the lesson on westward expansion by reading aloud the content and language objectives for the day.

Content Objectives

1. Students will use map skills to find and label the three main routes to the West.
2. Students will identify one or two facts about each of the three trails.

Language Objectives

1. Students will take notes to distinguish among the trails.
2. Students will categorize vocabulary terms.

After a whole-class brainstorming and List-Group-Label activity about why people leave their homes and move to new locations, Ms. Chen assigned most of the class a quick-write on the Gold Rush. She then provided a “jump-start” for the English learners with very limited proficiency by introducing key vocabulary, passing around iron pyrite (“fool’s gold”), looking together at a map of the trails west, and viewing several pictures of pioneers and Gold Rush characters.

Following this, Ms. Chen introduced the key vocabulary to the entire class. She asked students to use the names of the trails to try to determine their location on maps of the United States and Western Hemisphere and then worked with the class to locate the three trails on interactive whiteboard maps. Student groups practiced map skills and marked the routes on their own copies.

Finally, Ms. Chen distributed a scaffolded outline for taking notes on the chapter and modeled how to fill it in after a shared reading on the Oregon Trail section. The outline’s headings (“Locations,” “Characteristics,” “Challenges,” and “Advantages”) provided an organizer for the information, and in groups, students began working together to fill in the outline. The lesson concluded with a review of the content and language objectives. Then, several students volunteered to report on a number of facts about each of the trails.

Check your understanding: On the SIOP form in Figure 8.3 on the following page, rate Ms. Chen’s lesson for each of the features in Lesson Delivery. Be able to defend your ratings and discuss them with others, if possible.

FIGURE 8.3 Lesson Delivery Component of the SIOP® Model: Ms. Chen's Lesson

4	3	2	1	0
23. Content objectives clearly supported by lesson delivery		Content objectives somewhat supported by lesson delivery		Content objectives not supported by lesson delivery
4	3	2	1	0
24. Language objectives clearly supported by lesson delivery		Language objectives somewhat supported by lesson delivery		Language objectives not supported by lesson delivery
4	3	2	1	0
25. Students engaged approximately 90% to 100% of the period		Students engaged approximately 70% of the period		Students engaged less than 50% of the period
4	3	2	1	0
26. Pacing of the lesson appropriate to students' ability levels		Pacing generally appropriate, but at times too fast or too slow		Pacing inappropriate to students' ability levels



Reflect and Apply

Click here to explain your ratings for Ms. Chen's lesson on each of the Lesson Delivery features.

Mrs. Hargroves

Mrs. Hargroves began her lesson on the trails west by stating, "Today you'll learn about the Oregon Trail, the Overland Trail, and the Route around Cape Horn. We'll also be working on maps, and I want you to color the Overland Trail a different color from the color you use for the Cape Horn route. When you learn about the Oregon Trail, you'll complete the map with a third color. By the time you're finished, you should have all three routes drawn on the map using different colors." She held up a completed map for the students to see as an example.

Following a brief lecture on westward expansion, Mrs. Hargroves directed students to the respective chapter in the text and also displayed it using the electronic document reader. Students looked at the illustrations, and she responded to questions they had. She began reading the chapter, and after a few minutes, she directed students to complete the reading independently. She circulated through the room, answering questions, helping with difficult words, and getting students back on task. After 20 minutes, Mrs. Hargroves stopped the reading, distributed colored pencils and maps, and asked students to complete the maps with partners. When the maps were completed, she collected them and assigned a brief essay on the topic "If you had been a pioneer, which trail would you have chosen? Why?"

FIGURE 8.4 Lesson Delivery Component of the SIOP® Model: Mrs. Hargroves's Lesson

4	3	2	1	0
23. Content objectives clearly supported by lesson delivery		Content objectives somewhat supported by lesson delivery		Content objectives not supported by lesson delivery
4	3	2	1	0
24. Language objectives clearly supported by lesson delivery		Language objectives somewhat supported by lesson delivery		Language objectives not supported by lesson delivery
4	3	2	1	0
25. Students engaged approximately 90% to 100% of the period		Students engaged approximately 70% of the period		Students engaged less than 50% of the period
4	3	2	1	0
26. Pacing of the lesson appropriate the students' ability levels		Pacing generally appropriate, but at times too fast or too slow		Pacing inappropriate to students' ability levels



Reflect and Apply

Click here to explain your ratings for Mrs. Hargroves's lesson on each of the Lesson Delivery features.

Check your understanding: On the SIOP form in Figure 8.4, rate Mrs. Hargroves's lesson for each of the Lesson Delivery features.

Mr. Hensen

Mr. Hensen began his lesson by asking how many of the students had traveled to California. They discussed the various modes of transportation used by students who had visited the state, and then Mr. Hensen linked their responses to the travel modes of the pioneers. Following a video on the westward expansion, he introduced the key vocabulary for the day's lesson (Oregon Trail, Overland Trail, Route around Cape Horn).

Next, Mr. Hensen read aloud two paragraphs from the textbook chapter. He numbered students off into six groups, assigned different sections of the text to the newly formed groups, and engaged them in a Jigsaw reading activity for the remainder of the chapter. English learners were partnered with more proficient English readers for the Jigsaw activity. After the Jigsaw groups completed their reading, they regrouped to share what they had learned from the assigned text. At least one student from each of the Jigsaw groups was placed in the new home groups so chapter sections were fully covered. Again, English learners had support from students with greater English proficiency.

FIGURE 8.5 Lesson Delivery Component of the SIOP® Model: Mr. Hensen's Lesson

4	3	2	1	0
23. Content objectives clearly supported by lesson delivery		Content objectives somewhat supported by lesson delivery		Content objectives not supported by lesson delivery
4	3	2	1	0
24. Language objectives clearly supported by lesson delivery		Language objectives somewhat supported by lesson delivery		Language objectives not supported by lesson delivery
4	3	2	1	0
25. Students engaged approximately 90% to 100% of the period		Students engaged approximately 70% of the period		Students engaged less than 50% of the period
4	3	2	1	0
26. Pacing of the lesson appropriate to students' ability levels		Pacing generally appropriate, but at times too fast or too slow		Pacing inappropriate to students' ability levels



Reflect and Apply

Click here to explain your ratings for Mr. Hensen's lesson on each of the Lesson Delivery features.

Mr. Hensen then directed the students in their home groups to divvy up the three trails. Some students were asked to draw the Oregon Trail on a map; others were to draw either the Overland or Cape Horn trails. Their next task was to show the other students in their group how to locate, draw, and label the trails on their maps, using the map in the text and their reading as a guide. Mr. Hensen circulated through the room, assisting as necessary, while the students completed the mapping activity. At the lesson's conclusion, students were directed to pass in their maps. Those who had not finished were assigned the map task as homework.

Check your understanding: On the SIOP form in Figure 8.5, rate Mr. Hensen's lesson for each of the Lesson Delivery features.

Discussion of Lessons

23. *Content Objectives Clearly Supported by Lesson Delivery*

Ms. Chen: 4

Mrs. Hargroves: 1

Mr. Hensen: 3

We advocate for teachers to include content and language objectives in every lesson, and our research supports their value, especially for the English learners who need to have a clear, explicit understanding of what the expectations are for a lesson (Short, Echevarria & Richards-Tutor, 2011; Short, Fidelman, & Louguit, 2012). Recall that only Ms. Chen wrote her content and language objectives on the board and read them aloud for her students. While Mrs. Hargroves had a content objective (but no language objective) written in her plan book, she stated her plans for the day orally to her students, without clearly defining their learning objectives. Mr. Hensen had neither content nor language objectives written in his plan book, yet he appeared to have a clear idea of where he was going with his lesson. However, at the outset of the lesson, his plans may not have been clear for some students.

In this component of the SIOP Model (Lesson Delivery), we move beyond having the content and lesson objectives written in plan books and on the board. Rather, the focus here is on whether the actual lesson delivery matches the stated (or implied, in Mr. Hensen's case) objectives.

- From the beginning of the lesson, **Ms. Chen** had a clearly defined content objective, and her lesson delivery supported it. Her focus on the three routes to the West was supported by (1) activating students' prior knowledge about why people leave their homes and move to a new location; (2) engaging some students in a quick-write about the Gold Rush; (3) practicing map skills with the interactive whiteboard; (4) doing a shared reading of the textbook chapter; and (5) having students share facts about the three trails. The lesson was rated a "4" for supporting content objectives.
- In contrast, **Mrs. Hargroves's** lesson received a "1" on this feature. As you may recall, she did not write an objective on the board, and she hurriedly stated what she wanted the students to do for the lesson. What is also problematic about her lesson is that the coloring of the maps seemed to be what was important to her, rather than her confirmation that each student understood the information about the trails west. Students were expected to read the chapter independently, which was most likely impossible for struggling readers and the English learners.

Further, her lecture may have been difficult for her English learners to follow. The writing assignment, while a worthwhile topic ("If you had been a pioneer, which trail would you have chosen? Why?"), was not scaffolded, so it may or may not have been appropriate for her students, depending on their English proficiency and their ability to access the information in the text. Therefore, her lesson delivery did not support her intended content objective very well.

- Although **Mr. Hensen** did not state the objectives, they were implied and supported by his lesson. For example, at the end of the period, he asked several students to report on some differences among the trails; this initial feedback provided information about whether the students had met the day's objective. His constant monitoring and the various grouping activities provided additional information about who was meeting the objective and who was having difficulty. He might have added a quick group-response activity (pencils up/pencils down) to determine if all students understood the differences among the trails. Had Mr. Hensen written his objectives on the board and reviewed them with his

students, his lesson would have received a “4” for this feature. Because he did not, his lesson received a “3” for supporting content objectives.

24. *Language Objectives Clearly Supported by Lesson Delivery*

Ms. Chen: 4

Mrs. Hargroves: 0

Mr. Hensen: 2

- **Ms. Chen’s** lesson was rated “4” on this feature. Language objectives were clearly written and stated, and students had several opportunities to meet them. They categorized related terms in a List-Group-Label activity. Ms. Chen built vocabulary and text understanding for the least proficient English learners with the jump-start mini-lesson. She also modeled reading aloud and completing a section of the scaffolded outline so students could in turn take notes themselves.
- **Mrs. Hargroves** did not write or state any language objectives. Although she did assign a reading and writing activity, the text was inaccessible for many of the students and the writing activity was difficult, if not impossible, for them to complete. Moreover, as we pointed out in Chapter 2, a language activity is not the same as a language objective. Her lesson received a “0” for supporting language objectives.
- **Mr. Hensen** did not write or state his language objectives, but as with the content objectives, they were implied as something to do with reading comprehension. He engaged students in a Jigsaw activity for reading the text, and then they returned to their home groups and explained what they had learned from the reading. His lesson received a “2.”

25. *Students Engaged Approximately 90% to 100% of the Period*

Ms. Chen: 4

Mrs. Hargroves: 1

Mr. Hensen: 4

- **Ms. Chen** is an enthusiastic teacher who plans lessons that use each minute of class time to its fullest. As illustrated in the lesson, Ms. Chen spent time presenting materials, and she allowed students to work together. They eagerly participated in whole-group and small-group discussions, and Ms. Chen made sure they were on task. In addition, the content of the lesson was directly related to the district’s **content standards** on which the students will be assessed at the end of the unit.

Her lesson received a “4” for this feature because it met all the criteria for active student engagement: She maximized the academic learning time in an effective way, basing the lesson on the text, teaching outlining and mapping skills, providing opportunities for interaction and application of concepts, and so forth. Students were active and on task throughout, and the material was relevant to the assignment.

- Recall that **Mrs. Hargroves** read part of the text chapter aloud, which cut its substantial length. She then allotted 20 minutes for students to read the remaining portion of the text chapter. Not all students stayed on task. Some began talking among themselves, while others were trying to finish the reading. Overall, students were engaged less than 50% of the period. During Mrs. Hargroves's lecture on westward expansion, many students were disengaged except when she used the electronic document reader and discussed the illustrations and the trails on the map in the text. This lesson received a "1" for engaging the students.
- **Mr. Hensen's** students were actively engaged throughout the lesson. From the opening question about trips to California through the video and the Jigsaw activity, all students were held accountable for learning the material. During the map activity, students not only located and labeled a trail, but also were responsible for assisting each other in finding, drawing, and labeling the additional trails. This lesson was rated a "4" for this feature.

26. *Pacing of Lesson Appropriate to Students' Ability Levels*

Ms. Chen: 4

Mrs. Hargroves: 1

Mr. Hensen: 3

- **Ms. Chen** understood that the English learners in her class might need a slower pace than the native English speakers. Therefore, she provided a jump-start mini-lesson that enabled them to keep up with the whole-class activities. She also moved the pace along by doing a shared reading of the text. In this way, she adapted instruction for the English learners, and all students were able to work at roughly the same pace. The groups for the map activity included four to five students with both native English speakers and English learners who assisted one another as needed. Her lesson received a "4" for pacing.
- The pacing of **Mrs. Hargroves's** lesson was slow and monotonous at times, especially when she lectured, yet she covered material too quickly at other times. Many students were off task because of the problematic pace of the lesson. Her lesson received a "1" for pacing because it was inappropriate for the students' ability level—too slow to maintain interest and too quick for English learners to understand the information presented orally.
- **Mr. Hensen** included discussions, videos, a Jigsaw reading activity, group work, and mapping; some students, especially the English learners, may have felt a bit rushed to accomplish all of these tasks. However, he also provided scaffolding and did allow some students to complete their maps at home. The students participated well and understood most concepts. This lesson was rated a "3."



Watch this video of Kendra Moreno's third-grade lesson on distinguishing fact from opinion. How would you rate the lesson on the four features for Lesson Delivery? In what ways did it target the content and language objectives? At what point do you think the students met the objectives?

(For more examples of lesson and unit plans in social studies and history for grades K–12, see Short, Vogt, and Echevarría, 2011a.)

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Timers: While reflecting on a few recent lessons where the activities ran behind schedule and the class had to rush to get ready for lunch, Ms. Chen decided to investigate options for using alarms to better manage the time in her classroom. She wondered if her classroom iPad could help. Upon exploring the clock app that comes standard on the tablet (also called a native app), she discovered that she could set multiple alarms within one school day.

Looking over her daily class schedule, she set alarms for each section of the day that required the students to make the transition from one activity to another. While viewing the selection of different alarm sounds, Ms. Chen also determined that she could use songs as the alarm alerts instead of the preset tones. She could choose songs of a certain genre or length according to the type of task in the classroom.

Ms. Chen brought these ideas to her colleagues, and they brainstormed adaptations for each of their routines. Mrs. Hargroves decided to use calm jazz music to indicate the end of independent reading time when students would return their materials and gather their reflection journals. Ms. Chen helped Mr. Henson to set alarms to mark “5 minutes to go” at the end of a lesson. These alarms helped them manage the pacing of the lesson, ensuring appropriate time for review, exit tickets, and other end of the lesson tasks.

Other terms for this type of tool: timer app, stopwatch, clock app with multiple alarms, alarm clock

Related Products: *Timely* (Android), *Alarm Clock* (iOS), *Alarmed* (iOS)

Virtual Corkboard: Later in the Gold Rush unit, students work in groups to research the most important geographic locations during that time period. When students are conducting this type of research with the help of laptops, Mr. Hensen typically stops them after a period of time and conducts quick check-ins. He has the groups share discoveries and next steps for research and records that information on the whiteboard. These check-ins only take a few minutes but offer Mr. Hensen a chance to hear about his students' progress and offer support as needed. Additionally, students can see and hear what other groups have discovered and have a reminder of their next actions for the project.

Unfortunately, after each social studies period, Mr. Hensen has to erase the information he collected during the class in order to use the whiteboard for other instruction. He thought about using a digital camera to capture the board after each class, but wondered if there were another technology tool that could help. Based on a recommendation from Ms. Palacios, he decided to try *Padlet*, a digital version of a corkboard. Much like a traditional corkboard, *Padlet* users can add or pin different links, images, and text to a shared wall that other users can see. Intrigued by this tool, Mr. Hensen shared the Web site with the other teachers, and they planned to use it as the classes continued research on important locations for the Gold Rush.

In order to launch the new tool, the teachers each created new *Padlet* “walls” and changed the background image wall to a map of California. The teachers posted the unique Web addresses for the class walls

on their Web sites and gave the students a quick tutorial on how to access and use the tool. Next, the teachers assigned each group a particular location where gold was discovered. The teams investigated the location and then wrote short descriptions of the area and described its significance. Alongside the power of having students work collaboratively and share knowledge, each teacher had a useful artifact for reference, further instruction, and review of key concepts.

Other terms for this type of tool: backchannel, online corkboards

Related Products: *TodaysMeet*, *Edmodo*, *Popplet*



Check Your Understanding

Click here to check your understanding of Chapter 8, Lesson Delivery.

Summary

As you reflect on this chapter and the impact of effective lesson delivery, consider the following main points:

- The importance of setting and meeting objectives cannot be overemphasized. Many teachers may feel comfortable having a general objective in mind and moving along with a lesson's flow, but that approach is not helpful for English learners.
- If you plan objectives, you have to teach to them. Delivering a lesson geared to objectives allows the teacher to stay on track and lets the students know what is important to focus on and remember.
- By incorporating a variety of techniques that engage students throughout the lesson, teachers not only give students opportunities to learn, practice, and apply information and language skills, but also help to ensure the students meet the lesson's objectives.
- An appropriate pace for a lesson is critical for English learners. Information that is presented at a pace suitable for native English speakers may render that information meaningless, especially for beginning English speakers. Finding the right pace for a lesson depends in part on the content of the lesson, students' prior knowledge about the topic, and differentiation. Effective SIOP teachers use instructional time wisely.

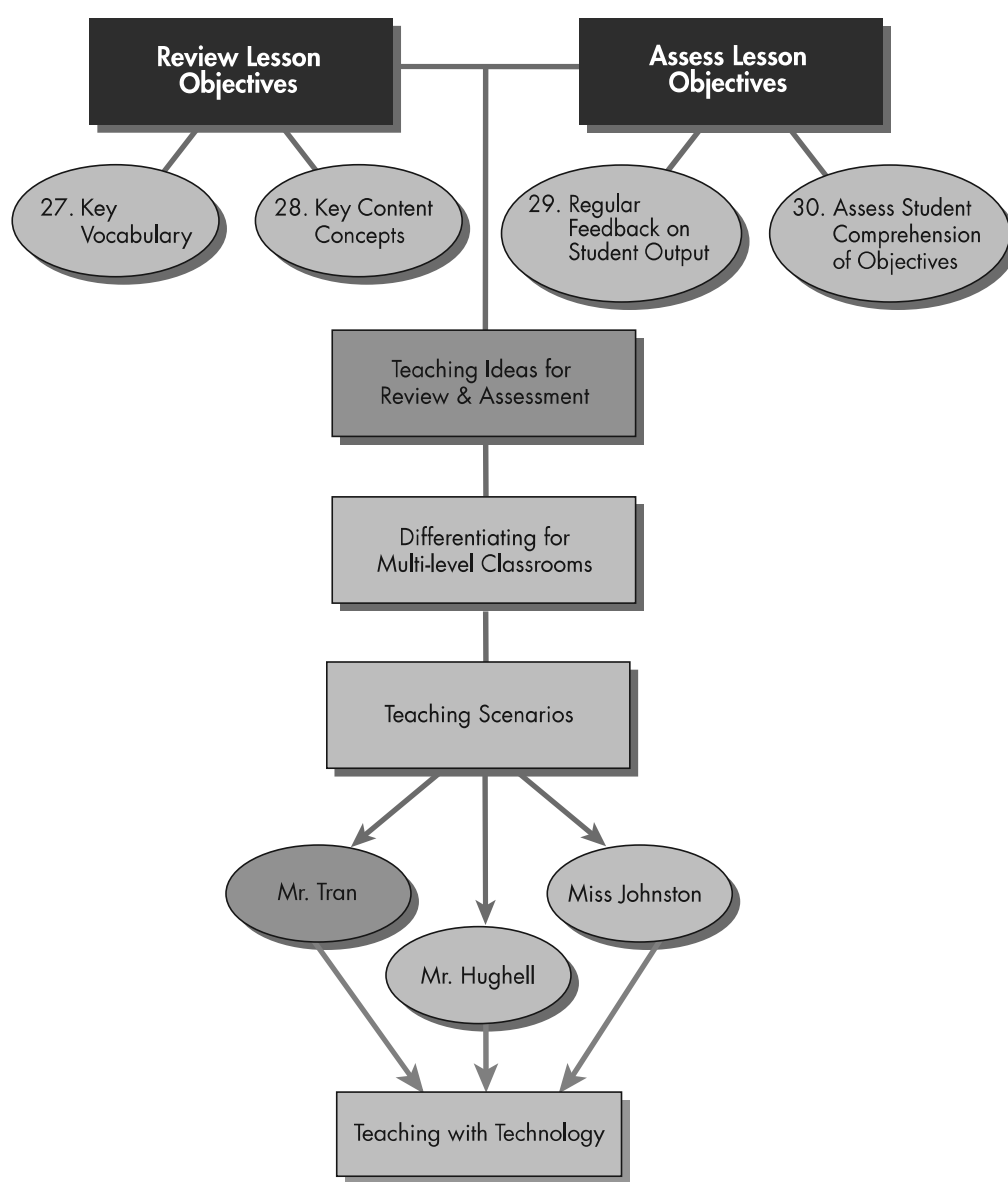
Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
 - a. Monitor lessons to determine if the delivery is supporting the objectives?
 - b. List strategies for improving student time-on-task throughout a lesson?
 - c. Generate activities to keep English learners engaged?

- d. Discuss characteristics of effective SIOP lesson delivery?
 - e. Explain how a focus on a lesson's objectives can aid in pacing?
 - f. Evaluate a situation where a lesson plan has not been enacted successfully and explain what might have gone wrong and what could be improved?
2. Reflect on a lesson that you taught or observed that did not go well. What happened? When did it go awry? Can you identify a feature in Lesson Delivery that might have caused the lesson to be less successful? Or a feature from another SIOP component? In retrospect, how might your delivery of the lesson have been improved?
 3. Suppose three new students, all with **limited English proficiency**, joined a fifth-grade class midyear. The other students in the class include a few former English learners and native English speakers. What are some language objectives the teacher could write for each of the following content concepts?
 - a. Trade routes across the Sahara
 - b. Expansion of the Roman Empire

How might the teacher pro-rate the tasks associated with the language objectives to meet the different academic development needs of the students?
 4. How does a teacher or supervisor determine whether a majority of students, including English learners, are engaged during a lesson? What techniques could be used to sustain engagement throughout the period? What should the teacher do if he or she senses that students are off task? Why is sustained engagement so critical to English learners' academic progress?
 5. Look over a SIOP lesson you have been working on. Write down the amount of time you expect each section (or activity) of the lesson to take. Teach the lesson and compare your expectations with reality. Do you have a good handle on pacing? If not, review your lesson for tightening or extending. What can you add or take away? List some routines you could implement in your classroom so you do less talking, or less distributing and collecting. Share with a colleague your ideas for maximizing time-on-task and student engagement.

Review & Assessment



Learning Outcomes

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

Identify the challenges in assessing content and language learning of students with limited English proficiency.

Create a plan for formative **assessment** for the linguistically diverse students in your classroom that will provide you with the information you need to make sound instructional decisions during lesson planning.

Determine opportunities for reviewing and assessing key vocabulary and key content concepts during and at the end of your lesson plan.

Language Objectives

Provide effective academic oral and written feedback to **English learners** during a lesson.

Compare and contrast characteristics of informal and formal assessments.

Explain the meaning of the following assessment terms: *formative* and *summative assessment*; *authentic assessment*; *multidimensional indicators*; *multiple indicators*.

Over the years, teachers have asked us why Review & Assessment is the eighth component in the SIOP Model. Usually the question is preceded by a comment such as, “Shouldn’t the assessment of students’ strengths and needs come before any instruction?” Our response is always, “Of course!” Clearly, assessment and instruction are inextricably linked. Effective SIOP teachers use assessment findings to plan their lessons according to students’ needs and strengths, review students’ progress toward meeting content and language objectives throughout each lesson, and evaluate how effectively their lessons have been delivered. Therefore, in this chapter, we focus on a very important aspect of teaching: assessing your students’ strengths, needs, experiential backgrounds, and language proficiencies. Please note that it is beyond the scope of this book to provide detailed information about specific language, literacy, and general academic assessments that are appropriate for English learners. ●



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■ Background

Throughout this book, we have discussed many aspects that impact the achievement and language development of English learners. Essentially, these are the instructional features of the SIOP Model. Each of these features, along with other factors (e.g., classroom management and teacher effectiveness), determines the classroom context for English learners and your other students.

Perhaps it is not surprising that effective SIOP teachers consider the context of the classroom when planning opportunities to review and assess students’ comprehension of a lesson’s language and content concepts. These teachers plan so that their students eventually will reach independence in application of these concepts (as depicted in Figure 5.1 in Chapter 5). It is likely that some students will need

substantial vocabulary and concept review, along with additional practice before they reach the goal of independence. With ongoing assessment throughout a lesson, teachers are able to ascertain who is ready to move on and who needs further reteaching, review, and practice.

Classroom Context and the Review & Assessment Component

When considering classroom context as you plan for review and assessment throughout a lesson, think about each of your students, both those who perform satisfactorily and those who struggle with your lessons. For students who are having little or no difficulty, there probably is a close match between the classroom context and their needs. However, for those students who struggle, there could be a mismatch between the classroom context and their academic and language needs. In a classroom with data-driven, culturally responsive instruction that is guided by periodic review and assessment, students are more likely to achieve an instructional match.

The following questions may help you locate possible areas of match and mismatch between your students and your classroom context (Vogt & Shearer, 2011). Keep in mind that there may be other areas of instruction that you need to explore (e.g., classroom management and room organization), but the questions that follow can get you started. For those of you who are in schools with **Response to Intervention (RTI)**, these questions can be part of the progress monitoring process (see Echevarría, Richards-Tutor, & Vogt, 2015, for more information).

1. *Is there a match between the student and the classroom context? If so, what needs to be continued?* Informal measures such as teacher observation and in-class assignments provide information, as well as more formal measures, such as unit exams and standardized test scores.
2. *Is there a mismatch between the student and the classroom context? Again,* observations and student work samples are a start; additional information, such as English proficiency level, information about L1 language and literacy acquisition, and the student's educational history may be needed.
3. *If there is a mismatch, what could create a better match for the student?* Check the student's reading skills in English and other abilities to determine areas of mismatch with instructional materials; determine if the student is understanding task directions and what might be preventing success with in-class and out-of-class assignments.
4. *How can you tell whether the changes you are making are achieving a closer match for the student in question?* Use formative assessments such as teacher observation, in-class and out-of-class assignments; and summative assessments, such as periodic measures of language and literacy proficiency, end-of-chapter or unit tests.

When review and assessment are linked to instruction that targets a lesson's content and language objectives, it is easier to answer these questions. Just as students need

to know what the objectives are for a lesson, they also need to be informed about how they will be assessed on them. Both formative and summative assessments of students' progress provide information about whether it is appropriate to move on or whether it is necessary to reteach and review (Bean, 2014; Kapinus, 2014).

Formative and Summative Assessment

Historically, educators have blurred somewhat the line between assessment and evaluation, generally using the term *evaluation* for both formative and summative judgments. The teacher's role in evaluation was primarily as an "evaluator," one who conveyed a value on the completion of a given task. This value was frequently determined from the results of periodic quizzes, essays, reports, oral or written presentations, or tests that served as the basis for report card grades in elementary and secondary schools.

Today, however, educators distinguish between assessment and evaluation (Lipson & Wixson, 2012; Vogt & Shearer, 2011). *Assessment* is defined as the gathering and synthesizing of information concerning students' learning, while *evaluation* is defined as making judgments about students' learning. The processes of assessment and evaluation can be viewed as progressive: first, assessment; then, evaluation. Formative and summative assessments that are multifaceted and attentive to the various contexts of a student's life (e.g., home, school, **culture**, **native language**, and literacy development in both **L1** and **L2**) provide relevant and practical information to the teacher about how to design appropriate and culturally relevant content and language instruction for linguistically and culturally diverse students.



Watch this video to hear Dr. MaryEllen Vogt explain the relationship between assessment and instruction. What information about your students do you need to gather before you begin planning lessons for them?

Informal Assessment

The assessment measures generally used by teachers to gather data about their students' academic and language performance in the classroom tend to be *informal*. Other qualities of effective classroom assessments include: they are *authentic*, *multidimensional*, with *multiple indicators* that reflect student learning, achievement, motivation, and attitudes (Lenski, Ehlers-Zavala, Daniel, & Sun-Irminger, 2006; Malloy, Marinak, Gambrell, & Mazzoni, 2013; McLaughlin, 2010; O'Malley & Pierce, 1996; Vogt & Shearer, 2011). These qualities are described as follows:

- **Informal assessment** involves on-the-spot, ongoing opportunities for determining the extent to which students are learning content. These opportunities may include teacher observations, anecdotal reports, teacher-to-student and student-to-student conversations, quick-writes and brainstorming, or any number of tasks that occur within regular instruction and that are not intended to be graded or evaluated according to set criteria.
- **Authentic assessment** is characterized by its application to real life, where students are engaged in meaningful tasks that take place in real-life contexts.
- **Multidimensional assessments** are usually part of authentic assessments because teachers use different ways of determining student performance. These may include written pieces, student and parent interviews, video clips, observations, creative work and art, discussion, performance, oral group responses, and so forth.



Watch this video and see how Bianca Nache, a sixth-grade Dual Language teacher, encourages reflection about portfolio evidences collected over the years. In what ways do portfolios demonstrate the characteristics of informal assessments?

- **Multiple indicators** are specific evidences students complete that are related to a lesson's content and language objectives. They provide a teacher with several ways of looking at a student's **language proficiency** and content knowledge. For example, a student may demonstrate proficiency with a language objective through a piece of writing, active participation in a group activity, or insightful questions asked during discussion. The teacher thus has more than one piece of evidence indicative of progress toward mastery of a particular objective.

This approach to informal assessment is congruent with RTI (progress monitoring), the Common Core State Standards and Next Generation Science Standards (high academic standards for all students), culturally responsive teaching, and, of course, the SIOP Model.

Formal Assessment

Formal assessments can be formative (to achieve a baseline or beginning point) or summative (to determine progress over time). One type is standardized and norm-referenced, and it ranks students' scores in comparison to a normed group of students. Another type of standardized measure is criterion-referenced. These tests measure students' performance as compared to a set of academic skills or objectives. Generally, formal assessments are used by schools and districts to look at academic trends over time and to identify subgroups of students who are performing extremely well or unsatisfactorily.

So, what does this have to do with the SIOP Model? English learners are at a particular disadvantage when they are taking a standardized test that presumes the test taker is English proficient. One important thing that you, as a teacher of English learners and struggling students, can do is to explicitly teach, model, and provide practice with the general academic words (cross-curricular/process/function) that are described in Chapter 3. These are frequently the types of words that are used in standardized test questions.



SIOP® FEATURE 27:

Comprehensive Review of Key Vocabulary

During class, English learners receive 20 to 30 minutes or more of input in a new language. Unless the teacher takes the time to highlight and review key information and explicitly indicate what students should learn, English learners and other students may not understand the lesson's focus. Students, especially those at the early stages of English acquisition, devote considerable energy to figuring out at a basic level what the teacher is saying or the text is telling them. These students are much less able to evaluate which pieces of information and which vocabulary terms are important to remember, given all the input they receive. That is why the teacher must take the time to review key vocabulary and key concepts throughout a lesson and as a wrap-up at the end.

We know that students with robust vocabularies are more successful in school. Therefore, it stands to reason that teachers would want to revisit and review key

words each day and make sure students are adding to their vocabulary knowledge. Researchers differ on the number of exposures that students need to internalize words at a deep level, but all agree the number is high, over 40 and up to 160! Repetition isn't simply about having students write words repeatedly. Rather, it is important to use the words in a variety of ways during a lesson, referring to the word on the board, on charts, on word walls, and so forth. Encourage students to use the key words or terms in their discussions and hold them accountable for doing so: "I noticed that in your group each of you used our three key words in your conversation!"

There are varied techniques for effectively reviewing academic vocabulary with students during a lesson, including the following (see the Teaching Ideas section in this chapter for additional ways to provide vocabulary review):

- Use analogies, the process of relating newly learned words to other words with the same structure or pattern. For example, previously we gave the example of the root *photo* (meaning light) in a lesson on photosynthesis, and suggested referring students to other words with the same word root (e.g., *photography*, *photocopy*). Use the Common Word Roots chart in Chapter 3 (Figure 3.2) to assist you in teaching the process of analogy.
- Point out multiple meanings, such as those that have one meaning in conversational English (e.g., "The laundry *product* I'm looking for in the supermarket is one that includes both detergent and bleach"), and another that is discipline-specific (e.g., "The *product* of 25×4 is 100").
- Point out synonyms and antonyms for key vocabulary, when possible. Four-corner charts can be helpful for review when they include (1) the vocabulary word, (2) a synonym, (3) an antonym, and (4) "what the word is not." For example: (1) *democracy*, (2) *republic*, (3) *dictatorship*, (4) *totalitarian state*. A math example is: (1) *fraction*, (2) *portion*, (3) *whole*, (4) *a whole number*.
- Draw students' attention to how words are used in various contexts (pragmatics), because they may differ across cultures and languages. For example, a discussion of human reproduction is appropriate in an upper grade science lesson but may be very inappropriate at a family gathering. As we move throughout our day, whatever the context, we continually adjust our speech, facial expressions, and body language accordingly. It's important to talk to students about how language is used in different contexts and how something that might be appropriate in one context may be inappropriate in another.
- As mentioned previously, repetition of academic words and terms has benefits to students. Provide multiple exposures to new terminology to build familiarity, confidence, and English proficiency. Words and concepts may be reviewed through paraphrasing, such as "Remember to *share your ideas*; that is, if you have something you want to say, tell it to the others in your group." Another example of a paraphrase (and contextualized sentence) is "*The townspeople were welcoming as they invited the visitors to their homes.* The citizens greeted the soldiers and asked them to come into their houses." Paraphrasing as review provides an effective scaffold for English learners, especially after words and phrases have been previously defined and discussed in context.

- A final vocabulary review is also beneficial at the conclusion of a lesson. Students might share understandings with a partner while you check their explanations; write a quick definition (in their own words) on individual whiteboards and hold them up to show you; do a quick match of words and definitions on an interactive whiteboard; write two or three sentences including the words on tickets-out cards that you collect as they leave the classroom (or before transitioning to a new subject); and so forth. What is important is that you plan for the final review just as you plan for the other activities in your lessons.

Please remember that effective review does not include the “dreaded word list” described in Chapter 3, nor the equally ineffective assignment of having students write vocabulary or spelling words 10 (or more) times each. Research findings are very clear—isolated word lists and dictionary definitions alone do not promote vocabulary and language development. Rather, provide as many exposures as possible to new, important words through meaningful tasks that incorporate multiple modalities: reading, writing, illustrating, acting out, chanting, and so forth.



SIOP® FEATURE 28:

Comprehensive Review of Key Content Concepts

Just as it is important to review key vocabulary periodically throughout a lesson and at its conclusion, it is also essential that English learners have key content concepts reviewed both during and at the end of the lesson. Understandings are scaffolded when you stop during a lesson and briefly summarize key content concepts covered up to that point. For example, in a lesson on Egyptian mummification, you might say something like the following: “Up to this point, we learned that little was known about Mummy No. 1770 until it was donated to the museum. After the scientists completed the autopsy, in which they took a very close look at the mummy’s insides, they discovered three important things. Who remembers what they were?” This type of review is usually informal, but it must be stated carefully so students know exactly what to recollect. Ideally, the review leads into the next section of the text or to a discussion: “Let’s read this next section to see what else the scientists learned.” Or, if predictions about an upcoming section of a text have been made or hypotheses about an experiment developed, teachers can refer to these afterward and confirm or disconfirm them when the time is right.

One of the great benefits of having posted content and language objectives is that you can, at any time, refer to them during a lesson. We all know how easy it is to “bird-walk,” a term coined by Madeline Hunter (1982). An eager student’s hand goes up, you call on him or her, and for the next several minutes you hear a story about something that is only marginally (or not at all) related to the topic at hand. Other students chime in with their experiences, and before you know it, the period is ending. By referring, as needed, to your objectives throughout the lesson, it’s much easier to stay on track, and students begin to distinguish between contributions that may or may not be appropriate to the lesson’s topic.

One favorite end-of-lesson review technique of SIOP teachers is Outcome Sentences. A teacher can post sentence starters on the whiteboard or chart paper, such as:

I wonder ...
 I discovered ...
 I still want to know ...
 I learned ...
 I still don't understand ...
 I still have a question about ...
 Something I will remember is ...

Students take turns selecting and completing an outcome sentence orally, or in writing on a tickets-out slip of paper. They can also confer with a partner before responding.

A more structured review might involve students summarizing with partners, writing in a journal, or listing key points on the interactive whiteboard. Toward the end of the lesson, a final review helps English learners assess their own understandings and clarify their misconceptions. Students' responses to a review can guide a teacher's decisions about what to do next, such as administering a summative assessment or, if needed, additional reteaching and assessing.

 Watch this video to see Rita Villalobos teach and assess CVC words to her first-grade students. How does she maximize engagement with classroom routines so she can assess student understandings?



SIOP® FEATURE 29:

Regular Feedback Provided to Students on Their Output

Periodic review of language, vocabulary, and content enables teachers to provide specific oral and written academic feedback to students to clarify confusing points and to correct misconceptions and misunderstandings. Effective feedback for English learners:

- **Supports and validates.** In order for English learners to receive teacher feedback, they must be able to provide output. Quiet, shy, and unconfident students can go unnoticed, and sometimes their coping strategies mask weaknesses in language production. Throughout this book we have suggested ways to encourage student interaction and participation. Perhaps the most important way to do so is through being supportive and validating when students do interact, participate, and engage meaningfully.
- **Is specific and academically oriented.** While support and validation are certainly important, how we do both is critical. For some teachers, it's almost a habit to say, "Good job!" or "Nice work!" or "Well done!" While these comments feel good when students hear them, they don't provide much information about what was good about the job or nice about the work. English learners and students who struggle need very specific academic feedback, and for some, it is

best if it is given in private. They need to know exactly what they did that's right so they can do it again and/or build upon it. For example, compare the praise phrase, *Good job!* to the following: *Enrique, I noticed that you had a question about one of the items on the study guide. I saw you look back at the chapter for help, and then I noticed you turned to Felipe with a question. Those were good strategies to try! And, thanks, Felipe for helping Enrique with his question!* Of course, not all comments need to be this detailed; just remember to be specific about what you have observed and communicate it directly to the student(s) involved. Also, remember that immigrant students who have attended school with a classroom context different from their current school benefit greatly from specific feedback as they are learning to negotiate their new educational environment.

- **Focuses on both content and language.** Many English learners plateau at the intermediate level, in part because they are exited prematurely from ESL programs, but also because when they are exited they don't have teachers who continue to develop academic language while teaching content. Therefore, encourage these students to use increasingly sophisticated words, phrases, and sentences by modeling their use in your teaching and during teacher-student conversations. Remember to continue to provide temporary scaffolds, as needed, as you did when these students had lower levels of English proficiency.
- **Includes modeling.** Teachers can model correct English usage when restating a student's response: "Yes, you're correct that the scientists *were confused* by the skull lying next to the mummy." Overly correcting English learners' grammar and pronunciation tends to shut them down. Therefore, simply restating the sentence with correct form, while validating, provides feedback that is instructive and helpful. However, if you want the students to start using the correct pronunciation or sentence structure, you need to dedicate some time to teaching and practicing pronunciation and sentence structure. An explicit focus on form makes more of a difference than a teacher-corrected restatement of a student's response (Saunders & Goldenberg, 2010).
- **Includes paraphrasing.** Paraphrasing also supports students' understandings and validates answers when we add "Is this what you were thinking/or saying?" after a paraphrase. If you know that some students are only able to respond to questions in one or two words, you can extend their responses in complete sentences: "Yes, *embalming* is the process of preserving bodies." But, always give students a chance to elaborate on their own first, with phrases such as, "Tell me more about that."
- **Includes facial expressions and body language.** A nod, smile of support, pat on the shoulder, or encouraging look can take away fear of speaking aloud, especially for students who are beginning to develop English proficiency. At the same time, a teacher's facial expressions and body language that convey frustration, impatience, or ambivalence speak volumes to a student who is trying to learn challenging content and a new language at the same time.
- **Can be provided by students for each other.** Partners or groups can discuss among themselves, giving feedback on both language production and content understanding to each other, and then report back to the whole class. The teacher can

facilitate effective feedback by providing appropriate modeling of how it is done. Sentence frames also assist students in getting started: “What you said was really interesting, because _____”; “One word that you used that helped me understand your point was _____”; “One question I have about what you said is _____.”



SIOP® FEATURE 30:

Assessment of Student Comprehension and Learning of All Lesson Objectives Throughout the Lesson

The purpose of this section is to offer suggestions for SIOP lessons and recommendations for how to assess the degree to which individual students meet or are making progress toward meeting a lesson’s content and language objectives. In SIOP lessons, assessment takes place at any time during a lesson, and teachers are encouraged to assess students whenever they have an opportunity. Examples include:

1. The lesson begins with an activity that activates students’ prior knowledge and experience, and provides an opportunity to build background for those who need it. This presents a great opportunity to assess those who may lack background information about the topic and/or have difficulty with the content and language concepts in the forthcoming lesson.
2. During the lesson, while students are practicing and applying the lesson’s key vocabulary and concepts, there is another opportunity to see who may need more review or reteaching. Informal assessments, including teacher observation, spot-checking with individuals, using group response techniques (such as thumbs-up/-down, individual whiteboards), conversations with students about their progress, and so forth can be used.
3. At the end of the lesson, SIOP teachers assess which students have met the content and language objectives by reviewing them with individuals and with the class. This final review of all content and language objectives is critically important. It provides you with information to guide the planning of your subsequent SIOP lesson. See suggestions for soliciting student responses to this review in the Teaching Ideas section of this chapter.

Some teachers who are learning to implement the SIOP Model express concern about having varied assessments throughout a lesson, in part because of the perceived amount of work it takes to create them, and also because some believe it is unfair if students are not assessed equally. While acknowledging this concern, we also believe that for English learners, assessment adaptations must be made if teachers are to ascertain accurately the extent to which lesson objectives and standards are met. Often, English learners do know the information on which they are being assessed, but because of language proficiency issues, including vocabulary, reading, and writing, they are unable to demonstrate their knowledge fully.

Therefore, to the extent possible, students should be assessed individually to determine if learning has taken place. In sheltered classes in particular, where students may have different **levels of language proficiency**, the value of assessment becomes readily apparent (Vogt, 2014). If teachers gather baseline data on what their students know and can do with the content information before instruction occurs, and then assess what they know and can do during a lesson and after its conclusion, they can identify student growth more accurately.



Teaching Ideas for Review & Assessment

Review and assessment can be accomplished with individual, group, or whole-class activities. Group response techniques quickly inform a teacher about how well each student is progressing, and they are especially sensitive to the needs of English learners.

- **Handheld Devices.** At the time of this writing, there are a number of electronic resources that can be used with informal review and assessment. Handheld devices, such as clickers and classroom performance tools, can be used in many ways, including recording student responses, learning about concepts in measurement, practicing multiplication tables, and taking notes, to name a few. Teachers can use clickers for a group review: students hold their clickers and respond to a prompt with multiple-choice options. The computer records and displays the class results, along with the correct answer. Teachers can pose yes/no, true/false, or multiple-choice questions, and students respond anonymously. The data are quickly collated and displayed so the teacher and students can see the number of correct responses and determine how many students might need reteaching.
- **Word Study Books.** Word Study books can include a student's own illustrations as mnemonics (pictures to remember word meanings and usage), and/or rebus pictures for definitions (difficult words are represented by simple drawings, usually provided by the teacher). As young children are learning to write, they can use their own Word Study books as references for spellings and meanings of the words to which they have had exposure. Usually, words are presented in alphabetical order, but some teachers prefer to have them organized by sounds (such as open/long sounds or closed/short sounds, initial consonants, blends, digraphs, etc.), content topics, and so forth.
- **Vocabulary Journals.** Somewhat similar to Word Study books, Vocabulary Journals are intended for particular subject areas (Rothenberg & Fisher, 2007). One section of the journal might focus on multiple-meaning words. For example, a math journal might have four columns labeled with "Word," "Common Definition," "Math Definition," and "Where I Found It." The student might fill in the columns as follows: Word: *prime*; Common Definition: *The best*; Math Definition: *A number that can only be divided by itself and 1*; Where I Found It: *In our textbook*. Students' Word Study books or Vocabulary Journals provide the opportunity to review words any time they wish.

- **Non-Print Review.** Students should be encouraged to review and practice words and idioms in non-print ways as well. Students may draw a picture to depict a concept or to remember a word. They may demonstrate the meaning through physical gestures or by acting out several words within the context of a role-play. The technique works well with students in primary grades and can be used for phonemes as well as words.
- **Games.** Playing *Pictionary*, *Bingo*, *Jeopardy*, and charade-like games at the end of a lesson can stimulate an engaging review of newly learned vocabulary and key concepts.
- **Rubrics.** Often, **rubrics** (such as the SIOP protocol) are used to ascertain a developmental level of performance for a particular goal, objective, or standard. For example, on a developmental rubric, student performance may be characterized as “emergent,” “beginning,” “developing,” “competent,” or “proficient.” Other rubrics may communicate evaluative information, such as “inadequate,” “adequate,” “thorough,” or “exceptional.” Whichever rubric is used, the results of assessment and evaluation are often shared with other interested stakeholders, such as parents and administrators, as well as with the students themselves.
- **Group Response Techniques (GRT).** GRT enable you to immediately determine each individual student’s understanding during an assessment activity with the whole class. Here are examples of some ways to generate group responses (see Teaching with Technology in this chapter for more ideas):
 - ◆ *Thumbs Up/Thumbs Down (or Pencils Up/Down for older students).* Used to signal *agree/disagree; yes/no; true/false*; students indicate *I don’t know* by making a fist or holding a pencil, in front of the chest, and wiggling it back and forth.
 - ◆ *Number Wheels.* A low-tech alternative to handheld devices, Number Wheels provide the teacher with immediate information about students’ comprehension of content concepts. A number wheel is made from tag board strips (5" × 1") held together on a metal ring fastener. Each strip has a number printed on it, with 0 to 5 or 0 to 10, or a–d, depending on your needs and students’ ages. Students use their individual number wheels to indicate their answers to questions or statements that offer multiple-choice responses. Possible answers are displayed on the board, chart paper, or pocket chart, and the teacher asks the questions or gives the statements orally. For example, if you were teaching a lesson on possessives, you could write the following on the board:
 1. boys
 2. boy’s
 3. boys’

Each student holds a number wheel and you say, “*Show me the correct use of the word ‘boys’ in the following sentences. Remember that you can show me a ‘0’ if you don’t know the answer. ‘The little boy’s dog was hungry and was barking.’ Think. Get set. Show me.*” At the “Get set” cue, students find the strip with the number 2, and hold the number wheels in front of their chests. When you say, “Show me,” they display their answers. They repeat the process as you give

the next sentence. Be sure to give the cues (*Think; Get Set*) before giving the direction, *Show me!*

- ◆ **Response Boards.** Popular dry-erase boards and dry-erase pens are great to have on hand for group responses. Ask a question and students respond on their boards and then turn them to face you when you say, *Show me!* Dry-erase boards (12" × 12") can be inexpensively cut from “bathroom tile board,” available at home and building supply stores; laminated tag board or plastic insert sleeves also can be used in the same way.
- ◆ **Numbers 3, 2, 1 for Self-Assessment.** As an alternative to a simple yes/no response, this is a quick and easy way to have students self-assess the degree to which they think they have met a lesson’s content and language objectives. Students simply indicate with one, two, or three fingers how well they think they met a lesson’s objectives:

3 = I fully met (or can do) the objective.

2 = I’m making progress but I need more help (or practice) to meet the objective.

1 = I didn’t (or can’t) meet (or do) the objective.

Depending on how students indicate their understanding of a lesson’s key concepts (the objectives), the teacher can reteach, provide additional modeling, group students for further instruction and practice, and so forth.

- **On-the-Spot Assessment.** This is another low-tech, but effective method of gathering on-the-spot information while observing students as they work independently or in groups. Put several pages of sticky address labels (3" × 5" or a size of your choice) on a clipboard. As you walk around the room and observe what a particular student is doing, jot brief notes on a sticky note, along with the student’s name. At a later time, you can transfer the day’s notes to students’ assessment files by attaching them to pages used for this purpose. You will end up with a consecutive list of observation notes that can be used for parent, ESL, or IEP conferences, and/or for grading purposes. The great thing about this idea is that you don’t have to transfer your notes by writing, or input anything into the computer (unless you want to).
- **Stock Market** (grades 3–12). Stock Market is great for an end-of-unit review prior to an exam because it provides the teacher with information about student misconceptions, factual errors, etc. It’s also lots of fun!
 1. Prepare *Monopoly* or other “play” money in denominations of 5, 10, 20, 50, 100. A variety of different play money templates are available on the Internet.
 2. Generate content questions (some from an actual quiz or test you’re going to give) so that you can assess your students’ readiness to take the test. Mix challenging and easier questions so that you’ll have at least 10–15 to choose from, depending on the grade you teach.
 3. Also write some trivia questions of interest to the grade level of your students (such as the principal’s first and last name; the U.S. President’s first name, the

street name where your school is located, the correct spelling of the school's name, etc.). Students also enjoy questions about popular culture, such as the names of musicians, actors, etc., but take care to ask questions on varied topics so that your immigrant English learners are not disadvantaged because they lack background knowledge about American popular culture.

4. On Stock Market day, group students heterogeneously (4–5 per group). This is very important so that all groups have a mix of kids, languages, abilities, etc.
5. Provide each table group with one worksheet with two columns:
 - a. for dollar “investments”
 - b. for students to write answers to the questions you will be asking
6. Each group receives \$25. A recorder for the group must write an “investment” dollar amount on the Stock Market worksheet prior to the teacher's asking a question. Groups cannot risk more than 50% of what they have in their group's “bank.” For example, if they have \$120, the most they can invest is \$60. You don't want to have any group “go broke” so they can't continue to play.
7. Ask the question (either content-related or trivia). After students have jotted their group answer on the worksheet, walk around to each group and assess whether the response is correct or incorrect. If a group's answer is correct, the “bank” pays; if not, the “bank” (you, the teacher) takes the investment.
8. Use both content and trivia questions, and alternate frequently, but don't let students know which type of question will be asked. If students miss several content questions in a row, you know you'll need to do some reteaching later. To keep everyone in the game, switch to some easier trivia questions that all groups are sure to answer correctly.
9. Reward groups that are behaving well and are cooperating by secretly slipping them some extra play money. It's also fun to give bonuses (\$25 or more) to groups for providing the correct spelling of answers to particular questions, either trivia or academic content. You don't need to “fine” groups for misbehavior or spelling; just reward or bonus them when they're on task, working well together, and conscientiously answering the questions.
10. If a group falls perilously behind, slip them some money so they won't go broke. If you do this discreetly, no one notices, and the group receiving the bank's assistance won't say a word. For older students, you can call it a “loan,” and require payment with interest.
11. Make the final question about content (not trivia), and tell groups they can invest all or some of their earnings—it's their choice. After the question is asked and answered, the group with the most money in the end is declared the winner for that day's Stock Market.

■ Differentiating Ideas for Multi-level Classes

The Center for Intercultural and Multilingual Advocacy (CIMA) at Kansas State University, based on recommendations made by Deschenes, Ebeling, and Sprague (1994), summarized types of assessment adaptations that permit teachers to more

accurately determine students' knowledge and understanding. We have modified them to enable teachers to more accurately assess and give grades (when necessary) to English learners in a culturally responsive way.

- **Range.** Adapt the number of items the English learner is expected to complete, such as even or odd numbers only (see *Leveled Study Guides* in Chapter 2 as another example). Determine percentages of correct responses based on the number of items assessed.
- **Time.** Adapt the amount of time the English learner has for completing a task, such as providing more processing time and/or breaking tasks into manageable chunks. Unless there is a requirement to have a timed test, allowing additional time should not impact a student's score or grade.
- **Level of support.** Adapt the amount of **scaffolding** provided to an English learner during assessments by asking an aide, peer assistant, or parent volunteer to read and/or explain the task, or even read aloud (and translate, if necessary and possible) the items for the assessment. Remember the difference between assessing an English learner's ability to *read* and follow *written* directions, and his or her ability to complete a task or answer questions about a content topic. If you are looking for a student's content knowledge (not his or her ability to read directions), it is fine to have someone else help with reading or clarifying what the expectation for the task is.
- **Difficulty.** Adapt the skill level, type of problem or task, and the process for how an English learner can approach the task, such as allowing a calculator, dictionary, or simplified instructions. Once again, you are not reducing the expectation that the English learner should know the material—you're just making it easier for him or her to demonstrate understandings.
- **Product.** Adapt the type of response the English learner is allowed to provide, such as permitting drawings, a hands-on demonstration, a verbal response, or, if necessary, a translated response. Whereas native speakers may be required to write a paragraph summary or essay, it may be reasonable for an English learner to submit an illustration, poster-board explanation, or other kind of product that doesn't rely so much on sophisticated English usage.
- **Participation.** Adapt the degree of active involvement of students in assessment, such as encouraging individual self-assessment, assistance in creating rubrics, and cooperative group self-assessment. As you have read often in this book, content learning is enhanced for all students, but especially for English learners, through interaction and group work. English learners can certainly be involved in their own assessment progress, particularly in the upper grades.
- **Role.** When students are working in collaborative groups, they often assume roles, such as recorder, timekeeper, reader, discussant, and so forth. While it is important for English learners to be able to participate fully, some roles (such as timekeeper) require less language. Of course, when a student gains language proficiency, he or she should be encouraged to take on a role that requires reading, writing, and speaking.

■ The Lesson

Egyptian Mummies (Eighth Grade)

The classrooms described in the teaching vignettes in this chapter are all in a large urban middle school with a heterogeneously mixed student population. English learners represent approximately 45% of the students who are in the teachers' eighth-grade classes, with the majority of the English learners speaking Spanish as their home language. The English learners represent a variety of levels of English proficiency, but there are no beginning English speakers in these classes.

The three eighth-grade language arts/social studies core teachers, Mr. Tran, Mr. Hughell, and Miss Johnston, are teaching an extended unit on Egypt. The lessons illustrated here are on the topic of Egyptian mummies. Each of the teachers has planned a two-day lesson using an article about Mummy No. 1770, maintained at the Manchester Museum in England. Because very little was known about this mummy, the museum made it available to a group of scientists who wanted to use modern techniques to determine its age, its mummification process, and how the person had lived. The article describes what the scientists learned, including when the 13-year-old lived (A.D. 260), what she had eaten, what her life was like, how she died, and how her body was preserved.

The following Common Core ELA/Social Studies Standards (grades 6-8) were used to guide the development of the following lessons (CCSS, 2010):

- *Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.*
- *Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.*

The following teaching vignettes represent the second day of the mummy lessons taught by Mr. Tran, Mr. Hughell, and Miss Johnston.

■ Teaching Scenarios

Mr. Tran

In his lesson plan and on the whiteboard, Mr. Tran listed the following objectives for this lesson:

Content Objectives

Students will explain how scientists learned about Mummy No. 1770.

Students will identify major discoveries scientists made during the autopsy of the mummy and compare them to news reports published at the time of the discovery.

Language Objective

Students will define and correctly use the following vocabulary words from the text: mummy, autopsy, evidence, embalming, amputation, tissue.

During day 1 of the lesson, working in small groups, Mr. Tran's class created a word wall of words from their own knowledge and from the first part of the article that they read. They began work on a sequence chain graphic organizer, listing steps taken by the scientists, and using words from the word wall.

On the second day of the lesson (the one observed for the SIOP rating), Mr. Tran reviewed the content and language objectives from the previous day and introduced a new language objective for day two's lesson:

Additional Language Objective

Students will compare and contrast the scientists' description of Mummy No. 1770 in the original article with a Wikipedia article about Mummy 1770.

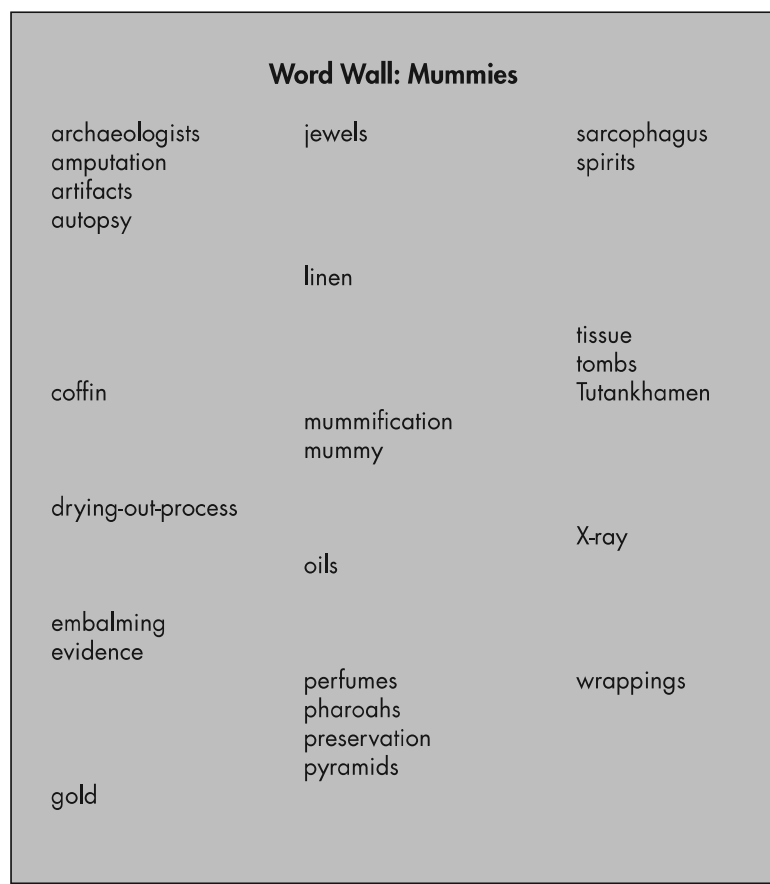
Mr. Tran then referred students to the word wall and the class read together the words in sequence and again in random order. He then asked for volunteers to give informal definitions for a few of the words, focusing on the key vocabulary he had selected to emphasize (*mummy, evidence, autopsy*). He reviewed the section of the article read on the previous day and asked students to recall with a partner the most important information they had learned about Mummy No. 1770. As needed, Mr. Tran clarified definitions, assisted students with pronunciations, and gently corrected errors.

Mr. Tran then asked students to share the sequence chains they had begun the previous day with their partners. Students provided feedback to their peers about their sequence chains' content, and all were prompted to add words from the word wall, as appropriate. Mr. Tran circulated and listened to the discussions of several pairs, again assisting as needed.

Next, the entire class briefly reviewed the major discoveries of the scientists described to this point in the reading, and two were listed on the board. The teacher referred to illustrations on pages five through seven of the article and asked students to predict what they thought happened to the teenage girl and how scientists might have reached conclusions about her death. He wrote on the board, "What *evidence* did the scientists discover during the *autopsy* of the *mummy*?" as a focal question for the rest of the lesson.

Students were directed to look for additional scientific discoveries as they read the next four pages with partners. They were told to complete a T-chart with the following column headings: "Evidence scientists discovered about No. 1770's life" and "Evidence scientists discovered about No. 1770's death." As a matter of practice, Mr. Tran walked around the room while students were working. He frequently

FIGURE 9.1 Use of Word Wall



smiled, voiced encouragement, answered questions, and provided feedback and support for his students' efforts.

The lesson continued as students reviewed their T-charts and the text to find additional words for the word wall. Among the words added were *embalming*, *amputation*, and *tissue* (see Figure 9.1). Mr. Tran wrote *embalm*, *embalmer*, and *embalming* on the board and discussed the differences in meaning. Students then completed the second section of their sequence chains, indicating the subsequent steps the scientists had taken to gather evidence from the mummy.

Mr. Tran next distributed and read aloud a brief article (14 sentences) about Mummy 1770 found on Wikipedia. Using their sequence chains, T-charts, and the word wall vocabulary, students worked with partners to compare and contrast the scientific evidence gathered from the Mummy 1770 article, and from the 14-sentence Wikipedia article, noting similarities and differences. Based on the comparison, the class voted on which source was more reliable, providing specific examples as evidence.

Mr. Tran concluded the lesson by highlighting in yellow on the word wall the six key vocabulary words, and these were reviewed one last time. He reviewed all of the lesson's content and language objectives to determine whether he and the students thought they had been met.

FIGURE 9.2 Review & Assessment Component of the SIOP Model: Mr. Tran's Lesson

4	3	2	1	0
27. Comprehensive review of key vocabulary		Uneven review of key vocabulary		No review of key vocabulary
4	3	2	1	0
28. Comprehensive review of key content concepts		Uneven review of key content concepts		No review of key content concepts
4	3	2	1	0
29. Regular feedback provided to students on their output (e.g., language, content, work)		Inconsistent feedback provided to students on their output		No feedback provided to students on their output
4	3	2	1	0
30. Assessment of student comprehension and learning of all lesson objectives (e.g., spot checking, group response) throughout the lesson		Assessment of student comprehension and learning of some lesson objectives		No assessment of student comprehension and learning of lesson objectives



Reflect and Apply

Click here to explain your ratings for Mr. Tran's lesson on each of the Review and Assessment features.

Check your understanding: On the SIOP form in Figure 9.2, rate Mr. Tran's lesson for each of the Review & Assessment features.

Mr. Hughell

Mr. Hughell's lesson plan noted the following objectives:

Write a paragraph on what mummies teach scientists about how Egyptians lived.

Explain how mummies were preserved.

Match 20 vocabulary words with their definitions.

The plan for the first day of the lesson included the following: Distribute a list of 20 words and definitions related to mummies along with page numbers on which the words could be found in the assigned article; read aloud half of the article while students follow along; have students find the first group of 10 vocabulary words in the chapter and write an original sentence related to the topic of mummies for each word.

Mr. Hughell began the second day of the lesson by asking volunteers to read several of the vocabulary sentences they had written the previous day. As students read, Mr. Hughell corrected language errors when needed. He clarified content misconceptions, modeled appropriate pronunciation, and reminded students of the

correct definitions for the vocabulary. He then gave students five minutes to review what had been read the previous day. He asked volunteers to orally summarize what they had learned about Mummy No. 1770 and how mummies were prepared. Several students responded briefly, and Mr. Hughell prompted others to elaborate. He highlighted key points by writing them on the board and made additions to the students' summaries.

He then asked for volunteers to read the next set of 10 words and definitions from the vocabulary list. He informed students that they would have a vocabulary matching quiz on these words the following day. Students were then directed to read the rest of the article silently and were encouraged by Mr. Hughell to ask for help if they found words they did not understand. Following the reading, students worked with partners to write 10 more sentences for the remaining words on the vocabulary list.

At the end of the period, Mr. Hughell called on a few volunteers to read their sentences aloud and asked if anyone had questions. Because not everyone had finished writing the sentences, he assigned the remaining ones for homework and reminded students of the vocabulary quiz planned for the next day. He suggested that students review the entire article at home because, in addition to the vocabulary quiz, they were going to be writing a paragraph in class on what scientists have learned from mummies. He would evaluate the students' comprehension of the article with the written paragraph and quiz the following day.

Check your understanding: On the SIOP form in Figure 9.3, rate Mr. Hughell's lesson for each of the Review & Assessment features.

FIGURE 9.3 Review & Assessment Component of the SIOP Model: Mr. Hughell's Lesson

4	3	2	1	0
27. Comprehensive review of key vocabulary		Uneven review of key vocabulary		No review of key vocabulary
4	3	2	1	0
28. Comprehensive review of key content concepts		Uneven review of key content concepts		No review of key content concepts
4	3	2	1	0
29. Regular feedback provided to students on their output (e.g., language, content, work)		Inconsistent feedback provided to students on their output		No feedback provided to students on their output
4	3	2	1	0
30. Assessment of student comprehension and learning of all lesson objectives (e.g., spot checking, group response) throughout the lesson		Assessment of student comprehension and learning of some lesson objectives		No assessment of student comprehension and learning of lesson objectives



Reflect and Apply

Click here to explain your ratings for Mr. Hughell's lesson on each of the Review and Assessment features.

Miss Johnston

Miss Johnston's lesson plans revealed one content objective for the two-day lesson on mummies: "The learner will understand how mummies were made." The plan included the following for both days: "Read article about Mummy No. 1770 and complete the worksheet questions."

Miss Johnston began the second day of the lesson by calling on a student to summarize the article that had been read aloud the previous day. The student responded, "We took turns reading about how some guys in a museum unwrapped an old mummy." Another student added, "And scientists learned the mummy was a girl with no legs." Although the responses were brief and only related simple facts, Miss Johnston offered no further explanation or review.

Miss Johnston then distributed a worksheet to students that had multiple-choice and fill-in-the-blank questions covering information in the article, along with two short essay questions. Students worked individually but were allowed to use their books while completing the worksheets. If they finished early, Miss Johnston gave them a word search including a variety of words related to mummies. This task would become a homework assignment if the period ended before students were finished. The teacher circulated through the room, answering questions and keeping students on task.

Toward the end of the period, to assess their learning, Miss Johnston asked students to exchange the worksheet papers. She read the correct answers for the multiple-choice and fill-in-the-blank questions aloud, and students marked their peers' papers. When she asked how many students had only one or two wrong answers, no one raised a hand. She did not pursue the discussion to see if some questions were problematic for most of the class. The lesson concluded with students turning in their papers so Miss Johnston could assign a grade. She reminded students to finish the word searches and to bring in shoe boxes and craft materials the next day so that each student could make a diorama as a culminating activity for the lessons.

Check your understanding: On the SIOP form in Figure 9.4 on the following page, rate Miss Johnston's lesson for each of the Review & Assessment features.

FIGURE 9.4 Review & Assessment Component of the SIOP Model: Miss Johnston's Lesson

4	3	2	1	0
27. Comprehensive review of key vocabulary		Uneven review of key vocabulary		No review of key vocabulary
4	3	2	1	0
28. Comprehensive review of key content concepts		Uneven review of key content concepts		No review of key content concepts
4	3	2	1	0
29. Regular feedback provided to students on their output (e.g., language, content, work)		Inconsistent feedback provided to students on their output		No feedback provided to students on their output
4	3	2	1	0
30. Assessment of student comprehension and learning of all lesson objectives (e.g., spot checking, group response) throughout the lesson		Assessment of student comprehension and learning of some lesson objectives		No assessment of student comprehension and learning of lesson objectives



Reflect and Apply

Click here to explain your ratings for Miss Johnston's lesson on each of the Review and Assessment features.

Discussion of Lessons

27. Comprehensive Review of Key Vocabulary

Mr. Tran: 4

Mr. Hughell: 1

Miss Johnston: 0

The emphasis on vocabulary and content instruction, practice, review, and assessment varied across the three classrooms.

- **Mr. Tran's** lesson received a "4" for this feature. He had clearly defined content and language objectives, and throughout the lesson, his instruction and activities were congruent with these objectives. He built upon what students already knew about mummies, incorporated student selection of important terms, and ensured the key vocabulary words were included on the word wall. He pointed out similarities in word structure and differences in word meaning (e.g., *embalm/embalming* and *tissue/tissue*).

Mr. Tran's English learners were challenged to articulate the key vocabulary both orally and in writing. Although many terms and phrases related to mummies were introduced, discussed in the text, and included on the word wall, sequence chain, and T-chart, Mr. Tran limited the words students were expected to master to

six. It is important to note that he repeatedly reinforced these words, at the beginning, in the middle, and again at the end of the lesson. By using the vocabulary in context, repeating the words orally, and writing the question on the whiteboard (“What *evidence* did the scientists discover during the *autopsy* of the *mummy*?”), Mr. Tran reviewed the pronunciation, meanings, and usage of the words.

Finally, Mr. Tran expected students to use the new key vocabulary orally and in their writing during partner, small-group, and whole-class discussion. As he listened, he could readily determine who had met the vocabulary objectives and who had not.

- **Mr. Hughell’s** lesson received a “1” for this feature. He reviewed the vocabulary sentences from the first day’s lesson, provided definitions and page numbers, and allowed students to write their sentences with partners. However, it is unrealistic to expect English learners, as well as struggling readers, to master such a large number of vocabulary words (i.e., 20 words) using the approaches he selected. He did not assist students in learning the words through analogy, pictorial representations, or exploration of language structure, and provided very few exposures to the words. The sentences that the partners were writing were not expected to result in connected text; thus, the students only used the words in isolated instances. Moreover, many students did not complete the assignment in class so Mr. Hughell was unable to review or assess student understanding of the words.

Mr. Hughell ran out of time at the end of the period and expected students to conduct their own review of the article at home. Obviously, this did not provide the type of scaffolding that English learners need and did not represent effective review of language, vocabulary, and content.

- **Miss Johnston’s** lesson received a “0” for this feature. She had no language objectives for the lesson plan and did not introduce, teach, or review any key vocabulary to assist students in completing the worksheet. There may have been words in the multiple-choice questions that students were unfamiliar with, reflecting “test language,” but she gave them no opportunity to ask about them, nor did she explain the words to the students in advance. Some students (those who finished the worksheets early) practiced finding vocabulary on a word search, and the rest were assigned the word search as homework. It is important to note that word searches, while engaging, do not constitute effective review of vocabulary because students are expected to simply match spellings without knowing pronunciations and meanings.

28. *Comprehensive Review of Key Content Concepts*

Mr. Tran: 4

Mr. Hughell: 1

Miss Johnston: 1

Most teachers, if they review at the end of a lesson, focus on the content concepts. In these three scenarios, the teachers did so to varying degrees.

- **Mr. Tran’s** lesson received a “4” for this feature. Throughout the lesson, he consciously and consistently reviewed content directly related to his objectives that were derived directly from the ELA/Social Studies Common Core standards for this lesson. Students reviewed the information they learned the previous day

and the new information from this lesson as a class and with partners. Mr. Tran created opportunities for students to correct errors or add information to the sequence chains and T-charts and had them compare the Wikipedia information to the original article. During each of these activities, the teacher could clarify misunderstandings. At the conclusion of the lesson, Mr. Tran had students review the major discoveries, along with the lesson's content and language objectives.

- **Mr. Hughell's** lesson received a "1" for this feature. He began by providing a basic review of the previous day's reading. He gave students time to focus on their previous learning and had volunteers summarize what had been read. He asked others to elaborate and wrote the information on the board so all students could follow along. Most important, he clarified points and added information to their summaries. These efforts were primarily reviewing the previous day's work. Thus, the lesson may have received a "3" on SIOP feature 8 in Building Background (linking to past learning). While this is important to do, especially for English learners, this review was not followed by reviewing the present day's key concepts. Unfortunately, Mr. Hughell ran out of time at the end of the period and consequently failed to review content concepts adequately before the lesson concluded. It was inappropriate for him to require English learners to review at home an entire article that had specialized terminology. The teacher is the one to provide this review or at least scaffold student efforts to review by themselves, prior to assessment and evaluation.
- **Miss Johnston's** lesson received a "1" for this feature. She took a different approach in reviewing content concepts with the students, but it yielded little success with English learners. Initially, she asked students to summarize the article they had read. Although two students made an attempt, each stated only one sentence, which included a fact but did not summarize the information. Miss Johnston's major effort at concept review was through an individualized paper-and-pencil assignment. This was, however, an assessment of student knowledge and reading comprehension, not a true review of content concepts. Students could peruse the article to find information, but neither the class as a whole nor students in groups had an opportunity to discuss and clarify understandings about the content material. Moreover, Miss Johnston's only objective was vague ("Students will understand how mummies were made") and did not provide clearly defined content concepts for the students. This was in large part because the objective was not derived from the rigorous Common Core standards as described in the lesson overview.

29. *Regular Feedback Provided to Students on Their Output*

Mr. Tran: 4

Mr. Hughell: 2

Miss Johnston: 1

Mr. Tran, Mr. Hughell, and Miss Johnston had some similar and different techniques for providing feedback to the students during their lessons.

- **Mr. Tran's** lesson received a "4" for this feature. He scaffolded students' learning by clarifying, discussing, and gently correcting responses. He encouraged peer support and feedback when the graphic organizers were shared, and he used

explanation and discussion to help students understand how to evaluate the importance of the scientists' discoveries. He moved around the classroom during the lesson, offering support and academic feedback. Mr. Tran clearly used review, assessment, and feedback to develop his students' language proficiency and content knowledge throughout the lesson. His final review was of the lesson's content and language objectives.

- **Mr. Hughell's** lesson received a "2" for this feature. He frequently clarified misconceptions and gave clear corrections for students' errors. However, his feedback would have been more effective had it better scaffolded students' developing language proficiency and content knowledge. That is, Mr. Hughell's feedback was primarily corrective rather than instructive. He essentially told students their answers were incorrect and then gave them the correct answers, rather than assisting them in formulating the correct responses themselves. Mr. Hughell also directed students to read the article independently and ask for help if needed. Many students, English learners especially, may be reluctant to ask for help for fear of appearing inattentive and/or because they don't know how to formulate the questions they need to ask. Also, because Mr. Hughell's classroom was quite teacher-centered (he delivered instruction mostly by standing at the front of the room), students had little opportunity to work together to provide each other with helpful feedback. His teaching would be more effective for English learners if he created a more supportive classroom environment. He could begin by providing more meaningful academic feedback to his students.
- **Miss Johnston's** lesson received a "1" for this feature. She attempted to help students by answering questions while they were completing their worksheets. She also corrected the papers in class, providing the answers for the questions. However, the amount of feedback she provided students was very limited, and not particularly supportive. When she gave the correct responses to the worksheet questions, she provided little or no explanation, and she did not consider student output on an individualized basis during the lesson. In all, English learners received very little supportive feedback during the observed lesson.

30. *Assessment of Student Comprehension and Learning of All Lesson Objectives*

Mr. Tran: 4

Mr. Hughell: 2

Miss Johnston: 1

Assessing student learning is a critical step in the teaching and learning cycle. The three teachers in these vignettes all conducted some assessment but in different ways.

- **Mr. Tran's** lesson received a "4" for this feature. As his lesson unfolded, Mr. Tran's assessment opportunities included group response, partner, and whole-class reporting, as well as individual written work. His assessments occurred throughout the lesson and were authentic, multidimensional, and included multiple indicators. Most important, his assessments were directly linked to his content and language objectives.
- **Mr. Hughell's** lesson received a "2" for this feature. His assessments of student understanding in the observed lesson were only somewhat effective. He called upon a few students to read their vocabulary sentences aloud, so for those

students he was able to assess their sense of the words' meanings, but he had no way of knowing whether the rest of the students, particularly the English learners, understood the vocabulary terms. When students read the article silently, he did not assess their reading comprehension of the content. He planned some summative assessments, namely the vocabulary matching test and the written paragraph, and tried to match assessment to his objectives ("Write a paragraph on what mummies teach scientists about how Egyptians lived; Explain how mummies were preserved; Match 20 vocabulary words with their definitions"). However, these assessments were scheduled for the following day, too late to guide necessary review, feedback, and reteaching during instruction. By the time he discovered who had met the language and content objectives and who had not, the lesson would be completed.

- **Miss Johnston's** lesson received a "1" for this feature. The factual recall sentences elicited responses from only two students. Although the worksheet constituted summative evaluation, there was no ongoing assessment throughout the lesson. Students responded to the worksheet individually, and only after she collected the papers, looked at the scores, and issued grades—after the class had ended—would she have a sense of what students had learned. As with Mr. Hughell, this information would arrive too late to guide review and reteaching. Without a rubric or criteria upon which the diorama projects would be assessed, it is doubtful they would inform Miss Johnston about the students' understanding of key vocabulary and content concepts. Finally, the one objective ("The students will understand how mummies were made") was too general, not directly measurable, not observable, and not derived from standards.



Watch this video to note how Ms. Phillips assesses student learning in the middle school science lesson you viewed in Chapter 7 (see the Summary for the link to Part I of this video). Using the SIOP protocol, see how many SIOP features you recognize in the two video clips.

Teaching with Technology



After talking with the teachers and discussing the lessons you read about in the Scenarios earlier in the chapter, our tech integrator, Ms. Palacios, offered some technology suggestions to enhance the teachers' lessons.

Jeopardy Labs: Mr. Tran, Mr. Hughell, and Miss Johnston were looking for an engaging way for their students to review the material at the end of the Egypt unit. At lunch, Mr. Tran explained how he likes to create a *Jeopardy* game on his whiteboard, drawing the boxes and categories by hand. Ms. Palacios asked if he had ever seen Jeopardy Labs, an easy- to-use Web site that enables teachers to quickly create game boards. In addition to creating original games, the site allows users to search for games created by other teachers and use them as a basis for a new one. Mr. Tran shared the new Web site with his team and they decided to give it a try for their final review.

In order to involve the students more in the process, Mr. Tran, Mr. Hughell, and Miss Johnston assigned the students the task of coming up with categories and review questions that would appear in the *Jeopardy* game. The students submitted their ideas based on class notes and other materials. Then, the teachers built a game for the Egypt unit with categories like *Important Geography*, *Mummies*, *Scientific Findings*, and more.

With the questions and answers entered, the teachers then had to determine how to make the activity work in a classroom with many students, not just three contestants.

How would students be selected to answer questions? What about a bell? How should they keep track of points? In order to answer these questions, Ms. Palacios suggested a slight adaptation that mixed a bit of the analog world with the digital world. Instead of a system in which students had to “ring in” to answer a question, she suggested dividing the class into small groups of three or four students and providing each group with a small whiteboard. After the teacher read a question, each team had 30 seconds to discuss the answer and write it on the whiteboard. When the time was up, the team leader held up the board so the teacher could award points for the correct answer. In order to allow some choice during the game, the teachers allowed the teams to choose the categories and dollar amounts on a rotating basis. By slightly changing the dynamic of the game and using whiteboards, each student had more opportunities to hear and review the material, including key vocabulary and content concepts.

Other terms for this type of tool: online *Jeopardy* game

Related Products: *Jeopardy Rocks*, *Jeopardy PowerPoint* templates

Online Rubric Creator: Rubrics are an essential component in the SIOP teacher’s toolkit and the Internet has made it possible to easily find many samples of teacher-created rubrics for a variety of content areas or purposes. One afternoon, Ms. Palacios and the team visited a number of such Web sites. They noticed that as with the options explored with Jeopardy Labs, many rubric creator sites allow users to create original rubrics or find others that could be adapted. The teachers found the Web sites to be helpful for suggestions of descriptors and ideas regarding scoring.

Other terms for this type of tool: Rubric maker, online rubric creator



Check Your Understanding

[Click here to check your understanding of Chapter 9, Review and Assessment.](#)

Summary

As you reflect on this chapter and the impact and role of review and assessment of vocabulary, and content and language objectives, consider the following points:

- Review and assessment are integrated processes, essential for all students, but they are critical to the success of English learners.
- Informal assessment is attentive to the classroom context, is authentic and multidimensional, and includes multiple indicators of students’ performance.
- Effective SIOP teachers carefully plan for review and informal assessment of key vocabulary throughout a lesson and at its conclusion.
- Formal assessments (e.g., standardized tests) require that students understand and apply content knowledge on tests that have high stakes. Therefore, it is important to teach, review, and assess English learners’ understandings of the

cross-curricular/process/function words and terms that are often found in test questions.

- At the conclusion of a SIOP lesson, teachers assess the degree to which students have met all content and language objectives.
- Most important, review and assessment guide teaching and reteaching, inform decision making, lead to supportive and academic feedback, and provide for fair and comprehensive judgments about student performance.

■ Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
 - a. Identify the challenges in assessing content and language learning of students with limited English proficiency?
 - b. Create a plan for formative **assessment** for the linguistically diverse students in your classroom that will provide you with the information you need to make sound instructional decisions during lesson planning?
 - c. Determine opportunities for reviewing and assessing key vocabulary and key content concepts in your lesson plan?
 - d. Provide effective academic oral and written feedback to **English learners** during a lesson?
 - e. Compare and contrast characteristics of informal and formal assessments?
 - f. Explain the meaning of the following assessment terms: *formative* and *summative assessment*; *authentic assessment*; *multidimensional indicators*; *multiple indicators*?
2. Many teachers introduce key vocabulary at the beginning of the lesson, but often neglect to revisit the new terms systematically throughout the lesson and review them at its conclusion. How can you ensure that a SIOP lesson's key academic vocabulary is reviewed at the end of each lesson? Describe a variety of ways you would review the terms, as well as the techniques you could put in place to build a vocabulary review into each lesson. Which of the activities introduced in this chapter would you select? Why?
3. Research has shown that gratuitous compliments to students (e.g., "Good job" or "Keep up the good work") do little to motivate them or assist with their learning. Instead, teachers should give regular, substantive feedback to students on their verbal contributions and on their academic work. What are some ways to provide constructive, specific academic feedback to students? Consider class size and English proficiency levels as you answer this question.
4. Reflect on the ideas presented in this chapter, as well as all the other activities you have used to assess student learning of specific lesson objectives. How much time do you think you should allocate for review and assessment during each lesson? What if you discover (as is often the case) that some students are ready to move on, while others need more review and/or reteaching?

5. Using the SIOP lesson you have been creating, provide specific provisions for students at varying levels. Plan multiple indicators throughout the lesson that will enable you to assess on-the-spot progress toward meeting the lesson's content objectives. Then determine what you will do for (1) independent or partner work for students who are ready to move on and (2) a reteaching or review minilesson for those who need additional assistance from you. This is probably the most challenging aspect of providing **differentiated instruction**, not only for English learners, but for all students. How will you assess who is ready to move on? How will you assess the students in the reteaching/review group to determine if and when they're ready to move on? What will you do if a few students are still struggling? These are the *big* questions to ask (and answer) when planning for a lesson's review and assessment.

Issues of Reading, RTI, and Special Education for English Learners

Learning Outcomes

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

Explain how linguistic differences in **home languages** and English can affect English learners' reading and writing development.

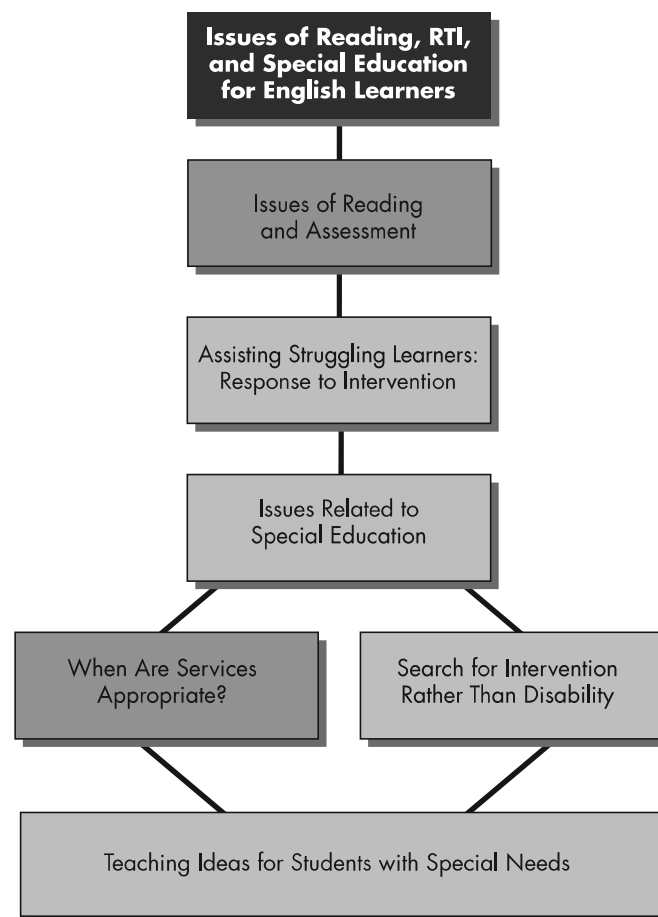
Describe in-class supports and/or modifications that content teachers can provide to English learners and struggling readers.

Delineate an effective RTI process to ensure appropriate services for English learners.

Language Objectives

Discuss with a group how to plan appropriate instruction for English learners who may have reading and learning difficulties.

Write a lesson plan that develops vocabulary and reading proficiency for English learners who struggle to read and learn.



In our work with teachers and administrators throughout the United States, a persistent question concerns appropriate instruction for **English learners** who exhibit difficulties with reading and learning. Teachers often feel ill prepared to provide content instruction for these students because they're not sure whether a student's difficulty is due to a reading problem, a learning disability, a lack of schooling, or limited English proficiency.

Response to Intervention (RTI) was

developed, in part, to more accurately identify learning disabilities. In this chapter, we provide a brief overview of RTI, and we discuss issues of assessment, identification, and instruction for students who may be experiencing reading and/or learning problems. With more rigorous English language arts and content standards in place, a process for supporting struggling students is even more essential.

Although it is not the intent of this book to provide a comprehensive treatment of the topic of struggling learners, we hope this chapter will stimulate your thinking about and discussion with colleagues regarding these issues, especially as they affect English learners. We begin with a discussion of reading development and assessment for English learners and examine how RTI provides assistance to teachers and learners alike. We then move on to issues related to special education. (For a full discussion of RTI, see *Response to Intervention (RTI) and English Learners: Using the SIOP Model* [Echevarría, Richards-Tutor & Vogt, 2015]. For a discussion of special education and English learners, see Echevarría & Graves, 2015.) ●



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■ Issues of Reading Development and Assessment

Teachers face many challenges related to the literacy development of English learners. The task of teaching English learners to read is made difficult in part due to the complexity of learning to read and write in a language the students do not

understand completely. Also, it is not always possible for students to learn to read in their primary language at school (which would enable them to carry over their knowledge of reading in the L1 to reading in English). These students may have difficulty with attending to the distinct sounds of English, letter identification, and comprehension because they lack familiarity with the purposes and mechanics of reading. As a result, some English learners are behind before the onset of school (Snow, Burns, & Griffin, 1998).

Not surprisingly, research suggests that English learners need systematic, high-quality literacy instruction from the start. According to the Report of the National Literacy Panel on Language-Minority Students and Youth (August & Shanahan, 2006), teachers of English learners must provide substantial instruction in the key components of reading as identified by the National Reading Panel (NICHD, 2000). These include phonemic awareness, phonics, fluency, vocabulary, and comprehension. As important as these are, they are not sufficient for English learners. Oral language development, often overlooked during literacy instruction, is also critical.

To promote English learners' oral language development, the following suggestions are offered:

- Engage students in “picture walks” or text walks where English learners and native speakers take turns describing a book’s illustrations (or graphic elements, such as tables and charts), which they use to predict the content of the story or chapter before reading.
- Provide repeated readings of highly predictable picture or pattern books for young children/or and beginning English speakers, so that students can internalize and then orally produce the patterns, rhyming words, and rhythm.
- Record the reading of stories, articles, or chapters so English learners can listen to and then retell what they learn as they refer to pictures they have drawn about the text’s content.
- Use the Language Experience Approach (LEA) to record on chart paper English learners’ dictated short stories and/or experiences, such as what occurred during a recent field trip or their description of an event at school or home. After the dictation, the text is used for repeated readings, discussion, and instruction. LEA is very effective for developing oral language and oral reading proficiency, vocabulary, and an understanding of English syntax, all essential for reading proficiency (Roskos & Neuman, 2014). It is recommended that students have their own copies of the dictated texts so they can underline words they recognize each time they orally and silently reread their stories (Rasinski & Padak, 2004; Stauffer, 1980).

A challenge that is particularly acute when teaching immigrant English learners to read in English is accurately determining their reading proficiency in their home languages. Students who have well-developed reading skills in their **native language** may have mastered many of the essentials of reading, such as:

- The knowledge that print carries meaning.
- The alphabetic principle: If students’ home language (**L1**) is alphabetic, they have learned that phonemes (sounds) are represented by graphemes (letters and

 Watch this video to see two third-grade literacy teachers probe students’ thinking about what makes a good reader, through their paraphrasing, elaboration of student responses, and think-alouds. Why is this type of a conversation with students so valuable for English learners and struggling readers?

letter combinations), and that when put together these graphemes create words and meaning (the alphabetic principle).

- Knowledge of syntax: Students have also learned the syntax (sentence structure) of their L1, and although they may be challenged by learning English syntax, they can use their knowledge of the L1 structure to make connections with English.
- Comprehension: Once students have learned what it means to strategically comprehend text in their native language, they are able to transfer cognitive, metacognitive, and language learning strategies from their L1 to English (Genesee, Linholm-Leary, Saunders, & Christian, 2006).
- Sound-symbol system of English: If students' L1 is non-alphabetic (such as Mandarin), they will need to learn the alphabetic sound-symbol system of English, but they can carry over to their new language their understandings of the reading and writing processes.

Students who read satisfactorily in their L1 do not have to relearn how to read or write. However, they do need to learn English. With comprehensible input and explicit instruction in English phonology, morphology, and syntax, they will have a better chance of transferring their existing reading skills to the reading of English. For example, for students whose L1 is Spanish, there are many cognates that link English vocabulary and spelling with Spanish (*estudiar* = study; *excepción* = exception). Using dictionaries in Spanish, English, French, and German as resources helps students make these connections as they explore similarities in these languages (Helman, Bear, Templeton, & Invernizzi, 2011).

It is also clear that English learners need to be immersed in print, with many opportunities to read books, stories, and informational texts that are at or a little above their level, ideally in their L1 as well as in English. English learners benefit when they learn to read and write in both their native language and in English.

In contrast to those English learners who have well-developed literacy skills in their L1, other students enter U.S. schools with little or no reading instruction in their primary language, or they find reading and writing very difficult. These students are often referred to special education programs without just cause, when other interventions may be more appropriate, such as longer exposure to high-quality, scaffolded instruction in English or their home language; more direct, small-group, or individual instruction; or referral to a reading specialist. It is important that teachers know whether their English learners can read in their primary language and that they are able to ascertain whether difficulty in content class work may be the result of a reading problem or a lack of English proficiency. If a particular student speaks a language that differs from other students in the school, it may be necessary for a community member who speaks the language to share reading material in the student's native language so that his or her literacy skills can be assessed.

Estimating Students' Reading Levels

Many teachers, rightly, want to determine the reading levels of their students. This information helps the teacher match texts to students' abilities. For example, if a fifth-grade student is reading at approximately the third-grade reading level, he

is likely to have difficulty comprehending his fifth-grade social studies textbook without instructional modifications and **scaffolding**. Either the too-difficult text will need to be adapted or the student will require considerable assistance in accessing the content information from the text.

Classroom teachers and reading specialists use a variety of assessments to determine their students' reading proficiency. However, commonly used assessments that yield a particular reading level (such as fourth grade) may be inappropriate for English learners (Jiménez, 2004; Vogt, 2014). For example, a common diagnostic instrument for assessing students' fluency and comprehension is some sort of an informal reading inventory (IRI). During this assessment, a student reads a series of increasingly difficult, leveled passages silently or orally. The teacher or reading specialist marks reading errors, asks comprehension questions, and, based on the student's reading proficiency, determines approximate reading levels, labeled as: *independent* ("I can read this accurately without any help"); *instructional* ("I can read and understand this if someone helps me"); and *frustration* ("I can't read or understand this, even if someone tries to help me").

IRI-like assessments are also used to match books to a student's reading ability, using Lexile® bands, but too often, English learners and struggling readers are provided only with low-level books because their assessments indicate this is what they're able to read. Instead, we need to select texts that are written at the students' instructional level, if possible, and that account for students' different experiential backgrounds, and then provide additional assistance so that the text becomes accessible. If this level and type of text isn't available, then we must adapt the grade-level text through rewriting, providing a detailed study guide, highlighting the key concepts, or providing detailed marginal notes (as discussed in Chapter 2). Without these, the instructional- and frustration-level texts will be largely inaccessible, especially for English learners.

It's important to remember that successful reading of any text is also dependent on a number of other variables, including familiarity with the topic being read, vocabulary knowledge, the flexible use of a variety of reading skills and strategies, motivation, and purpose setting. For students who are reading in their native language, these variables are relatively easy to assess, and the selection of appropriate text materials can be made with a reasonable amount of confidence. However, many of our usual battery of reading assessments may not yield reliable results for English learners, and selection of appropriate texts is considerably more difficult. A student who is assessed at grade level in his L1 may be assessed as reading at a much lower level in English. Thus, using results from an IRI or a standardized achievement test in English might suggest that the student has a serious reading problem. However, if he doesn't have difficulty reading in his native language, it's unlikely he'll have a serious reading problem in his new language. In contrast, if the student has a reading problem in his L1, he may very well have difficulty reading in English.

So how do we determine whether a student's academic difficulties are due to a reading problem or a lack of English proficiency? First, we need to recognize that English learners may need explicit instruction in the aspects of English that differ from their native languages, including the phonology (sounds), morphology

(roots and affixes), and syntax of English (sentence structure). As an example, although you may teach phonics explicitly and effectively, some English learners may not hear or be able to reproduce the sounds of English because these sounds do not exist in their primary language. The consonant sounds may be considerably different, the number of vowels may vary, and such things as vowel combinations, commonly found in English (*ea, ie, oa*), may be nonexistent in the students' home languages (such as Spanish).

It's not just the sound system (the phonemes) that can cause difficulty for English learners. Because of English orthography (the spelling system), some English learners may have difficulty learning to read and write the language. Orthographies of various languages are described in terms of whether they are *transparent*, with highly regular words that are easy to decode (such as Spanish and Italian), or they are *deep* or *opaque*, with correspondences between letters and sounds that are much less direct (such as French and English). A language like German is considered to be *semitransparent* because its orthography lies somewhere between deep and transparent (Helman et al., 2011). The point is that some students who have a primary language that is transparent (such as Spanish) may have a difficult time learning a language that is deep (such as English). However, in some studies that compare orthographic knowledge, bilingual learners have been found to negotiate satisfactorily between their languages and literacies (Tolchinsky & Teberosky, 1998). Rather than being confused by orthographic differences, these students can apply what they know about the structure of their primary language to the language they are learning.

English Learners and the Common Core State Standards for Reading, Writing, Listening, and Speaking

For English learners and struggling readers, the **Common Core** English Language Arts Standards are especially challenging, but they also represent an opportunity for all students to reach high levels of literacy attainment. Many of the Common Core literacy skills English learners need to acquire are metalinguistic in nature. That is, they require students to be particularly aware of the features and uses of language (Jiménez et al., 2015). An instructional example of how to help English learners employ metalinguistic strategies is to lead them through a brief content paragraph by examining each sentence, while pointing out that readers are likely to find one or more processes, such as *doing, sensing, being, or saying*, when reading expository text in science or another subject area text. This type of analysis and subsequent application of the metalinguistic strategy will assist English learners and others as they read increasingly complex texts.

With the Common Core State Standards now adopted by the majority of states, and with other states either adapting the Common Core or adopting similarly rigorous standards, it is imperative that all students, including English learners and struggling readers, be provided with appropriate reading instruction that focuses on, among other things, close reading of complex texts. Following are some ideas for providing opportunities for English learners and other students to meet these challenging literacy standards, especially with informational texts (Calkins, Ehrenworth, & Lehman, 2012; Vogt & Shearer, 2011).

1. ***Implement the SIOP Model's 30 features to a high degree*** and your students will be reading, writing, listening, and speaking throughout the day. As you've read throughout this book, developing English proficiency takes practice, practice, and more practice using the language.
2. ***Engage your students in reading more high-quality, high-interest, nonfiction texts.*** In many elementary and secondary language arts classrooms, the preponderance of text material is narrative fiction. Teachers and students alike love a good story, but with the focus of CCSS on close reading of expository texts, it's important to balance your instruction and students' practice with plenty of interesting and motivating nonfiction texts. It's not enough for students to thumb through a magazine or informational book—instead, it's about the volume of nonfiction texts that students are actually *reading*. This requires having available an ample number of independent or “just-right” books from which students can choose to read. In order to move toward the close reading of complex texts as required by CCSS, students need to practice reading independent level texts and then work up to more challenging texts without having to complete a worksheet. Rather, engage students in talking about the big-picture ideas in the text, the language that is used, the author's purpose and motivation for writing it, and the ideas they find compelling during close readings. In part, close readings require students to critically analyze the author's message by reading beyond the information on the page or screen (McLaughlin, 2012). These kinds of conversations can take place during and after teacher read-alouds of nonfiction texts that are about two grade levels above the students' reading levels. Students can listen to and talk about texts that are too difficult for them to read independently, and when you engage them in critically thinking about something you've read aloud, you're preparing them to engage in the same kind of thinking when they read more challenging texts themselves.

And, remember that close reading of texts isn't an every-period-every-day-every-text event. Use shorter texts that are complex and model what it means to read closely—how a reader approaches challenging text, how to analyze the language and textual features of what is being read, and how to find and cite evidence to support a position or argument (Serafini, 2014). Without this type of teaching, English learners and struggling readers will soon equate “complex text” with “frustration-level text” (See Calkins, Ehrenworth, and Lehman, 2012, for specific ideas about how to find appropriately leveled texts, and how to “nudge” students toward increasingly challenging reading material that requires close reading and structured discussion.)

3. ***Provide students with explicit and focused strategy comprehension instruction that is embedded in rich content and relevant texts.*** This can occur throughout the day in each subject area when you include primary sources and other interesting texts that provide the opportunity for students to work on the comprehension and learning strategies described in Chapter 5 (Strategies).
4. ***Engage your students in rich collaboration that promotes motivation and self-directed learning.*** Think about the **SIOP** component of Interaction and the Common Core Standards for listening and speaking. To meet the CCSS standards, students must learn to engage meaningfully with the teacher and with

each other, and this involves both listening and speaking opportunities that are targeted and structured (Fisher & Frey, 2014). Teach students how to engage in discussions and instructional conversations about what they read (see Chapter 4), and model skills such as how to articulate positions, defend statements with specific evidence from the text, and analyze the author's perspective.

5. ***Provide scaffolding as needed.*** Some students benefit from relevant sentence frames during instruction and practice:

"From the text, I learned... ."

"I think _____ because in the text, I read that _____."

"I don't believe _____, because _____."

"The most important point the author made was _____ because _____."

"In the text I read that _____, but I question that because _____."

So what do we do about those who *are* confused, and despite appropriate instruction in English, reading, and language arts, are not making satisfactory progress? First, as discussed in Chapter 9, it's important to examine the students' present classroom context as it relates to literacy strengths and needs. The following questions might guide this inquiry:

1. What evidence do you have that a particular student is having difficulty with reading?
2. Do you have any evidence that this student has difficulty reading in his or her home language? If not, how might you gather some information? If you are not fluent in the student's language, is there another student who is? Is there a community liaison or family member who can provide information about the student's L1 literacy development?
3. If your evidence points to a reading problem, what instructional supports and/or modifications have you and other teachers tried to accommodate the student's needs?
 - a. Are the student's teachers adapting content and texts to provide greater accessibility (see Chapter 2)?
 - b. Are the teachers using instructional techniques that make the content and expectations understandable for English learners (see Chapter 4)?
 - c. Are the student's teachers incorporating cognitive, metacognitive, and language learning strategy instruction in the ESL, language arts, and content subjects (see Chapter 5)?
 - d. Are the student's teachers scaffolding instruction through flexible grouping that promotes interaction between the teacher and students, and among students (see Chapters 5 and 6)?
 - e. Are the student's teachers providing multiple opportunities for practice and application of key content and language concepts (see Chapter 7)?

- f. Are the student's teachers using effective assessment to determine what the student knows and can do related to content and language objectives, and to plan subsequent reteaching lessons (see Chapter 9)?

At this point, we hope you're getting the idea that appropriate instruction for this student involves all of the components of the SIOP Model—those listed above as well as appropriate pacing, meaningful activities, sufficient wait time, and so forth. Certainly, a student with reading problems will benefit from the effective practices advocated in the SIOP Model as he or she receives an appropriate intervention for the reading problems.



Reflect and Apply

Click here to explain what you've learned about English Language Learners.

Will this type of instruction overcome a serious reading problem? Probably not, although research on effective literacy instruction for young English learners is consistent with the features of the SIOP Model. But here's the key: If you (and your colleagues) have done all you can to provide effective English language development and content instruction using the SIOP Model and a student is still struggling with reading (or math), it may be appropriate and important that the student receive intervention. This might be provided by the teacher in the classroom, a reading specialist, or another service provider. And that brings us to Response to Intervention.

Assisting Struggling Learners: Response to Intervention



Watch this video to see Dr. Jana Echevarría discuss creating an optimal learning environment for all students. In what ways do you think that RTI or MTSS can help to identify students with learning disabilities? How does it reduce inappropriate referrals for special education services?

Response to Intervention (RTI), also known as **MTSS (Multi-tiered System of Supports)**, is a service delivery model used to identify at-risk learners early and to provide appropriate supports including effective instruction in general education (typically called Tier 1), followed by targeted intervention as needed (Tier 2 and/or Tier 3). Although the terms RTI and MTSS are often used interchangeably, MTSS differs from RTI in that it is more comprehensive, addressing behavioral, social, and emotional issues experienced by students while RTI focuses primarily on academic progress.

Generally RTI consists of skill screening for all students, close monitoring of student progress, and the use of interventions to bolster student achievement. RTI is founded on the principle that *all students can learn* and is designed to catch learning problems early, thus reducing the number of students eligible for and in need of special education services (often Tier 3 or another level of intervention). Actually, early identification and intervention can help prevent reading difficulties altogether (Torgesen, 2012). With RTI, all students receive high-quality core instruction in general education, while some receive additional services for as long as there is evidence that they need those services. The focus is on finding ways to change variables such as teaching methods, materials, and/or student behaviors so the learner can be successful. RTI involves documenting a change in behavior or performance as a result of intervention and assessments, making it a recursive process with students moving in and out of interventions as needed. That is, students



Watch this video to see Drs. Jana Echevarría and MaryEllen Vogt discuss RTI and its relationship with SIOP. If a student is struggling academically, what should the RTI team first consider? https://www.youtube.com/watch?v=dU9NFf_xA-E

receive interventions for a specific amount of time and progress-monitoring data are analyzed to determine next steps. Does the student need the same level of intervention for a longer period of time and more intense intervention, or has the Tier 2 intervention been sufficient (and it is no longer needed)? Students aren't "stuck" in intervention indefinitely; their progress is closely monitored and decisions are made based on student need. In the IDEA 2004 reauthorization (Individuals with Disabilities Education Act), RTI was approved as an option for schools to use, and resources may be allocated from a number of sources such as Title I and special education funds (Klinger & Eppolito, 2014; Tilly, 2006).

As we begin a discussion of the specific components of a multi-tiered approach to instruction and intervention, keep in mind that effective instruction for English learners must be situated in a context that exudes high expectations for all students, respects students' language and cultural backgrounds, considers families as valued partners in their children's education, and actively assists English learners with their language development (Echevarría, Frey, & Fisher, 2015). Instruction will not be effective if students are disengaged, distressed, or feel disrespected (Jensen, 2013).

Tier 1 represents general education. Beginning in the general education classroom, teachers use evidence-based practices that work for the individual student and monitor each student's progress. Since the SIOP Model has been found to be effective with all learners—and is essential for English learners—its features should be implemented consistently to provide high-quality instruction for all students. The importance of high-quality Tier 1 instruction cannot be overstated:

Within RTI, the frontline of prevention is Tier 1, or the general education classroom, where every student regardless of ability is to receive *high-quality* instruction. Thus, the preventive possibilities of RTI are only as good as the Tier 1 supports classroom teachers provide students (Brozo, 2010, p. 147).

Students in Tier 1 who are not keeping up may need extra support, such as some of the supplemental supports listed below. For many students, the extra attention will be enough to catch them up.

- assignments that capitalize on student strengths and interests
- specialized materials including multimedia and computer programs
- small-group or individualized instruction
- family involvement/partnership
- primary language support
- explicit teaching of strategies for students with learning problems
- more intensive English language development
- modification of assignments
- counseling services
- Saturday school or after-school sessions

However, a subset of students (approximately 20% to 30%) who have received effective instruction may require more intensive interventions to meet their learning

needs (Tier 2), and the interventions used should be scientifically validated through research. Some characteristics of Tier 2 (and Tier 3) intervention include:

- small-group, classroom-based reading intervention
- homogeneous grouping by area of need
- focused and targeted instruction delivered by the general education teacher, reading specialist, or other specialist
- explicit reading instruction that emphasizes key features important for English learners and other students, including developing and practicing oral language, key vocabulary, interaction, phonemic awareness, phonics, fluency, comprehension strategies, and so forth.

The differences between Tier 1 and Tiers 2 and 3 are the individualized nature of the instruction, the level of intensity of the intervention, and the frequency of assessments. Based on progress monitoring, the RTI team may find some students (approximately 5% to 8%) who have had systematic, effective interventions, yet do not respond (Rinaldi & Samson, 2008). These students are eligible for Tier 3, which may include special education services. Few students would be placed in this category, and this consideration is based on a student's documented response to general education and Tier 2 interventions, along with the team's informed determination that an additional level of support is needed to increase achievement.

One of the main advantages of an RTI model is its emphasis on ensuring appropriate learning opportunities for all students, beginning in the general education classroom. All students receive instruction in the core curriculum, even those who receive additional services. In other words, Tiers 2 and 3 do not compensate for ineffective Tier 1 instruction. By focusing on interventions rather than learning problems, more students' needs will be met in the least restrictive environment, and decisions about student placement will be based on documented evidence over time.

■ Issues Related to Special Education

The discussion of reading at the beginning of the chapter is closely related to any discussion of special education because approximately 80% of referrals to special education are for reading problems. It is critically important that school personnel provide the support and assistance necessary when English learners exhibit learning difficulties, and exhaust every option through an RTI process before considering referral to special education. As mentioned, many reading difficulties can be ameliorated when they are identified early and when appropriate support is provided to the student. However, there are students with disabilities in our schools who have the right to an appropriate individualized education, and so it is equally important to identify those students for services. In some cases, a student's learning issues are significant enough to warrant more intensive services without spending valuable time going through each step of the school's RTI or MTSS process (Fuchs, Fuchs, & Compton, 2012).

In this section we touch on a variety of issues that teachers and administrators should think about when considering special education for English learners. Some issues include:



Watch this video and think about the difference between sequential and simultaneous bilingual development. What impact does this distinction have on testing? <https://www.youtube.com/watch?v=3irqd73SPe4>

- **Overrepresentation.** The overrepresentation of culturally and linguistically diverse (CLD) students in high-incidence special education programs (e.g., intellectual disabilities, learning disabilities, and emotional disturbance) has been a serious concern for decades (Artiles, 1998; Dunn, 1968; Vasquez III et al., 2011). One of the issues related to overrepresentation is that “increasing diversity of student population, increasing number of primary languages spoken in many schools, and states raising the bar of the achievement expected of all students has placed additional demands on educators who are ill prepared to teach CLD learners or infuse appropriate practices to meet their needs” (Vasquez III et al., 2011, p. 85). Teachers may believe that special education is the only way to provide extra assistance to underachieving students. Further, teachers may have low expectations for CLD students or may misread their abilities due to their lack of understanding of cultural and linguistic differences.
- **Underrepresentation.** Recent research indicates that Black, Hispanic, and Asian children were less likely to receive special education services than otherwise similar White children, and that English learners are less likely to be identified as having learning disabilities or speech or language impairments (Morgan, et. al. 2015). In practice, English learners may be underreferred for special education services for some of the following reasons: (1) teachers may delay referral so that students have ample opportunity to learn English, which deprives them of valuable early intervention; (2) low expectations allow English learners to languish without services; or (3) district policies require an arbitrary amount of time (e.g., 12–18 months before starting the identification process) to pass before students can be referred for the services they need. Specifically, Hispanic students are underrepresented in some regions of the United States (Skiba et al., 2008) and Asian/Pacific Islanders are significantly underrepresented throughout the United States (Cortiella, 2011).
- **Cultural Differences.** Another factor may be that the classroom is not culturally responsive, leading to a mismatch between CLD learner characteristics and the materials and teaching methods presented in school, which contributes to underachievement among this group of students (Powers, 2001; Vogt & Shearer, 2011). Much of what students understand and are able to do in school is based on their culture and background, and most academic **tasks** and curricula reflect middle-class values and experiences (see Chapter 3 for more discussion). Reliance on paper-and-pencil tasks, independent reading of dense text in upper grades, and information presented orally are only some of the types of academic tasks that may create difficulties for English learners. Also, students who are culturally and linguistically diverse may not have the requisite background knowledge and experience to perform well academically.
- **Underachievement.** Poor performance that often leads to special education referral and placement may also be explained by factors such as the effects of low teacher expectations (Jensen, 2008), poor study habits and poor time management, cultural differences in students’ and teachers’ behavioral expectations (Vasquez III et al., 2011), language differences (Cummins, 1984; Echevarría & Graves, 2015), and poverty (Smith, 2009). In fact, twice as many students in low-SES schools are placed in classes for learning disabilities than

those from high-SES districts (Lynch, 2000). Obviously, all the complexities of underachievement cannot be ameliorated with good instruction alone; however, quality of instruction is a variable that makes a difference, and it is something that is under the control of school personnel.

- **Increased Inclusion.** Teachers may be tempted to refer English learners who struggle academically to special education services, thereby relegating responsibility for meeting these students' needs to special education teachers. They expect these specialists to "fix" the problem. In reality, special education services are part of a comprehensive education plan for students who are eligible for services. Most students with learning disabilities spend the majority of their school day in the general education classroom. In fact, over 60% of students with learning disabilities spend 80% or more of their in-school time in general education classrooms (Cortiella, 2011), so all teachers share responsibility for these students.
- **Better Training for School Personnel.** Professional preparation programs for all school personnel should address effective instruction for English learners—general education, special education, reading specialists, school psychologists, and administrators. Preparing general education and special education personnel to work together effectively with English learners begins at the preservice level. Teacher preparation programs (general and special education) that address issues of diversity, social equity, second language acquisition, culturally relevant instruction methods, and empirically supported interventions contribute to a teaching force that implements meaningful and appropriate instruction for students with differing abilities (Echevarría & Graves, 2015). Working effectively with diverse populations should be a priority for teacher preparation programs, especially given demographic trends. Further, RTI is becoming common practice in schools, and when intervention is necessary, it should be provided by a well-trained specialist who has a strong background in literacy and understands the needs of English learners (Vaughn & Ortiz, 2011).
- **Need for Improved Teaching.** When teachers feel unprepared to work with students who struggle academically or who exhibit inappropriate classroom behaviors, referral to special education is often the first option to which they turn. In many ways, a teacher is the key to a student's success or failure. Students' interactions with their teachers can be either disabling or empowering, and the quality of teacher–student interactions has a significant impact on academic performance and classroom behavior (Echevarría, Frey & Fisher, 2015). In a study on teacher–student interaction (Yoon, 2008), it was found that when teachers treat English learners with respect and have positive interactions with them, English-speaking peers follow suit. In addition, English learners participate in class to a greater extent and learning opportunities are enhanced in such settings.

Effective SIOP teachers are culturally responsive; they reflect on their practice and are mindful of the interaction between the learner and the instructional setting, materials, and teaching methods, and they make adjustments as needed to facilitate learning. The importance of context to learning cannot be overstated; characteristics of the classroom and school can increase the risk for academic and



Watch this video to hear a general education teacher and a special education teacher discuss how they meet the needs of special education students in a first-grade classroom. What are some ways you might collaborate with specialists at your school to improve learning for students?

behavior problems (see Chapter 9 for more information about the role of classroom context). Teachers need training in understanding the interaction between learning and context, avoiding the deficit model that views academic and behavior problems as a within-student problem. We have empirical and anecdotal evidence that many academic and behavioral difficulties can be attributed to the impact of the instructional setting (teacher, materials, methods) on the student, rather than some inherent problem of the learner.

In fact, in our observation of classrooms, it seems that the best option for struggling students may be the type of program offered to our most capable students. In those classes, teachers tend to capitalize on students' strengths; validate cultural and linguistic differences as resources; provide positive behavior supports; allow students time to interact and discuss ideas; and teach in creative, stimulating ways. Too many classes for low-performing students are devoid of an excitement for learning, and teachers often have low expectations for students' potential.

■ Special Education Services: When Are They Appropriate?

Special education services are designed to provide students who have identified disabilities with the support they need to be successful in school. Of the 5.9 million students with various kinds of disabilities who receive special education services, 42% have learning disabilities (LD). Although learning disabilities are real and last throughout one's life span, it is one of the disability categories in which identification is based on the judgment of school personnel rather than that of a medical professional—and the determination can be subjective. Some other “judgmental” categories include behavior disorders, language impairments, attention deficit hyperactivity disorder, and mild intellectual disability.

Actual learning disabilities are believed to be caused by differences in brain structure and function, and they affect the brain's ability to store, process, or communicate information. They may be passed from one generation of a family to the next, and may also be caused by prenatal and birth problems, childhood experiences of traumatic injuries, severe nutritional deprivation, and exposure to poisons, including lead. However, they are not primarily the result of low intelligence; intellectual disability; emotional disturbance; cultural, environmental, or economic disadvantages; or language acquisition. It's important to note that conditions such as ADHD, autism, and intellectual disabilities are frequently confused with LD (Cortiella, 2011).

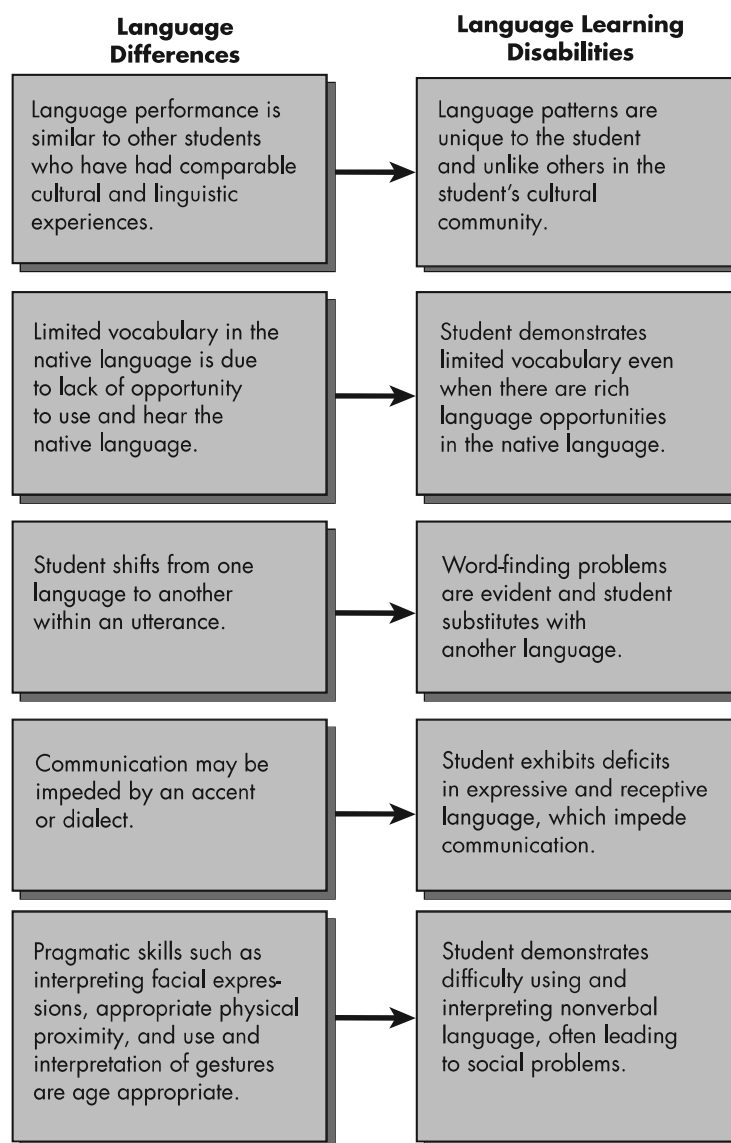
Educators should be prepared to meet the needs of students with LD within the general education classroom because students with LD are no longer “referred out” of general education. In fact, in 2008, 62% of students with LD spent 80% or more of their in-school time in general education classrooms, double the amount of time spent in 2000. Increasingly, general education teachers are responsible for the progress of all their students, with the support of specialists (Cortiella, 2011).

It is easy to see the complexities involved in providing appropriate services to English learners who may have learning disabilities. Disproportionate representation of minority students in special education is most pronounced among the judgmental

disability categories. For example, almost 24% of Hispanic students are labeled as having learning disabilities, although they account for only about 21% of the population, while 52.5% of white students have the LD label, but they make up 56.5% of the population (Cortiella, 2011).

The characteristics of students in mild to moderate disability categories are not as easily identifiable as they are in students with more significant disabilities and therefore require subjective judgment. Research indicates that it is very difficult for school personnel to distinguish between the challenges associated with acquiring a second language and those related to a language-based learning disability (Klinger & Eppolito, 2014). The distinctions can be fairly subtle, as you can see in Figure 10.1. The subjectivity of identification is exacerbated because mild to moderate disabilities

FIGURE 10.1 Causes of Confusion in Assessing Students with Language Differences and/or Language Learning Disabilities



do not have a clear biological cause, prompting some to argue that the disabilities themselves are socially constructed (Barnes, Mercer, & Shakespeare, 1999). What is considered “normal” is influenced by a number of factors, including culture, age, community practice, point in history, and school expectations. The labels associated with mild disabilities may be assigned arbitrarily and are subject to extreme variability in identification rates. For example, only 1.8% of Asians and Pacific Islanders are identified as LD, but they comprise 4.7% of the population (Cortiella, 2011).

In determining whether a student qualifies for special education services, we need to ensure that the student has been provided ample opportunity to respond to effective instruction and intervention and that an appropriate process of progress monitoring and intervention has been followed. The reality is that a number of variables affect what happens once a student experiences considerable difficulties in the general education program—academic, behavioral, or both. For English learners, low English **language proficiency**, gaps in educational experience, and cultural differences influence the referral process. Moreover, teachers have a tremendous impact on who is referred and who is not. Research indicates that two factors influence referral: (1) teacher tolerance and (2) the interaction of perceived student ability or behavior with the teacher’s own expectations and approach to instruction and classroom management (Podell & Soodak, 1993). Subjectivity is part of the evaluation process—including whom to test, what test to use, when to use alternative **assessments**, and how to interpret the results (Klinger & Eppolito, 2014; Losen & Orfield, 2002). So if teachers have an understanding of cultural and linguistic differences and the modifications those differences require, effective instruction and intervention in the general education classroom is more likely.

Search for Intervention Rather than Disability

The principles of RTI have fostered increased awareness that learning difficulties are often the result of instructional issues, not an inherent problem in the learner. Since all students *can* learn, it is incumbent upon educators to find the best ways to reach and teach each struggling learner. Collaborative teams offer an effective means for supporting struggling students as well as providing support for teachers. Team members work together to explore options for instruction and intervention, monitor progress, and perform other related duties. Membership must include experts knowledgeable about English learners and second language acquisition, and parents should also be included since they offer valuable insight into their child’s development and home life.

Collaborative site-based teams have been shown to decrease referral and special education placement and even to reduce disproportionate referrals of minority students to special education (Kampwirth & Powers, 2016; Klinger & Eppolito, 2015).

If a student does not improve after intensive intervention and progress monitoring have been tried and documented, he or she would be considered for special education services. All students eligible for special education services have gone through a referral, assessment, and placement process. In those states with an effective RTI process in place, failure to respond to intensive intervention would suffice for qualification. In others, a full battery of assessments is completed to determine eligibility for special education services.

Once it has been determined that a student qualifies for special education services, his or her individualized educational plan (IEP) will include instructional



Watch this video to find out how one school made site-based teams work in the context of a school day. What are some elements that need to be in place to replicate what is discussed?

strategies and modifications that are tailored to demonstrated needs, including English language development (Echevarría, Powers, & Elliott, 2004). Further, instruction needs to be evidence based. Kretlow and Blatz (2011) identify the ABCs of evidence-based practice for special education teachers.

- Access evidence-based practice through journals and online resources such as the IRIS Center.
- Be careful with fidelity by implementing the practice in the way it was designed and tested through research. With the SIOP Model, we found that student achievement was directly linked to how well teachers implemented the model with fidelity (Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011).
- Check student progress at regular intervals using progress monitoring and curriculum-based assessment.

Kretlow and Blatz (2011) conclude—and we concur—that “using evidence-based practices with fidelity and ongoing progress monitoring gives students with disabilities the best chance at achieving their goals” (p. 18).



Teaching Ideas for Students with Special Needs

In the section that follows, you will find some teaching ideas to help you prepare lessons that are designed for students who receive special education services.

- **Collaborative Strategic Reading (CSR).** This research-based intervention has been successfully implemented and studied in culturally and linguistically diverse, inclusive classrooms from fourth grade through middle school (Klingner, Vaughn, Argüelles, Hughes, & Ahwee, 2004). CSR includes strategies for summarizing information, asking and answering questions, monitoring comprehension and taking steps to improve understanding, and encouraging peer discussion. The structure of CSR is divided into before, during, and after reading activities.
- **Implement SIOP Components.** The SIOP Model is effective for students with learning differences. In studies that included students with learning disabilities, students made significant growth in writing when teachers used the SIOP Model (Echevarría, 1998; Richards & Funk, 2009).
- **Use Assistive Technology.** Students with severe reading disabilities may benefit from computer programs that can scan words and “read” them aloud via synthesized voices, some of which sound almost human. Also, voice recognition software can help students who have trouble writing their ideas down on paper by pen or typing. It allows them to talk into a microphone and immediately see their words on screen. Some programs use visual prompts and templates to help organize thoughts, improve writing skills, and keep track of tasks. The effectiveness of such programs has yet to be determined for individual students, especially for those who have difficulty with numerous visual cues. While there are myriad apps and programs to assist students with learning disabilities, only a small percentage—estimated at between 25% and 35%—of students with LD

are being provided with assistive technology to support their instruction and learning (Cortiella, 2011).

- **Focus Students' Attention.** Limit the clutter and excessive visual stimuli in the classroom. While we advocate word walls and other visuals to assist students in information recall and vocabulary development, they must be used with discretion. Students with disabilities may have difficulty focusing on important posted information when they are distracted by artwork and projects hanging around the room.
- **Use Repetition.** Students will retain more information if it is repeated and reviewed frequently. Poor memory is often a characteristic of students with special needs, especially memory that is associated with symbols (e.g., letters and numbers).
- **Allow Extra Time for Students to Process Information.** Students with learning differences are often just processing a question by the time the answer is given. Teachers may use strategies such as asking a question, letting the student know he or she will be asked for the answer, and then coming back to the student.
- **Scaffold Assessment to Measure Understanding.** Students' disabilities can interfere with their demonstration of knowledge and understanding. These students may have difficulty with learning vocabulary, expressing their ideas, or using language adequately. Rather than asking a student to write an explanation of a concept, have him list the features of the concept or label a graphic organizer that is provided; ask the student to complete an outline rather than generate a summary or essay; or have the student select examples from a list provided instead of asking him to produce examples.
- **Differentiate the Curriculum to Students' Needs.** Modify the number of items the learner completes; increase the amount of personal assistance; provide different materials to meet a learner's individual needs; or allot a different amount of time for learning, task completion, or testing.
- **Be Sensitive to Frustration Levels.** Students with special needs often have a lower frustration threshold than typical learners, which may result in their having outbursts or giving up. A structured learning environment, scaffolded instruction, and opportunities to experience success help alleviate frustration.

 Watch this video and find out about ways that you can learn more about RTI and English learners.
<https://www.youtube.com/watch?v=nRgFiPZEZLY>

All of these suggestions for assisting students with learning and behavior problems have commonalities: They must be used consistently; data must be used to monitor student learning; student well-being is the focus; and there is a commitment to enhancing learning for all students.



Reflect and Apply

Click here to reflect on your knowledge of multi-tiered systems of support.



Check Your Understanding

Click here to check your understanding of Issues of Reading, RTI, and Special Education for English Learners.

■ Summary

As you reflect on this chapter and the issues of reading, RTI, and special education for English learners, consider the following points:

- Traditional reading assessments, such as informal reading inventories and phonics tests, may be inappropriate for English learners. Teachers are cautioned to not overgeneralize the results of these assessments.
- Linguistic differences between students' home languages and English may cause English learners difficulty with literacy development. When classroom teachers implement the features of the SIOP Model, many students with reading and learning difficulties find success. Very often, students' academic difficulties have more to do with the curriculum, teaching methods, and classroom setting than with any disability the student may have.
- The Common Core and other rigorous state standards require sophisticated levels of reading, writing, listening, and speaking. Through the standards and with appropriate instruction, English learners and struggling readers are provided the opportunity to read and think deeply about complex texts they are taught to read. This requires that teachers know and use information about English learners' L1 language and literacy development.
- The SIOP Model provides teachers with a guide to lesson planning and delivery that offers an instructional program appropriate for *all* students in their classes: those with limited English proficiency, those who excel academically, those who are performing at grade level, those with low academic levels, those who find reading difficult, those who have experienced persistent failure, those who work hard but continue to struggle academically, and those with problematic behaviors.
- The result of an effective RTI process is that (a) fewer students from diverse backgrounds are inappropriately identified as having disabilities and (b) those who require special education services will have IEPs that include instructional strategies and modifications tailored to their demonstrated needs (Echevarría, Powers, & Elliott, 2004).
- Effective instruction and intervention offer supports to struggling students. Most importantly, we want to avoid labeling students with reading problems or disabilities and instead provide them with the most appropriate and effective instructional context possible.

■ Discussion Questions

1. In reflecting on the content and language objectives at the beginning of the chapter, are you able to:
 - a. Explain how linguistic differences in home languages and English can affect English learners' reading and writing development?
 - b. Describe in-class supports and/or modifications that content teachers can provide to English learners and struggling readers?

- c. Delineate a sequence of steps involved in an effective RTI process to ensure appropriate services for English learners?
 - d. Discuss with a group how to plan appropriate instruction for English learners who may have reading and learning difficulties?
 - e. Write a lesson plan that develops vocabulary and reading proficiency for English learners who struggle to read and learn?
2. Select an English learner in your class who is having difficulty with reading and/or content learning. Reread the questions in this chapter on pages 261–262. Begin with the first question:
- a. What evidence do you have that a particular student is having difficulty with reading? Try to provide answers to the other questions as they relate to your identified student.
 - b. If questions 1a–e are answered negatively, what are the implications for your instruction of this student, and for the other teachers who work with him or her?
 - c. Now examine Figure 10.1. From your work with this student, using your best guess as well as any assessment findings you have—including a measure of English language proficiency that you may need to obtain from your school’s ESL specialist—see if any of the descriptions of Language Differences and/or Language Learning Disabilities match your student.
 - d. For older English learners (grades 4–8), what are some possible next steps for meeting students’ language, literacy, and academic needs?
3. In this chapter, we have discussed some of the reasons why minority students, including many English learners, are over- and underrepresented in special education. How can RTI help ensure that English learners are receiving an appropriate education and that proper services are offered as needed?
4. How would you respond to a teacher who says, “Well, if I follow the SIOP Model and make sure my English learners are able to access content using these activities, techniques, and approaches, my on-level kids and **native English speakers** will be bored.”
- a. Do you agree with this statement? Why or why not? What research presented in this book supports your position?
 - b. How can teachers with only a few English learners in their classrooms organize instruction so that all students’ needs are met?
 - c. Which, if any, of the activities, methods, or SIOP features in this book are inappropriate for some students, such as accelerated learners?
 - d. Recent research has shown that all students benefit from high-quality SIOP Model lessons. But from our experience, some teachers think otherwise. Prepare a response to these teachers’ concerns.

Effective Use of the SIOP® Protocol

Learning Outcomes

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

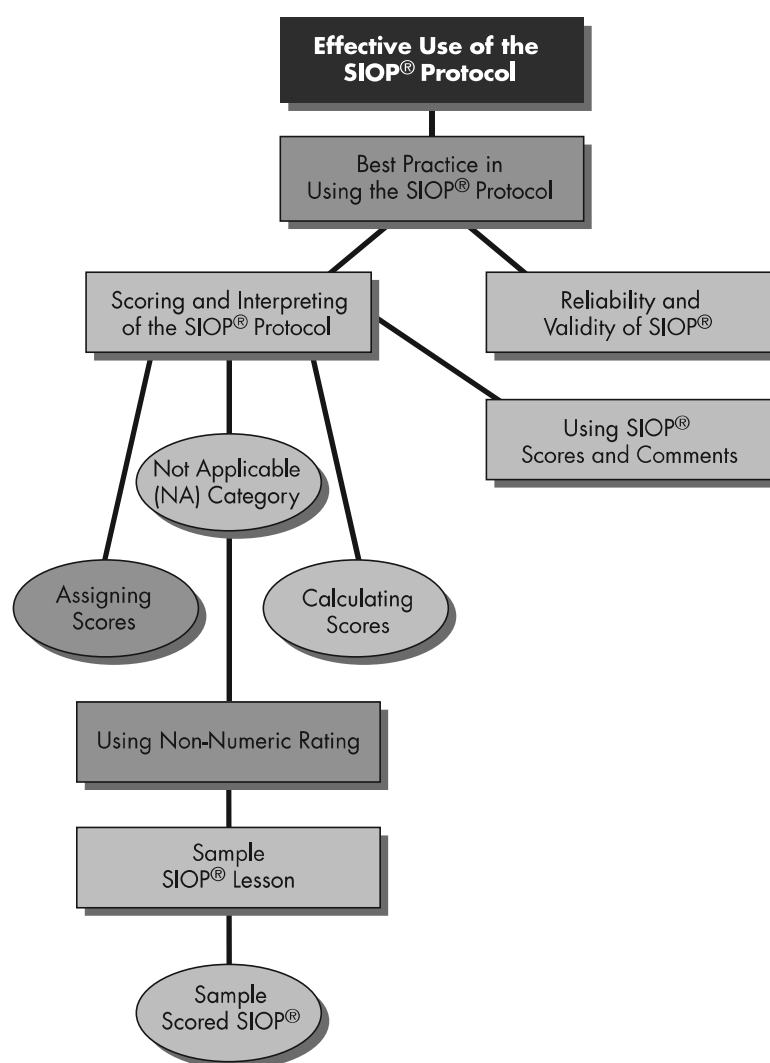
Examine how all SIOP features fit into one lesson plan.

Use the SIOP protocol to rate and assess a teacher's lesson.

Language Objectives

Discuss SIOP scores at a post-observation conference with the teacher whose lesson was rated.

Explain the value of observing and rating lessons over time using SIOP.



Most of the previous chapters focused on the components of the SIOP Model and their implementation. We know that effective SIOP implementation is critical for improving student achievement (Echevarría, Richards-Tutor, Chinn & Ratleff, 2011), but how can it be measured? The SIOP protocol is an observation instrument that was designed to document the extent to which SIOP features are present in a lesson.

The SIOP Model and its protocol have been used in school districts and universities around the country since the 1990s with measurable success. We have interviewed many school personnel who have told us their stories of SIOP implementation (Echevarría, Short, & Vogt, 2008). From their stories and our experience with SIOP professional development, we offer in this chapter suggestions and guidelines for using the protocol effectively. ●



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■ Best Practice in Using the SIOP[®] Protocol



Watch this video to see a SIOP coach discuss using the SIOP protocol. What are some ways the protocol was used with teachers? What are some ways you might use it?

Initially we developed the SIOP protocol because we found that school personnel and researchers wanted and needed an objective measure of high-quality **sheltered instruction** for English learners. Over time, uses of the SIOP protocol have expanded.

The SIOP protocol provides a tool for gauging the quality of teaching. Qualitative and quantitative information written by an observer on the protocol itself documents lesson effectiveness and shows areas that need improvement. The observation data recorded on the protocol may be used by teachers, administrators, university faculty, and researchers.

Teachers find the SIOP protocol useful for improving their own practice through self-reflection and/or peer coaching. Some schools reported that their teachers regularly used the protocol to reflect on their lessons, completing the protocol after they taught a specific lesson. More effective is the practice of videotaping lessons and scoring the lessons on their various SIOP features. The objectivity the camera

provides is valuable to teachers in helping them to recognize their strengths as well as areas that need attention.

Some schools used peer coaches to assist teachers in SIOP implementation. In one school district, a coach modeled a SIOP lesson for a group of three to five peers. Using the SIOP protocol with the rating numbers removed, the group debriefed the lesson and discussed the components of SIOP. The focus of the debriefing and discussion was around the comments written on the protocol. Participants wrote what they saw the coach do and described it on the protocol under each corresponding feature. At the conclusion of the session, one of the teachers in the group volunteered to model a lesson during the following quarter (two-month period). Because of the non-evaluative nature of the feedback, it wasn't difficult to get teachers to volunteer. The coach assisted the teacher volunteer in planning a lesson that was later modeled for the group. Feedback from the group was always limited to positive comments and a discussion of how the lesson matched SIOP features. After each teacher in the group had a turn at modeling a SIOP lesson for the group, the individuals then became coaches for another small group of teachers. In this way, a large number of teachers learned and practiced using SIOP Model and had the opportunity to understand the model deeply (Echevarría, Short, & Vogt, 2008).

A number of sources have reported that schoolwide use of the SIOP Model and protocol provides a common language and conceptual framework from which to work and develop a community of practice. School site administrators commented that the features of the SIOP bring together in one place many of the ideas and techniques staff have learned through district professional development efforts. For example, a school's staff may have received inservice training in use of technology, Thinking Maps, or differentiated instruction, but teachers may struggle with how to incorporate these varied ideas into their daily teaching practice. The SIOP provides a framework for systematically addressing and incorporating a variety of techniques into one's teaching practice.

The SIOP protocol is useful for administrators because it provides them with a way of understanding instruction for English learners. Administrators typically do not have the same opportunities to learn about effective instruction for English learners that are available to the teachers on their staff (Short, Vogt, & Echevarría, 2008). Yet the administrator is responsible for observing and providing feedback to teaching personnel. The SIOP protocol gives administrators a means for providing clear, concrete feedback to the teachers they observe. The format allows for rating of lessons, but, more importantly, has space for writing comments that will be constructive for improving instruction for English learners.

University faculty have also found the SIOP Model and protocol to be useful in courses that specifically address the needs of English learners (Smolen et al., 2015). The individual components allow professors to focus on manageable chunks of information so that students learn and understand how to present effective instruction to English learners over time. Faculty who supervise field experience find that the SIOP protocol assists in providing concrete examples of techniques necessary for making instruction comprehensible for English learners and developing their English proficiency. Feedback on the rating and comments sections of the instrument assists student teachers in their professional development.

Finally, the SIOP protocol is a tool researchers can use to determine the extent to which SIOP instruction is implemented in a given classroom. It can also be used to measure consistency and fidelity of implementation. An increasing number of research studies have used the SIOP protocol to measure effective instruction for English learners (Bose, D. 2012; Rodriguez 2010; Torres, 2006).

■ Scoring and Interpreting the SIOP® Protocol

The heading on the first page of the SIOP protocol is fairly self-explanatory (see Figure 11.1). It is intended to provide a context for the lesson being observed. There is space for the observer's name and the date of the observation. Other information, such as the teacher's name, school, grade of the class being observed, ESL level of the students, and the academic content area, is also included. We recognize that an observation at one point in time does not always accurately represent the teacher's implementation of SIOP strategies and techniques. Therefore, there is a place for the observer to indicate if the lesson is part of a multiday unit or is a single-day lesson.

In employing the SIOP protocol, we have found that it is most useful to videotape a lesson and analyze it later. Teachers, supervisors, and researchers alike have found this to be an effective way of recording and measuring teachers' growth over time. The recording number may be written on the heading to indicate its corresponding lesson.

Finally, there is a box for the total score the teacher received on the SIOP. It is most useful to represent a teacher's score as a percentage because NA (not applicable) affects a total score number (see the next section for an explanation of scoring).

When scoring a lesson is appropriate, an observer may assign scores in a number of ways: (1) during the observation itself, as individual features are recognized; (2) after the observation, as the observer reflects on the entire lesson, referring to observational field notes; or (3) after the observation while watching a videotape of the lesson. The third option is often useful so that the teacher and observer are able to share the same point of reference when discussing the lesson.

It is important to stress that not all features on the SIOP will be present in every lesson. However, some features, such as items under Lesson Preparation, Comprehensible Input, Interaction, and Review/Assessment, are essential for each lesson. Over the course of time of instruction (several lessons, a week), all features should be represented.

FIGURE 11.1 SIOP® Heading

**The Sheltered Instruction
Observation Protocol (SIOP®)**

(Echevarría, Vogt, & Short, 2000; 2004;
2008, 2012)

Observer(s): _____ Teacher: _____
Date: _____ School: _____
Grade: _____ Class/Topic: _____
ESL Level: _____ Lesson: Multiday Single-day
(circle one)

Total Points Possible: 120 (Subtract 4 points for each NA given) _____

Total Points Earned: _____ Percentage Score: _____

Directions: Circle the number that best reflects what you observe in a SIOP lesson. You may give a score from 0–4 (or NA on selected items). Cite under “Comments” specific examples of the behaviors observed.

Assigning Scores

We suggest that an observer determine the level of SIOP implementation by using the scenario descriptions in this book as a guide. Each chapter's scenarios were designed to show a clear example for each feature, with scores ranging from 0 to 4. The SIOP protocol provides a five-point scale as well as space for qualitative data. It is recommended that the observer use the "Comments" section to record examples of the presence or absence of each feature. That way, both the observer and the teacher have specific information, besides a score, to use in their post-lesson discussion. More information may be added to the Comments section during the post-lesson review of the SIOP protocol so that elements of the discussion are recorded for future reference. Also, these comments are useful as subsequent lessons are planned. In any case, sufficient notes with examples of how the feature was addressed should be included to provide concrete feedback with each score.

Naturally, there is an element of subjectivity to interpreting the features and assigning scores. Observers must be consistent in their scoring so establishing **inter-rater reliability** is important. (See www.siop.pearson for information on establishing inter-rater reliability.) For example, one person may think that for Feature #3 (Content concepts appropriate for age and educational background level of students), only grade-level materials are appropriate, while another observer may feel that the same content found in materials for lower grade levels can be used because of the students' low reading levels or because students have interrupted educational backgrounds. In either case, observers should establish a common understanding and interpretation of the features, and rate lessons accordingly across settings.

We suggest that to assist in more accurate scoring, the observer ask the teacher for a copy of the lesson plan in advance of observing the class. Ideally, the teacher and observer would meet for a pre-observation conference to discuss the lesson plan and provide the observer with background about the lesson. In this way, the observer is better able to rate the lesson, especially the Lesson Preparation section and NA items.

Not Applicable (NA) Category

The Not Applicable (NA) rating is important because it distinguishes a feature that is "not applicable" to the observed lesson from a score of "0," which indicates that the feature should have been present but was not. For example, Mr. Leung taught a five-day unit on the solar system. During the first few lessons of the unit, Mr. Leung concentrated on making the rather dense information accessible to his students. He adapted the text to make it understandable for them and provided ample opportunities for students to use strategies. On the final day of the unit, an observer was present. Mr. Leung wrapped up the unit by having the students complete an enjoyable hands-on activity in which they applied the concepts they had learned. It was obvious that the students had learned the content and were able to use it in the activity. However, because of the nature of that particular lesson, there was no observed adaptation of content (Feature #5). Mr. Leung was not penalized by receiving a score of "0" because the lesson did not lend itself to that item and he had covered that item on another day. A rating of NA would be correct in this case.

In the case of Mrs. Nash, however, it would be appropriate to score this feature as "0." Mrs. Nash also taught a unit on the solar system. On the first day of the unit,

she showed a video about the solar system and had a brief oral discussion following the video. The next day an observer was present as she read from the text and then had students answer chapter questions. There was no evidence that any of the content had been adapted to the variety of student proficiency levels in her class. In fact, many students appeared to be confused as they tried to answer questions based on the grade-level textbook.

The distinction between a “0” and “NA” is an important one because a rating of “0” adversely affects the overall score for the lesson, while an “NA” does not because a percentage is used to indicate a lesson’s score.

Calculating Scores

There are 30 features on the SIOP, each with a range of possible scores from 0 to 4, or NA. After scoring each feature, the observer tallies all numeric scores. The score is written over the total possible score, usually 120 (30 features $\times$ a score of 4). So an example of a total score would be written 115/120. Because of the NA, adding the individual scores for a grand total is meaningless. It is more informative to know the total score based on the total possible score.

Let’s take a step-by-step look at how a lesson’s total score is calculated.

Mr. Leung’s lesson received a score of 4 on 20 features, a score of 3 on 5 features, a score of 2 on 4 features, and 1 NA. The sum of those scores is 103.

$$20 \times 4 = 80$$

$$5 \times 3 = 15$$

$$4 \times 2 = 8$$

$$\text{Total score} = \frac{103}{116}$$

The score of 116 was derived in this way: If the lesson had received a 4 on each feature of the SIOP (a perfect score), it would have had a total score of 116.

$$29 \times 4 = 116$$

The number of features is 29 instead of 30 because one feature was not applicable (NA); the lesson was rated on only 29 features.

Mr. Leung’s lesson received a total score of 103/116. The total score can be converted to a percentage if that form is more useful. Simply divide the numerator by the denominator: $103 \div 116$. In this case, the SIOP was implemented at a level of 88%. You can see the importance of distinguishing between a score of 0 and NA. For Mr. Leung’s lesson, a 0 score would have changed the total score from 88% to 85%. Let’s see how.

$$20 \times 4 = 80$$

$$5 \times 3 = 15$$

$$4 \times 2 = 8$$

$$1 \times 0 = 0$$

$$\text{Total score} = \frac{103}{120}$$

The highest possible score on the SIOP for all 30 features is 120 (30 items $\times$ a score of 4). If Mr. Leung’s lesson were rated on all 30 features, the total score would be 103/120, or 85%.

FIGURE 11.2 The Step-by-Step Process for Tallying Scores

1. Add the lesson's scores from all features.
2. Count the number of NAs, multiply by 4, then subtract this number from 120.
3. Divide the number from step 2 into the number from step 1 (the adjusted possible score into the lesson's score).

The step-by-step process for tallying scores is shown in Figure 11.2.

In our research studies using the SIOP protocol for measuring level of implementation, we established the following guidelines:

High implementation—lessons that receive a score of 75% or higher

Low implementation—lessons that receive a score of 50% or lower

This indicates that a lesson (one day or several days) included all 30 features and each feature was rated from 0–4. Then the total score was calculated using the process shown in Figure 11.2.

■ Using Non-Numeric Rating

Our colleagues at the University of Houston—Clear Lake, Laurie Weaver and Judith Marquez, have used the SIOP Model extensively in teacher preparation. They also facilitate a SIOP professional development learning group at an elementary school where, in their fourth year, teachers observe one another. Through their experience, they found it useful to change the rating scale from 0–4 to Novice–Expert as seen in Figure 11.3. In this case, the observer would mark an X along the continuum to indicate if the feature was demonstrated at the expert level, novice level, or somewhere in between. Typically when they used the protocol with numbers, every teacher thought he/she would score a 4 in everything. Once Weaver and Marquez started talking about 4 being expert level, they began to see people thinking more realistically about their practice. They reported that conversations changed and teachers were more open to thinking deeply about how they might improve their practice. We have also had situations where teachers interpreted the numbers as grades: A, B, C, D, and F and were sometimes defensive if they didn't receive what they perceived to be all A's. Removing the numbers diffuses those sorts of situations and allows observers and teachers to have more substantive and productive post-observation discussions.

■ Sample Lesson

In this section of the chapter, we will describe an entire science lesson conducted by a sixth-grade teacher and show how it was scored on the SIOP protocol. Ms. Clark received professional development training and has been using the SIOP for lesson planning and delivery for about 16 months. This lesson took place at the end of the first quarter of the school year. The class consisted of beginning ESL students from varying language backgrounds and countries of origin. The class has been studying a unit on minerals and visited a local natural history museum. The students have examined rocks in class as well. Ms. Clark provided us with a lesson plan before we conducted the observation.

FIGURE 11.3 Expert-Novice Rating

Expert		Novice
1. Content objectives clearly defined, displayed and reviewed with students	Content objectives for students implied	No clearly defined content objectives for students
<i>Comments:</i>		
Expert		Novice
2. Language objectives clearly defined, displayed and reviewed with students	Language objectives for students implied	No clearly defined language objectives for students
<i>Comments:</i>		
Expert		Novice
3. Content concepts appropriate for age and educational background level of students	Content concepts somewhat appropriate for age and educational background level of students	Content concepts inappropriate for age and educational background level of students
<i>Comments:</i>		

In the classroom, the desks were arranged in three circular groups. Some students had to turn around to see the board and screen at the front of the room. The class objectives and agenda were written on a whiteboard at the side. Two bulletin boards in the back of the room displayed the students' work for a language arts project and a science project. A Spanish-speaking bilingual aide assisted the teacher and also helped newly arrived Spanish-speaking students. The class period was 45 minutes long.

The teacher began the class by complimenting the students for their performance on a test they had taken on minerals and singled out one student who received the highest A grade in the class. She then asked the students to read the objectives and activities for the day silently while she read them aloud:

Content Objective: Today we will:

- create a semantic map by writing facts about volcanoes.
- identify the sequence of events that leads to volcano eruption.

Then she stated her plan for the day:

- First, I will demonstrate how rocks could move and what happens when they move.
- Second, you will use a semantic web worksheet to recall what you know about volcanoes.
- Third, I will use a model to show how a volcano erupts.

- Fourth, you will make predictions about the story *Pompeii . . . Buried Alive*, and then read pages 4 to 9 silently.
- Fifth, you will refer to information on page 6 in the book to write on a worksheet the steps that happen before a volcano erupts.
- Your homework is to draw a volcano and label the parts. The vocabulary words and terms for the day are: *melts, blast, mixture, rumbles, straw, pipe, shepherd, giant, peddler, crater, lava, magma, magma chamber*.

Ms. Clark then demonstrated for the class what happens when rocks move against each other, using two stacks of books. After placing the stacks side by side on a desk, she pushed against one stack so the other stack slid off the desk and scattered onto the floor. She asked the students what happens when one set of rocks moves another set of rocks. The students responded that the rocks break.

The aide distributed semantic web worksheets to the students and asked them to write “Volcano” in the center circle. Then, in the other spaces, students were to write everything they already knew about volcanoes. While the students worked, the teacher and aide circulated to monitor the students’ understanding of the task and to see how they were progressing.

After the students filled in their webs, the teacher led them in a discussion of what they had written and wrote some of their comments on the whiteboard:

- Lava melts and explodes.
- When it erupts, all that force comes from the middle of the earth.
- Volcanoes are formed deep inside the earth.
- When a volcano is under water, the lava comes out and makes an island.

The teacher repeated that she was going to make a model volcano and asked the class what a “model” is. One student answered that it is an example, not a real volcano. All of the students were watching as the teacher showed them a bottle and explained it would be like the magma chamber that is inside a volcano. She poured a cup of warm water inside the bottle. While it cooled slightly, she showed the class a diagram of the model for the experiment, with the corresponding volcano parts labeled. They discussed each part of the volcano and in doing so emphasized some of the key vocabulary words and terms: *crater, magma pipe, lava, magma, magma chamber, basin*.

The teacher returned to the model and placed a few drops of liquid dish detergent in the warm water. Next, she picked up an object and asked the students to identify it. One student said it was a measuring spoon. The teacher measured a teaspoon of baking soda and put it into the water and detergent mixture. She asked the students to identify where she was putting it. The students responded, “magma chamber.” She put in a second teaspoon of baking soda and then held up the bottle for the students to observe, and then they reviewed the ingredients. To speed up the process, she added vinegar to the bottle. She asked them, “When was the last time we used vinegar?” The students said they had used it on the previous day. The “volcano” began to erupt, and the teacher displayed the bottle so that the students could see the foam overflowing.

The class reviewed the process and the ingredients for the model volcano. Individual students were called to the front to participate in a second volcano demonstration, each

one completing one of the steps to produce another “eruption.” The second “lava” flow was a bit larger than the first.

The teacher asked the whole class to think about “What causes a volcano to erupt?” and added, “We used warm water. What will happen to heat in a chamber?” One student answered, “Heat rises.” The teacher explained that it was not just the heat that caused the eruption and asked them to think of the other ingredients and what happened when they were mixed. The teacher went on to explain, “The mixture of gases produces carbon monoxide,” and wrote “carbon monoxide” and its chemical symbol on the board. She also asked them what they knew about plants and said, “They breathe in carbon monoxide. We breathe out carbon monoxide; we breathe in oxygen.” [This part was an error, but the teacher did not realize her mistake in calling carbon dioxide (for plants and humans), carbon monoxide.]

One student wanted to know why rocks come out of volcanoes and another student offered an explanation, “The volcano is inside of a mountain of rocks.” The teacher commented that whatever is inside the chamber when it erupts will come out with the lava, and if they had put small bits of material inside their model, those bits also would have come out when it erupted.

The teacher and aide handed out the storybook *Pompeii . . . Buried Alive* to the students, and they began prereading activities. The teacher focused their attention on the title and asked them to predict what they thought the book would be about. One student said, “Volcanoes erupting.” The teacher asked, “Where do you think it takes place?” Students guessed various places: Nicaragua, Rome, Greece, England. The teacher commented on the togas in the cover’s picture. She then directed their attention to the back cover and read the summary aloud, stating the story took place 2,000 years ago in Italy. She asked, “Is it a true story?” Some students guessed yes; others no. “How do you know it’s true?” They discussed that the term “took place” and the use of a specific time in history meant that it was true. The teacher then asked for a student volunteer to point out Italy on the wall map, and the class discussed the location of Italy in southern Europe.

The teacher asked how many of the students came from countries with volcanoes. Students from Ethiopia, El Salvador, and Guatemala said they knew about volcanoes in their countries. One student asked if it had to be a hot country to have a volcano. The teacher asked if they knew where the most recent eruption had occurred. She told them it was Montserrat in the Caribbean and that volcanoes often occur in warm countries, but not all are in warm countries. She asked if they knew about a volcano in the United States and told them about Mt. St. Helens in Washington, a state that is cold in winter. She showed them Washington on the map. One student commented on the way precipitation forms and tried to compare it with what happens in the formation of a volcano.

The teacher directed the students to read pages 4 to 9 silently for two minutes. While they were reading, she distributed worksheets with a sequencing exercise to describe what happens before a volcano erupts. The instructions told students to put the sentences in order according to what they read on page 6. They could refer back to the reading.

The teacher began to read the passage aloud slowly about three minutes later, although some students indicated that they had not yet finished reading it silently.

As she read, she again displayed the model volcano diagram on the projector and referred to it and to the key vocabulary as she read. She also paused from time to time to ask comprehension questions. Students were able to answer questions orally, using the model and naming the parts of a volcano. They discussed unknown words in the reading, such as *peddler*, *rumbled*, and *shepherd*, as they went along.

As the period drew to a close, the teacher told the students they would complete the sequencing worksheet the next day. She reminded them of the homework—draw a volcano in their journal and label the parts. They were also told to place the webs they had completed in their journals. The teacher then led a brief wrap-up of the lesson, asking questions about a volcano, which students answered.

On the following pages (Figure 11.4), you will see how Ms. Clark was scored on the SIOP items and the Comments that provide evidence for her score.

■ Using SIOP[®] Scores and Comments

If lessons are rated, comments supporting the scores are essential. A completed protocol can be used as a starting point for a collaborative discussion between a teacher and a supervisor or coach, or among a group of teachers. We have found that videotaping a lesson, rating it (or writing comments without scores), and discussing it with the teacher provides an effective forum for professional growth. We also get valuable information from teachers explaining a student's behavior or why something may not have taken place despite it being included in the lesson plan, for example. The discussion may take place between the teacher and the observer, or a group of teachers may meet on a regular basis to provide feedback to one another and assist in refining their teaching.

Scores can also be documented on a SIOP Lesson Rating Form over time to show growth (see Figure 11.5). Using percentages, teachers can see how their implementation of the SIOP features improves. This type of documentation is also useful for research purposes to document systematic implementation of SIOP and fidelity of implementation.

Further, plotting scores on a graph, as seen in Figure 11.6, is an effective way to illustrate strong areas as well as areas that require attention, or areas teachers have highlighted as important for their own growth. If a lesson consistently shows low scores on certain features, this information provides the teacher with clear feedback for areas on which to focus. Staff developers and teacher educators may use the scores to determine areas for further discussion and practice in professional development and course sessions if several teachers are having difficulty with the same feature or component.

Finally, while the SIOP protocol is a useful tool for professional development, scores should be used with caution. Many variables affect the success or failure of a given lesson, such as time of day, time of year, dynamics between students, and numerous other factors. Rather than just doing one observation and scoring of a lesson, an observer should rate several lessons over time for a more complete picture of the teacher's implementation of SIOP.

FIGURE 11.4 The Sheltered Instruction Observation Protocol (SIOP®)

The Sheltered Instruction Observation Protocol (SIOP®)

(Echevarría, Vogt, & Short, 2000; 2004; 2008, 2012)

Observer(s): J. Cruz

Date: 10/3

Grade: 6

ESL Level: Beginner

Teacher: Ms. Clark

School: Cloverleaf

Class/Topic: Science

Lesson: Multiday Single-day (circle one)

Total Points Possible: 120 (Subtract 4 points for each NA given) 120

Total Points Earned: 94

Percentage Score: 78%

Directions: Circle the number that best reflects what you observe in a sheltered lesson. You may give a score from 0–4 (or NA on selected items).
Cite under “Comments” specific examples of the behaviors observed.

Lesson Preparation				
	4	3	2	1
1. Content objectives are clearly defined, displayed and reviewed with students	4	3	2	1
Comments: Content objectives were written and stated at the beginning of the lesson.				
2. Language objectives are clearly defined, displayed and reviewed with students	4	3	2	1
Comments: No specific language objective was written or stated. Key vocabulary was listed, but the language skills to be targeted were listed and stated as activities and not written as objectives.				
3. Content concepts appropriate for age and educational background level of students	4	3	2	1
Comments: Students seemed to understand the concepts. However, several students mentioned that they studied volcanos in elementary school. It is unclear why volcanos were taught when these concepts had been introduced previously.				

FIGURE 11.4 The Sheltered Instruction Observation Protocol (SIOP®) (continued)

Lesson Preparation				
④	3	2	1	0
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (e.g., computer programs, graphs, models, visuals)	Some use of supplementary materials	No use of supplementary materials		
<i>Comments: Good use of supplementary materials to enhance students' understanding of volcanoes such as copies of semantic maps, pull-down maps, a book, Pompeii . . . Buried Alive, a projected image of the parts of a volcano, stacks of books to demonstrate rocks pushing against each other, household items to illustrate a volcanic eruption.</i>				
④	3	2	1	NA
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency	Some adaption of content to all levels of student proficiency	No significant adaption of content to all levels of student proficiency		
<i>Comments: All students were given the same text with which to work. There were no specific adaptations made to the text itself to address the varying levels of language proficiency. However, the teacher had prepared a sequencing activity for students to complete where she identified sentences that explained the process of a volcanic eruption and students were required to put the steps in order. In addition, she began reading the text aloud to the students and paused frequently to ask questions and to check for clarification.</i>				
④	3	2	1	0
6. Meaningful activities that integrate lesson concepts (e.g., surveys, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking	Meaningful activities that integrate lesson concepts but provide little opportunity for language practice with opportunities for reading, writing, listening, and/or speaking	No meaningful activities that integrate lesson concepts with language practice		
<i>Comments: There were a lot of meaningful and interesting activities that provided students with language practice (e.g., participation in building the model volcano, discussing information from their semantic maps about volcanoes, and reading authentic text).</i>				
Building Background				
④	3	2	1	NA
7. Concepts explicitly linked to students' background experiences	Concepts loosely linked to students' background experiences	Concepts not explicitly linked to students' background experiences		
<i>Comments: The teacher tapped into students' understanding of volcanoes by asking them to complete a semantic mapping exercise, writing everything they knew about volcanoes.</i>				

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Comments: The key vocabulary words used for this lesson were written on the board, stated to the students at the beginning of the lesson, and reiterated throughout the lesson, particularly when the teacher and students constructed the model volcano.

Comments: The teacher explained tasks well and modeled the demonstrations first before the students participated.

Comments: The teacher explained tasks well and modeled the demonstrations first before the students participated.

(continued)

FIGURE 11.4 The Sheltered Instruction Observation Protocol (SIOP®) (continued)

Comprehensible Input (continued)

	3	2	1	0
12. A variety of techniques used to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language)		Some techniques used to make content concepts clear		No techniques used to make content concepts clear

Comments: A variety of techniques were used in this lesson: the use of the projector with a diagram of a volcano and the labeled parts, brainstorming in the semantic mapping activity, demonstrating a model of a volcanic eruption, and reading about the topic after exploring it orally and visually. Used sequencing steps to check reading comprehension.

Strategies

	4	3	2	1	0
13. Ample opportunities provided for students to use learning strategies			Inadequate opportunities provided for students to use learning strategies		No opportunity provided for students to use learning strategies
<i>Comments: The teacher used various strategies with students such as accessing prior knowledge and having them make predictions. Students, however, used these strategies with the teacher, not with other students.</i>					
14. Scaffolding techniques consistently used, assisting and supporting student understanding (e.g., think-alouds)	4	3	2	1	0
			Scaffolding techniques occasionally used		Scaffolding techniques not used
<i>Comments: The teacher used various scaffolding techniques throughout the lesson to promote and assess students' comprehension of content concepts by means of questions, visuals, models, graphic organizers, prereading predictions, and demonstrations.</i>					
15. A variety of questions or tasks that promote higher-order thinking skills (e.g., literal, analytical, and interpretive questions)	4	3	2	1	0
			Infrequent questions or tasks that promote higher-order thinking skills		No questions or tasks that promote higher-order thinking skills

Comments: Most of the questions for this beginning level consisted of more fact/identification questions. In some cases, more elaborated responses were required of students; for example, "What happens when one set of rocks moves against another?" "Can you think of other places in the world where eruptions have occurred?" "Tell me about volcanoes in your country?" "How do you know this is a true story?"

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- 4 ③ 2 1 0
16. Frequent opportunities for **interaction** and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts
- Interaction** mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts
- Interaction** teacher-dominated with no opportunities for students to discuss lesson concepts

Comments: The teacher engaged the students in discussions about volcanoes throughout the class period. The semantic mapping exercise, the demonstration, and the prereading activity were all means that facilitated student interaction. The majority of interactions were teacher-student.

- 4 ③ ② 1 0
17. **Grouping configurations** support language and content objectives of the lesson
- Grouping configurations** unevenly support the language and content objectives
- Grouping configurations** do not support the language and content objectives

Comments: Although students were seated in groups, there was little opportunity for them to interact to practice their language skills. The whole-class setting supported the demonstration about volcanic eruption.

- 4 ③ 2 1 0
18. Sufficient **wait time** for student responses consistently provided
- Sufficient **wait time** for student responses occasionally provided
- Sufficient **wait time** for student responses not provided

Comments: At times there were students who wanted to respond but were overlooked, perhaps because the period was running out of time. For those students selected to respond, the teacher allowed them time to articulate their thoughts.

- ④ ③ 2 1 NA
19. Ample opportunities for students to **clarify key concepts in L1** as needed with aide, peer, or L1 text
- Some opportunities for students to **clarify key concepts in L1**
- No opportunities for students to **clarify key concepts in L1**

Comments: Only a few students could be identified as using their L1 during the lesson, and they were seated in the far left corner of the classroom where the bilingual aide assisted them. The other students in the classroom did not seem to need to use their L1 text.

Practice/Application

- 4 ③ 2 1 NA
20. **Hands-on materials and/or manipulatives** provided for students to practice using new content knowledge
- Few hands-on materials and/or manipulatives** provided for students to practice using new content knowledge
- No hands-on materials and/or manipulatives** provided for students to practice using new content knowledge

Comments: The lesson involved manipulatives. During the experiment/demonstration for the volcanic eruption, for example, the teacher used materials such as a bottle, liquid detergent, warm water, measuring spoons, baking soda, and vinegar. Only a few students, though, used these materials themselves.

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(continued)

FIGURE 11.4 The Sheltered Instruction Observation Protocol (SIOP®) (continued)

Practice/Application (continued)				
4	③	2	1	0 NA
21. Activities provided for students to apply content and language knowledge in the classroom		Activities provided for students to apply either content or language knowledge in the classroom		No activities provided for students to apply content or language knowledge in the classroom
<i>Comments: For the most part, students applied content and language. More student-student interactions would have been beneficial and provided better opportunities for assessment.</i>				
4	③	2	1	0
22. Activities integrate all language skills (i.e., reading, writing, listening, and speaking)		Activities integrate some language skills		Activities do not integrate language skills
<i>Comments: The lesson allowed students an opportunity to use all language skills (some more than others) such as listening, speaking, and reading. Writing was evident mostly in the semantic mapping activity. Some predicting and scanning for information was part of the reading skills practiced.</i>				
Lesson Delivery				
4	③	2	1	0
23. Content objectives clearly supported by lesson delivery		Content objectives supported somewhat by lesson delivery		Content objectives not supported by lesson delivery
<i>Comments: The demonstration and discussion along with the constant repetition of key vocabulary served to accomplish most of the content objectives for the lesson. While students seemed to indicate an understanding of what volcanoes are, it is not certain that they fully understand what causes them to erupt.</i>				
4	3	②	1	0
24. Language objectives clearly supported by lesson delivery		Language objectives somewhat supported by lesson delivery		Language objectives not supported by lesson delivery
<i>Comments: Most of the language objectives were supported by the delivery. Students did not have a chance to complete the sequencing activity based on the reading in order to assess their reading comprehension.</i>				
4	③	2	1	0
25. Students engaged approximately 90% to 100% of the period		Students engaged approximately 70% of the period		Students engaged less than 50% of the period
<i>Comments: Students were on task throughout the lesson activity.</i>				

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Comments: The pacing seemed fine, but was a little rushed at times, which prevented students from completing some activities such as the individual silent reading and sequencing activity.

Review/Assessment

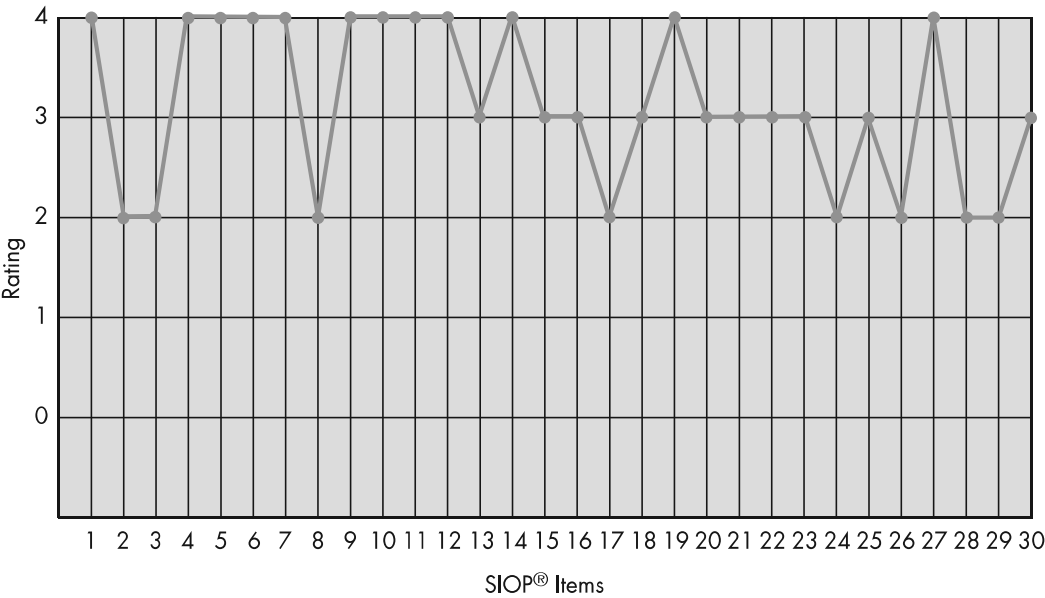
Comments: Throughout the lesson, the teacher checked students' understanding of some concepts and of the instructional tasks. She monitored the classroom to answer questions and to provide assistance. During the reading activity, however, students were not allotted sufficient time to read individually, and the sequencing activity was moved to the following day. Therefore, it is unclear how she was able to assess individual student comprehension before she began reading the text to students.

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FIGURE 11.5 SLOP® Lesson Rating Form

Teacher	Observation 1 Date/Score (%)	Observation 2 Date/Score (%)	Observation 3 Date/Score (%)

FIGURE 11.6 Ms. Clark’s Scores



■ Reliability and Validity of SIOP®

After several years of field testing and refining SIOP, a study was conducted (Guarino, Echevarría, Short, Schick, Forbes, & Rueda, 2001) to establish the **validity** and **reliability** of the instrument. The findings of the study indicated that SIOP is a highly reliable and valid measure of sheltered instruction (see Appendix C for a discussion of the study).

■ Summary

This book has been developed for teachers, supervisors, instructional coaches, administrators, teacher education faculty, professional developers, and researchers as a resource for increasing the effectiveness of instruction for English learners. We have presented a research-based, professional development model of sheltered instruction, the SIOP Model, whose protocol may be used as an observation instrument, as well as a lesson planning guide.

The SIOP Model and protocol provide concrete examples of the features of effective instruction for English learners, and the book has been written to illustrate and elucidate those features by describing how real teachers might actually teach SIOP lessons in grades K–12. The use of vignettes allows readers to “see” what each feature might look like in a classroom setting. The features of the SIOP Model represent best practice for teaching English learners and have been shown to benefit English-speaking students as well.

■ Discussion Questions

1. The SIOP Model has a number of uses by different constituencies (e.g., teachers, supervisors, administrators, and researchers). How can you begin using SIOP? What additional uses might it have for you or other constituencies?
2. Reread the sample lesson on pages 280–284. Would you score this lesson differently from the sample SIOP scores? On which items would you differ? What was the basis of your disagreement?
3. Look at the sample SIOP protocol and change any two scores to 1. What would be the total score and percentage score on the revised and recalculated SIOP?
4. Imagine that you and a supervisor or an instructional coach have just watched a videotape of your SIOP lesson. You are discussing the SIOP rating sheet that each of you scored independently. What would be the most collaborative way to approach the discussion of your lesson? What would yield the most useful information for improving your teaching?

Frequently Asked Questions: Getting Started with the SIOP[®] Model

Learning Outcomes

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

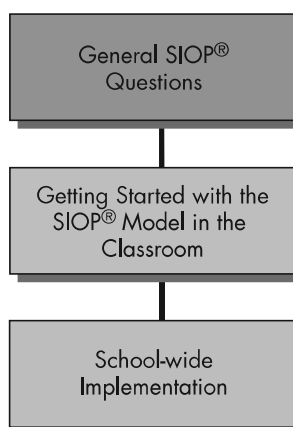
Plan initial steps to get started with SIOP implementation in the classroom and school.

Identify a variety of uses for the SIOP protocol.

Language Objectives

Discuss with colleagues the most frequently asked questions and responses about the SIOP Model for those who are beginning “SIOPers.”

Generate questions and possible answers of your own about the SIOP Model.



The purpose of this final chapter is to provide you with information and suggestions for beginning your work with the SIOP Model. Over the years, we have worked with thousands of teachers and administrators who are becoming “SIOPers.” Frequently, we are asked about how to effectively implement the SIOP Model in classrooms, schools, and districts. From many conversations, we have culled some of the most common questions and we provide answers to those questions in this chapter. ●



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For a comprehensive guide to implementing the SIOP Model, with profiles of 17 SIOP districts, information about funding sources, suggestions for creating a SIOP implementation plan, SIOP coaching, SIOP professional development, data collection, and more, see *Implementing the SIOP® Model through Effective Professional Development and Coaching* (Echevarría, Short, & Vogt, 2008).

■ General SIOP® Questions



Watch this video and hear the three SIOP authors talk about how SIOP benefits teachers and students. As you think of the teachers in your school, who might be likely candidates to begin SIOP training, and why do you think these individuals will be successful?

1. Who can implement SIOP?

- Keep in mind that SIOP is an instructional framework, not a program, not lock-step way of teaching, or a curriculum. Therefore, as an instructional framework, it can be used in many educational contexts where students are diverse and learning is the goal. Pre-K, elementary, and secondary subject-area teachers, reading/language arts and English teachers, resource teachers, coaches, specialists, special educators, community college, and university professors implement the SIOP Model in a variety of educational program designs. Any teacher who has students learning content through a nonnative language can use SIOP effectively, as part of a general education program, an **ESL** program, a late-exit bilingual program, a dual language/two-way bilingual immersion program, a newcomer program, a **sheltered** program, or a foreign language immersion program. In order to implement

the model well, we recommend teachers participate in professional development for at least one year.

2. Is SIOP only for English learners?

- No. SIOP has been validated also with native-English speaking students, both general education and special education students, and former English learners. When teachers implement the 30 features consistently, all subgroups of students, including students receiving special education services, have been shown to demonstrate academic gains.

3. Isn't SIOP just good instruction?

- SIOP is excellent instruction with research-based features that have been proven effective with English learners and other learners. What distinguishes it is the systematic, consistent, and simultaneous teaching of both content concepts and academic language through its 30 features.
- What also distinguishes SIOP is that, as of the time of this writing, it is the only empirically validated model of sheltered instruction for English learners that exists.

4. What is the relationship between SIOP and **Culturally Responsive Teaching**?

- Almost by definition, when teachers implement SIOP to a high degree, they're engaging in culturally responsive teaching. For example, SIOP respects students' home languages and cultures by incorporating students' background knowledge and experiences into lessons.
- Effective SIOP teachers create groups where students work together on relevant activities, making sure that English learners are equal participants.
- With SIOP, teachers hold high expectations for all students, and adjust instruction and materials to provide access to the grade-level curriculum. Compare the tenets of culturally responsive teaching and the features of SIOP and you will see that they intersect naturally, and thus are not separate or competing instructional approaches.

5. What if there are only a few English learners in my classroom?

- We now have empirical evidence that all students benefit academically when teachers implement SIOP to a high degree. Therefore, all teachers who have English learners in their classrooms should become SIOP teachers, regardless of the number. SIOP isn't something that teachers "turn on" and "turn off," depending on the makeup of their classes. Rather, it becomes the way they teach from period to period, subject to subject, throughout the day.

6. What is the most important thing I should keep in mind (whether a teacher, coach, or administrator)?

- Recognize that learning to implement SIOP is a process. Not all features will be observed to a high degree in the beginning stages. Reflect on your lessons each day and use the SIOP protocol to assess your planning and delivery. Work through SIOP systematically to ensure it will become internalized and part of your regular classroom practice.

■ Questions About Getting Started with SIOP® in the Classroom



Watch this video to hear SIOP teacher, Wanda Holbrook, and principal, Debbie Hutson, talk about the need for administrative support when beginning implementation. Why do you think Ms. Hutson recommended starting with just “a few teachers?”

1. How do I get started using SIOP in my classroom?
 - Assess your areas of strength and your areas for needed improvement with the SIOP protocol.
 - Begin with one component at a time, gradually adding the others over time. We suggest that unless you’ll be working alone to implement SIOP, you and your subject-area or grade-level colleagues should discuss and decide together which SIOP component will be your starting point.
 - As you attain proficiency in one component of SIOP, gradually add others to your teaching repertoire. Again, working with your colleagues on lesson planning, observing each other’s lessons (in person or via video), and sharing techniques and ideas are all beneficial.
2. Do I have to implement the eight components in the order they’re presented in the book?
 - No. There’s no intended hierarchy or order of the components, with the exception, perhaps, of Lesson Preparation. However, teachers may choose to begin with another component first if that’s more comfortable. We recommend that Lesson Preparation not be delayed beyond the second or third component because of the necessity of including content and language objectives in lessons.
3. Do I have to incorporate all 30 SIOP features in every lesson?
 - Eventually, yes. We recommend that elementary teachers begin implementing one component at a time in one subject area until all components are implemented in that subject area. The ultimate goal is to add other subjects until all are “SIOPized.” Secondary teachers are encouraged to begin with one class period, gradually adding the other periods until all are “SIOPized.” However, there might be occasional lessons where not all features are present, such as in a review lesson at the end of a unit. If you’re able to speed up this process (adding new components and subject areas or periods), so much the better!
 - Keep in mind that the definition of “a lesson” varies somewhat depending on the age of students you’re teaching and the way the classroom day is organized. For example, pre-K, kindergarten, and first-grade teachers present many lessons in 15- to 20-minute (or less) blocks of time, while elementary teachers of older students may plan lessons ranging from 30–45 minutes. In the secondary grades, longer lessons that span over 1–3 days is not uncommon. A rule of thumb is: What can you teach, provide practice and application for, and assess in a given period of time? That’s what constitutes a “lesson” with SIOP.
4. What if I have students who can’t speak any English? Will SIOP help?
 - SIOP will certainly help, but it’s not enough. Beginning speakers, or newcomers, need intensive English instruction provided by an ESL or ELD teacher, in addition to effective SIOP instruction the rest of the day. If newcomer programs are not available, SIOP instruction provides students with the

best opportunity to comprehend lessons, because SIOP teachers are teaching content and academic English concurrently.

5. How long will it take for me to become an effective SIOP teacher?
 - It depends on the support you receive. Our research has shown teachers can become effective SIOP teachers in one year with coaching, observations, workshops, and planning time. Realistically, we generally say it takes 2–3 years with consistent focus on the eight components and 30 features to become a high implementer of the Model. And, of course, follow-up professional development, observations, and coaching certainly help.
6. How should I use the **SIOP protocol**?
 - Use it as a lesson plan checklist, self-assessment tool, and conversation starter with colleagues. You may wish to videotape yourself teaching and use the protocol to check the degree to which you are implementing particular features. SIOP teachers have found that sharing and discussing videotaped lessons is very beneficial for deepening their understandings of effective teaching. See Chapter 11 for additional information about uses of the SIOP protocol.
 - Once you are familiar with the features in the individual components, use the protocol as a tool for post-teaching reflection. Two resources that may be helpful while planning lessons are books that offer a multitude of teaching ideas and activities for enhancing SIOP components and features in your lessons (see Vogt & Echevarría, 2008; Vogt, Echevarría, & Washam, 2015).
 - Observe a peer's lesson and use the protocol to determine the degree to which SIOP features were present in the lesson you observed. You can then discuss together which SIOP features were highly evident, somewhat evident, or not evident in the lesson you observed.
7. Now that I've read the book and tried out some components, how do I deepen my SIOP knowledge?
 - Collaborate with and observe other educators who are committed to excellent SIOP teaching.
 - Observe other SIOP classrooms and frankly discuss what is working and what is problematic, and what a teacher can do to overcome any problems.
 - Read the other SIOP books that are cited in this text. Also there are a number of research articles written about the SIOP Model. Form a cohort of "SIOPers" and have a study group with these resources.
 - Connect with other SIOP schools and districts.

■ Questions About School-wide Implementation of the SIOP® Model

1. How should we get started in our school implementation?
 - It's critically important that you have a plan in place, including who will receive professional development, who will provide it, where the funding will come from, and so forth. See Echevarría, Short, and Vogt, 2008, for details

about how to create a plan, and how other schools and districts have rolled out their plan once it was created.

- Get your school administrator on board with the SIOP Model as a school-wide initiative. See Echevarría, Short, and Vogt, 2008 for ideas.

2. Who should receive SIOP professional development?

- Anyone who will be working with English learners, including teachers, support personnel, instructional assistants, and administrators, should participate in SIOP professional development.
- In addition, an overview of SIOP is beneficial for School Board members and district-level administrators so everyone is starting on the “same page,” with the same ultimate goal.

3. What should SIOP professional development look like?

- Ideally, it should be a combination of workshops, coaching, observations and conferences, book study with this text and included video clips, and follow-up workshops focusing on individual SIOP components.

4. How should SIOP be used school wide?

- As a source of conversation about best practices for teaching English learners
 - As an informal observation instrument for peers, mentors, coaches, and administrators
 - As a tool for observing growth in implementation of separate SIOP features, over time
 - As a research observation tool for fidelity of model implementation
- Please do not use the protocol for teacher evaluation, especially while the teachers are learning the Model. In order to change their regular lesson planning style to the SIOP Model, teachers must take some risks. Because the process takes time and is challenging, lessons should not be rated early in the process of learning SIOP.
- The protocol is also an excellent tool for targeted and productive discussions among preservice student teachers, master teachers, and university supervisors, and between a teacher and coach.

5. What should we do about resistant or reluctant teachers?

- Don't begin with them; instead, begin SIOP professional development with those who want to improve their instruction for English learners and other students.
- That said, if these teachers have English learners in their classrooms, eventually they will need to receive and be held accountable for SIOP professional development. From our experience, when resistant teachers hear their colleagues talk about SIOP successes, they come around and want to be part of the story, particularly if their English learners are not experiencing academic success, but the students of SIOP teachers are.

6. With whom should we collaborate during SIOP implementation?

- Collaborate with anyone who works with English learners, including the classroom teacher, ESL teacher, SIOP coaches, special educators, paraprofessionals, and administrators.



Watch this video to hear Principal Debbie Hutson talk about how her school in Phoenix started working with SIOP. Recall that in the second clip in this chapter she recommended starting with just a few teachers. How do you think she works with teachers who were a bit reluctant?



Watch this video to hear Dr. MaryEllen Vogt and Dr. Deborah Short talk about the Common Core State Standards and the SIOP Model. As you reflect on SIOP's instructional features, which ones provide a pathway for your students to meet the rigorous standards? Why do you think so?

- Use a collaborative approach with teachers, including conferencing about observations, setting goals for implementing other features of the model, reflecting on progress in using SIOP, and so forth.
7. What does it mean to be a high-implementing SIOP teacher?
 - The protocol, with the 0-4 **rubric**, can be used to measure levels of implementation of SIOP instructional features. From our research, and that of others, we have learned that fidelity (level of implementation) to SIOP really makes a difference in student performance. High implementers are those teachers whose lessons consistently score 75% or higher on the SIOP protocol as measured during classroom observations. (See Chapter 11 for more information about uses of the SIOP protocol.)
 8. Is SIOP compatible with the **Common Core State Standards**?
 - Yes. The Common Core State Standards (or other rigorous state standards) can be used to guide the development of content and language objectives in English language arts and mathematics. The Common Core State Standards' Listening and Speaking Standards can also serve as a foundation for writing language objectives.
 - The Common Core State Standards do not directly address *how* English learners (and struggling learners) are to attain the standards. For many teachers, SIOP provides a pathway for helping their students become successful in a Common Core classroom.
 9. SIOP is a lesson planning and delivery system for teachers, but what about student outcomes?
 - Our research has focused almost exclusively on the impact of SIOP on student achievement (see Appendices C and D). In the classroom, the features of the SIOP Model translate directly into student outcomes when implemented well. (See Figure 12.1 for ways that the features benefit students.) At the conclusion of an effective SIOP lesson, students should be able to demonstrate the outcomes as shown in Figure 12.1. This checklist may be used as a spot check to gauge the effectiveness of SIOP lessons.
 10. As an administrator, where can I get some assistance?
 - Additional information about school-level implementation of the SIOP Model from an administrator's perspective can be found in *The SIOP® Model for Administrators* (2nd Ed.). (Short, Vogt, & Echevarría, in press.)
 - Become familiar with the additional SIOP resources that support lesson planning and delivery. Books of lesson techniques, SIOP lessons and units for English-language arts, mathematics, history/social studies, and science, and of the Model's use in Response to Intervention programs are available. (See Appendix D for resources.)
 - Other versions of this text, *Making Content Comprehensible for English Learners: The SIOP® Model*, have been written specifically for elementary and secondary students (Echevarría, Vogt, & Short, 2014a; 2014b).
 11. How can the SIOP protocol be used by researchers and program evaluators to measure teachers' level of SIOP implementation with the protocol?

FIGURE 12.1 Learner Outcomes**High Quality SIOP Lessons: Checking Learner Outcomes***Learners...*

- demonstrated that they understood the purpose and objectives of the lesson.
- used the differentiated materials available and participated in meaningful activities.
- were actively encouraged to make links between their own background and the lesson's concepts and activities.
- had multiple opportunities to use new vocabulary in meaningful ways.
- responded to the teacher's modified speech and comprehensible input techniques.
- used learning strategies in completing tasks and assignments.
- were supported while completing tasks and assignments at their level of academic and language proficiency.
- were able to respond to a variety of questions including higher-order questions.
- demonstrated that they could work both independently and collaboratively, using academic English.
- participated in a variety of grouping configurations that facilitate interaction and discussion.
- used their home language as needed to clarify key concepts.
- contributed to the lesson by using hands-on materials and/or manipulatives to practice and apply content knowledge.
- were engaged and working at their potential throughout the lesson.
- followed the pace of the lesson.
- demonstrated understanding of the lesson's key vocabulary and content concepts.
- received appropriate and regular feedback on their output (e.g., language, content, work).
- were aware of their progress through assessment of the lesson's objectives.

- Because it is the only empirically validated, instructional approach for English learners at the time of this writing, the protocol can help determine if a school's or district's investment in SIOP staff development is returning dividends.
- Analyze student performance in conjunction with teachers' level of implementation.

As we conclude this fifth edition of *Making Content Comprehensible for English Learners*, we thank you for your interest in SIOP and hope that you find that the effort to become a high-implementing SIOP teacher (or effective coach or administrator) is well worth the journey. From our work, we have learned that the benefits of this effort include:

- teachers who are empowered to meet their students' needs
- improved academic achievement for English learners and other students
- gains in English language proficiency
- students who are active, engaged participants in their classrooms

The English learners in our schools deserve our best efforts because they and their native English-speaking peers are our future. Welcome aboard!

Appendix A

SIOP (Sheltered Instruction Observation Protocol)

Observer(s): _____ Teacher: _____
 Date: _____ School: _____
 Grade: _____ Class/Topic: _____
 ESL Level: _____ Lesson: Multi-day Single-day (circle one)

Total Points Possible: 120 (Subtract 4 points for each NA given: _____)

Total Points Earned: _____ Percentage Score: _____

Directions: Circle the number that best reflects what you observe in a SIOP lesson. You may give a score from 0–4 (or NA on selected items). Cite under “Comments” specific examples of the behaviors observed.

■ Lesson Preparation

4	3	2	1	0
---	---	---	---	---

1. **Content objectives** clearly defined, displayed and reviewed with students

Content objectives for students implied

No clearly defined **content objectives** for students

Comments:

4	3	2	1	0
---	---	---	---	---

2. **Language objectives** clearly defined, displayed and reviewed with students

Language objectives for students implied

No clearly defined **language objectives** for students

Comments:

4	3	2	1	0
---	---	---	---	---

3. **Content concepts** appropriate for age and educational background level of students

Content concepts somewhat appropriate for age and educational background level of students

Content concepts inappropriate for age and educational background level of students

Comments:

(Echevarría, Vogt, & Short, 2000, 2004, 2008, 2013, 2017)

4	3	2	1	0
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (e.g., computer programs, graphs, models, visuals)		Some use of supplementary materials		No use of supplementary materials

Comments:

4	3	2	1	0	NA
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency		Some adaptation of content to all levels of student proficiency		No significant adaptation of content to all levels of student proficiency	

Comments:

4	3	2	1	0
6. Meaningful activities that integrate lesson concepts (e.g., interviews, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking		Meaningful activities that integrate lesson concepts but provide few language practice opportunities for reading, writing, listening, and/or speaking		No meaningful activities that integrate lesson concepts with language practice

Comments:

■ Building Background

4	3	2	1	0	NA
7. Concepts explicitly linked to students' background experiences		Concepts loosely linked to students' background experiences		Concepts not explicitly linked to students' background experiences	

Comments:

4	3	2	1	0
8. Links explicitly made between past learning and new concepts		Few links made between past learning and new concepts		No links made between past learning and new concepts

Comments:

4	3	2	1	0
9. Key vocabulary emphasized (e.g., introduced, written, repeated, and highlighted for students to see)		Key vocabulary introduced, but not emphasized		Key vocabulary not introduced or emphasized

Comments:

■ Comprehensible Input

4	3	2	1	0
10. Speech appropriate for students' proficiency levels (e.g., slower rate, enunciation, and simple sentence structure for beginners)		Speech sometimes inappropriate for students' proficiency levels		Speech inappropriate for students' proficiency levels

Comments:

4	3	2	1	0
11. Clear explanation of academic tasks		Unclear explanation of academic tasks		No explanation of academic tasks

Comments:

4	3	2	1	0
12. A variety of techniques used to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language)		Some techniques used to make content concepts clear		No techniques used to make concepts clear

Comments:

Strategies

4	3	2	1	0
13. Ample opportunities provided for students to use learning strategies		Inadequate opportunities provided for students to use learning strategies		No opportunity provided for students to use learning strategies

Comments:

4	3	2	1	0
14. Scaffolding techniques consistently used, assisting and supporting student understanding (e.g., think-alouds)		Scaffolding techniques occasionally used		Scaffolding techniques not used

Comments:

4	3	2	1	0
15. A variety of questions or tasks that promote higher-order thinking skills (e.g., literal, analytical, and interpretive questions)		Infrequent questions or tasks that promote higher-order thinking skills		No questions or tasks that promote higher-order thinking skills

Comments:

Interaction

4	3	2	1	0
16. Frequent opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts		Interaction mostly teacher-dominated with some opportunities for students to talk about or question lesson concepts		Interaction teacher-dominated with no opportunities for students to discuss lesson concepts

Comments:

4	3	2	1	0
17. Grouping configurations support language and content objectives of the lesson		Grouping configurations unevenly support the language and content objectives		Grouping configurations do not support the language and content objectives

Comments:

4	3	2	1	0
18. Sufficient wait time for student responses consistently provided		Sufficient wait time for student responses occasionally provided		Sufficient wait time for student responses not provided

Comments:

4	3	2	1	0	NA
19. Ample opportunities for students to clarify key concepts in L1 as needed with aide, peer, or L1 text		Some opportunities for students to clarify key concepts in L1		No opportunities for students to clarify key concepts in L1	

Comments:

■ Practice & Application

4	3	2	1	0	NA
20. Hands-on materials and/or manipulatives provided for students to practice using new content knowledge		Few hands-on materials and/or manipulatives provided for students to practice using new content knowledge		No hands-on materials and/or manipulatives provided for students to practice using new content knowledge	

Comments:

4	3	2	1	0	NA
21. Activities provided for students to apply content and language knowledge in the classroom		Activities provided for students to apply either content or language knowledge in the classroom		No activities provided for students to apply content and language knowledge in the classroom	

Comments:

APPENDIX A

4	3	2	1	0
22. Activities integrate all language skills (i.e., reading, writing, listening, and speaking)		Activities integrate some language skills		Activities do not integrate language skills

Comments:

■ Lesson Delivery

4	3	2	1	0
23. Content objectives clearly supported by lesson delivery		Content objectives somewhat supported by lesson delivery		Content objectives not supported by lesson delivery

Comments:

4	3	2	1	0
24. Language objectives clearly supported by lesson delivery		Language objectives somewhat supported by lesson delivery		Language objectives not supported by lesson delivery

Comments:

4	3	2	1	0
25. Students engaged approximately 90% to 100% of the period		Students engaged approximately 70% of the period		Students engaged less than 50% of the period

Comments:

4	3	2	1	0
26. Pacing of the lesson appropriate to students' ability levels		Pacing generally appropriate, but at times too fast or too slow		Pacing inappropriate to students' ability levels

Comments:

■ Review & Assessment

4	3	2	1	0
27. Comprehensive review of key vocabulary		Uneven review of key vocabulary		No review of key vocabulary

Comments:

4	3	2	1	0
28. Comprehensive review of key content concepts		Uneven review of key content concepts		No review of key content concepts

Comments:

4	3	2	1	0
29. Regular feedback provided to students on their output (e.g., language, content, work)		Inconsistent feedback provided to students on their output		No feedback provided to students on their output

Comments:

4	3	2	1	0
30. Assessment of student comprehension and learning of all lesson objectives (e.g., spot checking, group response) throughout the lesson		Assessment of student comprehension and learning of some lesson objectives		No assessment of student comprehension and learning of lesson objectives

Comments:

(Reproduction of this material is restricted to use with Echevarría, Vogt, and Short (2008), *Making Content Comprehensible for English Learners: The SIOP® Model*.)

SIOP (Sheltered Instruction Observation Protocol)

(Echevarria, Vogt, & Short, 2000, 2004, 2008, 2013, 2017)

Observer(s): _____

Date: _____

Grade: _____

ESL Level: _____

School: _____

Teacher: _____

Class/Topic: _____

Lesson: Multi-day Single-day (circle one)

Total Points Possible: 120 (Subtract 4 points for each NA given) _____

Total Points Earned: _____ Percentage Score: _____

Directions: Circle the number that best reflects what you observe in a SIOP lesson. You may give a score from 0–4 (or NA on selected items). Cite under “Comments” specific examples of the behaviors observed.

	Highly Evident	3	Somewhat Evident	2	1	Not Evident	0	
Lesson Preparation	4							
1. Content objectives clearly defined, displayed, and reviewed with students	☐	☐	☐	☐	☐	☐	☐	
2. Language objectives clearly defined, displayed, and reviewed with students	☐	☐	☐	☐	☐	☐	☐	
3. Content concepts appropriate for age and educational background level of students	☐	☐	☐	☐	☐	☐	☐	
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (e.g., computer programs, graphs, models, visuals)	☐	☐	☐	☐	☐	☐	☐	NA
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency	☐	☐	☐	☐	☐	☐	☐	☐
6. Meaningful activities that integrate lesson concepts (e.g., surveys, letter writing, simulations, constructing models) with language practice opportunities for reading, writing, listening, and/or speaking	☐	☐	☐	☐	☐	☐	☐	
<i>Comments:</i>								
Building Background	4	3	2	1	0			NA
7. Concepts explicitly linked to students' background experiences	☐	☐	☐	☐	☐	☐	☐	☐
8. Links explicitly made between past learning and new concepts	☐	☐	☐	☐	☐	☐	☐	
9. Key vocabulary emphasized (e.g., introduced, written, repeated, and highlighted for students to see)	☐	☐	☐	☐	☐	☐	☐	
<i>Comments:</i>								
Comprehensible Input	4	3	2	1	0			
10. Speech appropriate for students' proficiency level (e.g., slower rate, enunciation, and simple sentence structure for beginners)	☐	☐	☐	☐	☐	☐	☐	
11. Clear explanation of academic tasks	☐	☐	☐	☐	☐	☐	☐	

12. A **variety of techniques** used to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language) ☐ ☐ ☐ ☐ ☐

Comments:

Strategies 4 3 2 1 0

13. Ample opportunities provided for students to use **learning strategies** ☐ ☐ ☐ ☐ ☐
14. **Scaffolding techniques** consistently used assisting and supporting student understanding (e.g., think-alouds) ☐ ☐ ☐ ☐ ☐
15. A variety of **questions or tasks that promote higher-order thinking skills** (e.g., literal, analytical, and interpretive questions) ☐ ☐ ☐ ☐ ☐

Comments:

Interaction 4 3 2 1 0

16. Frequent opportunities for **interaction** and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts ☐ ☐ ☐ ☐ ☐
17. **Grouping configurations** support language and content objectives of the lesson ☐ ☐ ☐ ☐ ☐
18. Sufficient **wait time for student responses** consistently provided ☐ ☐ ☐ ☐ ☐ NA
19. Ample opportunities for students to **clarify key concepts in L1** as needed with aide, peer, or L1 text ☐ ☐ ☐ ☐ ☐ ☐

Comments:

Practice & Application 4 3 2 1 0 NA

20. **Hands-on materials and/or manipulatives** provided for students to practice using new content knowledge ☐ ☐ ☐ ☐ ☐ ☐ NA
21. Activities provided for students to **apply content and language knowledge** in the classroom ☐ ☐ ☐ ☐ ☐ ☐
22. Activities integrate all **language skills** (i.e., reading, writing, listening, and speaking) ☐ ☐ ☐ ☐ ☐

Comments:

Lesson Delivery 4 3 2 1 0

23. **Content objectives** clearly supported by lesson delivery ☐ ☐ ☐ ☐ ☐
24. **Language objectives** clearly supported by lesson delivery ☐ ☐ ☐ ☐ ☐
25. **Students engaged** approximately 90% to 100% of the period ☐ ☐ ☐ ☐ ☐
26. **Pacing** of the lesson appropriate to students' ability level ☐ ☐ ☐ ☐ ☐

Comments:

Review & Assessment

	4	3	2	1	0
27. Comprehensive review of key vocabulary	☐	☐	☐	☐	☐
28. Comprehensive review of key content concepts	☐	☐	☐	☐	☐
29. Regular feedback provided to students on their output (e.g., language, content, work)	☐	☐	☐	☐	☐
30. Assessment of student comprehension and learning of all lesson objectives (e.g., spot checking, group response) throughout the lesson	☐	☐	☐	☐	☐

Comments:

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SIOP® Lesson Plan Template 1

Date: _____ Grade/Class/Subject: _____

Unit/Theme: _____ Standards: _____

Content Objective(s): _____

Language Objective(s): _____

Key Vocabulary

Supplementary Materials

SIOP® Features

Lesson Preparation

- ☐ Adaptation of Content
- ☐ Links to Background
- ☐ Links to Past Learning
- ☐ Strategies incorporated

Scaffolding

- ☐ Modeling
- ☐ Guided practice
- ☐ Independent practice
- ☐ Comprehensible input

Grouping Options

- ☐ Whole class
- ☐ Small groups
- ☐ Partners
- ☐ Independent

Integration of Processes

- ☐ Reading
- ☐ Writing
- ☐ Speaking
- ☐ Listening

Application

- ☐ Hands-on
- ☐ Meaningful
- ☐ Linked to objectives
- ☐ Promotes engagement

Assessment

- ☐ Individual
- ☐ Group
- ☐ Written
- ☐ Oral

Lesson Sequence

Reflections:

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SIOP® Lesson Plan Template 2

STANDARDS:

LESSON TOPIC:

OBJECTIVES:

Content

Language

LEARNING STRATEGIES:

KEY VOCABULARY:

MATERIALS:

MOTIVATION:

(Building background)

PRESENTATION

(Content and language objectives, comprehensible input modeling, strategies, interaction, feedback)

PRACTICE & APPLICATION:

(Meaningful activities, interaction, strategies, practice/application, feedback)

REVIEW & ASSESSMENT:

(Review objectives and vocabulary, assess learning)

EXTENSION:

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SIOP® Lesson Plan Template 3

Topic:	Class:	Date:
Content Objectives:		Language Objectives:
Key Vocabulary:	Materials (including supplementary and adapted):	
Higher-Order Questions:		
Time:	Activities Building Background <i>Links to Experience:</i> <i>Links to Learning:</i> <i>Key Vocabulary:</i>	

(Continued on next page)

[illegible]

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SIOP® Lesson Plan Template 4

SIOP® Lesson Grade:			Subject:		
Standards:					
Key Vocabulary:					
Higher order questions and tasks:					
Multimedia/Materials:					
Building Background:					
Objectives		Lesson Sequence		Review & Assessment	
Content Objectives:					
Language Objectives:					
Wrap-up (including review of content and language objectives):					
Lesson Reflection/Extension:					

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The SIOP Model has been developed and refined through 20 years of sustained research and development studies (Short, Echevarría, & Richards-Tutor, 2011, Short & Himmel, 2013). The following discussion highlights the investigations over time.

■ CREDE Research: Development of the SIOP Model, Protocol, and Professional Development Program

- The first version of the SIOP began in the early 1990s as an observation tool to determine if observed teachers incorporated key sheltered techniques consistently in their lessons.
- The protocol evolved into a lesson planning and delivery approach, known as the SIOP Model (Echevarría, Vogt, & Short, 2000), through a 7-year, quasi-experimental research study, *The Effects of Sheltered Instruction on the Achievement of Limited English Proficient Students*, that was sponsored by the Center for Research on Education, Diversity & Excellence (CREDE) and funded by the U.S. Department of Education. It began in 1996.
- The goals of the research project were to (1) develop an explicit model of sheltered instruction; (2) use that model to train teachers in effective sheltered strategies; and (3) conduct field experiments and collect data to evaluate teacher change and the effects of sheltered instruction on LEP students' English language development and content knowledge.
- This original SIOP study involved collaborating middle school teachers in four large metropolitan school districts—two on the East Coast and two on the West Coast—who worked with researchers to identify key practices for sheltered instruction and develop a professional development model that would enable more teachers to use sheltered instruction effectively in their classrooms. Dr. Jana Echevarría of California State University, Long Beach, and Dr. Deborah Short of the Center for Applied Linguistics in Washington, DC, were co-project investigators.
- Together, we reviewed the professional literature on best practices for English learners in the areas of ESL, bilingual education, reading, second language acquisition, discourse studies, special education, and classroom management and found many techniques that showed promise but hadn't been empirically investigated. We decided to test combinations of these techniques and thus built our initial model.
- During four years of field testing, we analyzed teacher implementation and student effects as teachers tried out variations in their classrooms.
- In 2000, we finalized the format—30 features of instruction grouped into eight components essential for making content comprehensible for English learners—Lesson Preparation, Building Background, Comprehensible Input,

Strategies, Interaction, Practice & Application, Lesson Delivery, and Review & Assessment (Echevarría, Vogt, & Short, 2000; Short & Echevarría, 1999). These components emphasize the instructional practices that are critical for second language learners as well as high-quality practices that benefit all students. The eight components are:

- The six features under *Lesson Preparation* initiate the lesson planning process, so teachers include content and language objectives, use supplementary materials, create meaningful activities, and more.
 - *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 that 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.
- We created a 5-point scale for each feature on the observation protocol so we could measure the level of implementation in any lesson (4—closest to recommended practice, 0—no evidence of the use of the practice). A separate study confirmed the SIOP protocol as a valid and highly reliable measure of sheltered instruction (Guarino et al., 2001). Experienced observers of classroom instruction (e.g., teacher education faculty who supervise student teachers) who were *not* specifically trained in the SIOP Model were able to use the protocol to distinguish between high and low implementers of the model. A statistical analysis revealed an inter-rater of correlation 0.90 or higher.
 - Because this CREDE study predated NCLB, most of the English learners in the research districts were exempted from the standardized testing process. To investigate whether the model yielded positive results in terms of student performance, we used pre- and post-measures of the Illinois Measurement of Annual Growth in English (IMAGE) writing test as an outcome measure of academic literacy. The IMAGE was the standardized assessment of reading and writing used by the state of Illinois to measure annual growth of these skills in their limited English proficient students in Grades 3–12. It was correlated to and a predictor of scores on the IGAP (the state standardized test of achievement) that was given to all students in Illinois, except

those exempted for linguistic development reasons or learning disabilities. The IMAGE Writing Test provided separate scores for five features of writing: Language Production, Focus, Support/Elaboration, Organization, and Mechanics, as well as an overall score.

- Two distinct, but similar, cohorts of English learners in sheltered classes participated: students whose teachers were trained in implementing the SIOP Model (the treatment group), and students whose teachers had no exposure to the SIOP Model (the comparison group). The students in both groups were in Grades 6–8 in the same districts and represented mixed proficiency levels. We found that students who participated in classes taught by teachers trained in the SIOP Model improved their writing skills significantly more than students in classes with non-SIOP-trained teachers. They also made greater gains from the fall to spring administrations of the test. These findings were statistically significant (Echevarría, Short, & Powers, 2006).
- We found that this model can be applied in ESL classes as well as all content area classes because it offers a framework for instruction that incorporates best practices for teaching both language and content.
- From 1999 to 2002, we field-tested and refined the SIOP Model’s professional development program, which incorporates key features of effective teacher development as recommended then by Darling-Hammond (1998) and still recommended today (Darling-Hammond & Richardson, 2009). The program includes professional development institutes (see <http://www.siop.pearson.com>), videotapes of exemplary SIOP teachers (Hudec & Short, 2002a, 2002b), facilitator’s guides (Short, Hudec, & Echevarría, 2002), and other training materials.

■ NJ SIOP Research: Improvement in English Language Proficiency

- From 2004–2007 we replicated and scaled up the SIOP research in a quasi-experimental study. *Academic Literacy through Sheltered Instruction for Secondary English Language Learners* was conducted by researchers at the Center for Applied Linguistics in two districts in New Jersey and funded by the Carnegie Corporation of New York and the Rockefeller Foundation from 2004–2007. The treatment and comparison districts each had one high school and two middle schools with ESL programs and had multilingual student populations.
- In the treatment site, math, science, social studies, language arts, ESL, and technology teachers participated in ongoing SIOP Model training: approximately 35 teachers for two years (Cohort 1) and an additional 25 for one year (Cohort 2). The professional development program included summer institutes, follow-up workshops, and on-site coaching. The teachers in the comparison site did not receive any SIOP Model training.
- We collected teacher implementation data (two classroom observations each year, one in the fall, the other in the spring) using the SIOP protocol at both sites. We found that 56% of the treatment teachers in Cohort 1 became high

implementers of the SIOP Model after one year and 71% were high implementers after two. Seventy-four percent of the Cohort 2 teachers, who joined the Cohort 1 teachers at their schools, reached the high implementation level in just one year. At the comparison site, fewer teachers implemented the SIOP features to a high level: 5% of the teachers in the first year; 17% by the second year (Short, Fidelman, & Louguit, 2012).

- We also collected student data from the state English language proficiency assessment at that time, the IPT (Idea Proficiency Tests), for all English learners in Grades 6–12. 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).

■ CREATE Research: Fidelity Matters and All Students Benefit—English Learners and English Speakers Alike

- From 2005–2011, researchers from California State University, Long Beach, and the Center for Applied Linguistics participated in the program of studies at the National Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE), funded by the U.S. Department of Education. The study, *The Impact of the SIOP® Model on Middle School Science and Language Learning*, first examined the SIOP Model in middle school science classrooms (Himmel, Short, Richards, & Echevarría, 2009) and later applied the SIOP Model as the professional development framework for a school-wide intervention (Echevarría & Short, 2011). In this set of studies, we used an experimental design and English learners, former English learners, and native English speakers were part of the treatment and control student populations.
- A pilot study was conducted to develop SIOP science curriculum units, where local standards and curricula were enhanced with SIOP features, and to design and field-test science language assessments that would measure student scientific vocabulary, reading comprehension, and writing skills.
- In 2006–2007, an experimental study was conducted in eight middle schools for one semester. Five received the treatment, which was SIOP professional development, classroom-based coaching, and four SIOP science units developed by researchers and teacher consultants. Three schools were control sites where teachers taught in their regular fashion with their own lessons. Treatment and control teachers were observed and their lessons were rated using the SIOP protocol.
- Results showed that students in the treatment classes outperformed control students (Echevarría, Richards-Tutor, Canges, & Francis, 2011) and the higher the level of SIOP implementation, the better the students performed on assessments (Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011). This result held true for English learners, former English learners, and native English speakers.

- During the 2009–2010 school year, another experimental study took place. A two-year intervention focused school-wide on Grade 7 and the SIOP Model was the overarching professional development framework (Echevarría & Short, 2011). Other content-specific curriculum interventions tested through earlier years of the CREATE program were implemented as well. Eight schools were randomly assigned to treatment or control. The four treatment schools had SIOP professional development and classroom-based coaching for SIOP implementation, and where applicable, for the content-specific curriculum intervention. The teachers in the four control schools delivered regular instruction without curriculum units or SIOP training. Their instruction was observed for research purposes, but they did not receive feedback.
- In the 2010–2011 school year, teachers in three of the prior year's control schools became treatment teachers and received the SIOP professional development and curriculum interventions as well. A new treatment school joined the study that year, bringing the number of schools to four.
- Researchers collected data in the treatment and control sites during both years. Teacher implementation levels were measured with the SIOP protocol and other tools. Student performance was measured with standardized tests and curriculum-based assessments. Analyses showed that this school-wide intervention improved outcomes in content knowledge and academic English for both English learners and native English speakers in the treatment classes. Specifically, students in SIOP curriculum groups outperformed control students to a significant degree on criterion-referenced vocabulary, science, and social studies measures (Short & Himmel, 2013).

■ Program Evaluation and Other Research

- School districts have conducted a number of program evaluations on their implementation of the SIOP Model that 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; Friend, Most, & McCrary, 2009; Honigsfeld & Cohan, 2008; McIntyre et al., 2010; Smolen, et al., 2015).

■ Uses of the SIOP Model and Protocol

Since the SIOP Model was first published in 2000, the following uses for the observation tool and professional development program have been realized:

- Teacher lesson planning checklist and self-reflection guide
- Classroom observation tool for administrators and coaches
- Supervision tool for faculty to observe student teachers
- Research observation tool for fidelity of model implementation
- Program of professional development
- Framework for development of sheltered curricula

■ Conclusion: SIOP Research to Date

By looking at these research studies as a whole, we can see that SIOP instruction is making a positive learning difference for English learners and other students who are in the classrooms. No one is disadvantaged by SIOP instruction; rather, the focus on academic literacy and scaffolded instruction help all students learn academic English and content curricula better.

■ Books

Core SIOP Texts:

- Echevarría, J., Vogt, M.E., & Short, D. (2017). *Making content comprehensible for English learners: The SIOP® Model* (5th ed.). New York: Pearson.
- Echevarría, J., Short, D., & Peterson, C. (2012). *Using the SIOP® Model with pre-K and kindergarten English learners*. New York: Pearson.
- Echevarría, J., Vogt, M.E., & Short, D. (2014a). *Making content comprehensible for elementary English learners: The SIOP® Model* (2nd ed.). New York: Pearson.
- Echevarría, J., Vogt, M.E., & Short, D. (2014b). *Making content comprehensible for secondary English learners: The SIOP® Model* (2nd ed.). New York: Pearson.

Additional SIOP Texts:

- Echevarría, J., Short, D., & Vogt, M.E. (2008). *Implementing the SIOP® Model through effective professional development and coaching*. New York: Pearson.
- Echevarría, J., Vogt, M.E., & Short, D. (2010). *The SIOP® Model for teaching mathematics to English learners*. New York: Pearson.
- Short, D., & Echevarría, J. (2016). *Developing academic language using the SIOP Model*. New York: Pearson.
- Short, D., Echevarría, J., & Vogt, M.E. (2008). *The SIOP® Model for administrators*. New York: Pearson.
- Short, D., Vogt, M.E., & Echevarría, J. (2011a). *The SIOP® Model for teaching history-social studies to English learners*. New York: Pearson.
- Short, D., Vogt, M.E., & Echevarría, J. (2011b). *The SIOP® Model for teaching science to English learners*. New York: Pearson.
- Vogt, M.E., & Echevarría, J. (2008). *99 ideas and activities for teaching English learners with the SIOP® Model*. New York: Pearson.
- Vogt, M.E., Echevarría, J., & Washam, M. (2015). *99 more ideas and activities for teaching English learners with the SIOP® Model*. Boston, MA: Alyn & Bacon.
- Vogt, M.E., Echevarría, J., & Short, D. (2010). *The SIOP® Model for teaching English-language arts to English learners*. New York: Pearson.

Teaching English Learners with Learning Challenges:

- Echevarría, J., & Graves, A. (2015). *Sheltered content instruction: Teaching English learners with diverse abilities* (5th ed.). New York: Pearson.
- Echevarría, J., Richards-Tutor, C., & Vogt, M.E. (2015). *Response to intervention (RTI) and English learners: Using the SIOP Model* (2nd ed.). New York: Pearson.

Journal Articles and Book Chapters

- Echevarría, J., & Colburn, A. (2006). Designing lessons: Inquiry approach to science using the SIOP[®] Model. In A. Fathman & D. Crowther, (Eds.), *Science for English language learners* (pp. 95–108). Arlington, VA: National Science Teachers Association Press.
- Echevarría, J., Richards-Tutor, C., Canges, R., & Francis, D. (2011). Using the SIOP Model to promote the acquisition of language and science concepts with English learners. *Bilingual Research Journal*, 34(3), 334–351.
- Echevarría, J., Richards-Tutor, C., Chinn, V., & Ratleff, P. (2011). Did they get it? The role of fidelity in teaching English learners. *Journal of Adolescent and Adult Literacy*, 54(6), 425–434.
- Echevarría, J., & Short, D. (2004). Using multiple perspectives in observations of diverse classrooms: The Sheltered Instruction Observation Protocol (SIOP). In H. Waxman, R. Tharp, & S. Hilberg (Eds.), *Observational research in U.S. classrooms: New approaches for understanding cultural and linguistic diversity*. Boston, MA: Cambridge University Press.
- Echevarría, J., & Short, D. (2010). Programs and practices for effective sheltered content instruction. In California Department of Education (Ed.), *Improving education for English learners: Research-based approaches* (pp. 250–321). Sacramento, CA: CDE Press.
- Echevarría, J., Short, D., & Powers, K. (2006). School reform and standards-based education: An instructional model for English language learners. *Journal of Educational Research*, 99(4), 195–210.
- Echevarría, J., & Vogt, M.E. (2010). Using the SIOP[®] Model to improve literacy for English learners. *New England Reading Association Journal (NERAJ)*, 46(1) 8–15.
- Guarino, A.J., Echevarría, J., Short, D., Schick, J.E., Forbes, S., & Rueda, R. (2001). The Sheltered Instruction Observation Protocol. *Journal of Research in Education*, 11(1), 138–140.
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Blogs

A number of current and archived blog posts about using the SIOP Model can be found at <https://be.wordpress.com/tag/the-siop-model/>

SIOP Website

Various resources are available, including video clips of SIOP classrooms, on our website at siop.pearson.com

Glossary

Academic language: Language used in formal contexts for academic subjects and purposes. The aspect of language connected with literacy and academic achievement. This includes technical and general academic terms (*see* Cognitive/Academic Language Proficiency–CALP) and reading, writing, listening, and speaking skills as used in school to acquire new knowledge and accomplish academic tasks.

Assessment: The orderly process of gathering, analyzing, interpreting, and reporting student performance, ideally from multiple sources over a period of time.

Basic Interpersonal Communicative Skills

(BICS): Face-to-face conversational fluency, including mastery of pronunciation, vocabulary, and grammar. English learners typically acquire conversational language used in everyday activities before they develop more complex, conceptual, academic language proficiency. (*See* Social language.)

Bilingual education: School instruction using two languages, generally a native language of the student and a second language. The amount of time that each language is used depends on the type of bilingual program, its specific objectives, and students' level of language proficiency.

Cognitive/Academic Language Proficiency

(CALP): Language proficiency associated with schooling, and the abstract language abilities required for academic work. A more complex, conceptual, linguistic ability that includes analysis, synthesis, and evaluation. (*See* Academic language.)

Common Core State Standards (CCSS): A set of Grades K–12 English language arts and mathematics standards, adopted by most states in the United States, the District of Columbia, and some U.S. territories.

Content-based ESL: An instructional approach in which content topics are used as the vehicle for second language learning. A system of instruction in which teachers use a variety of instructional techniques as a way of developing second language, content knowledge, and cognitive and study skills. It is often delivered through thematic units and tied to the subject area instruction that English learners receive.

Content objectives: Statements that identify what students should know and be able to do in a subject area for a given lesson. They support school district and state content standards and learning outcomes, and they guide teaching and learning in the classroom.

Content standards: Definitions of what students are expected to know and be capable of doing for a given content area; the knowledge and skills that need to be taught in order for students to reach competency; what students are expected to learn and what schools are expected to teach. May be national, state, or district standards.

Culturally responsive teaching: An approach to classroom instruction and communication that respects the different cultural characteristics of all students. The learning environment reflects high expectations for all. Class discussions are open to cultural viewpoints, student ways of knowing are elicited, collaboration is frequent, pedagogical materials are multicultural, and values are shared and affirmed. The goal is equitable access for all to high quality instruction. Also known as *culturally relevant teaching*.

Culture: The customs, lifestyle, traditions, behavior, attitudes, and artifacts of a given people. Culture also encompasses the ways people organize and interpret the world, and the way events are perceived based on established social norms. A system of standards for understanding the world.

Differentiated instruction: In order to create a learning environment that addresses the diversity of abilities and language proficiency levels represented in many classrooms, teachers adjust the pace, amount, level, or kind of instruction to meet the individual needs and abilities of each learner. Teachers may differentiate the way new information is presented, the texts and materials being used, the tasks being required of students, or the grouping of the learners.

Engagement: When students are fully taking part in a lesson, they are said to be engaged. This is a holistic term that encompasses active listening, reading, writing, responding, and discussing. The level of students' engagement during a lesson may be assessed to a greater or lesser degree. A low SIOP score for engagement would imply frequent chatting, daydreaming, nonattention, and other off-task behaviors.

English language development (ELD): Used in some regions to refer to programs and classes to teach students English as a second (additional) language. May refer to the language teaching specialists and their teaching certifications or endorsements. (*See* ESL.) May refer to some state or district standards. (*See* ELP standards.)

English language proficiency (ELP) standards: Definitions of what students are expected to know and be capable of doing in English; the knowledge and skills that need to be taught in order for students to reach competency; what students are expected to learn and what schools are expected to teach. May be national, state, or district standards. Each state is required by the federal government to have ELP standards and related assessments. (*See* ELD).

English learners: Children and adults who are learning English as a second or additional language. This term may apply to learners across various levels of proficiency in English. English learners may also be referred to as English language learners (ELLs), non-English speaking (NES) students, limited English proficient (LEP), and nonnative speakers (NNS).

English-only: Used in some regions, English-only refers to students whose native language is English.

ESL: English as a second language. Used to refer to programs and classes to teach students English as a second (additional) language. May refer to the language teaching specialists and their teaching certifications or endorsements.

ESOL: English speakers of other languages. Students whose first language is not English and who do not write, speak, and understand the language as well as their classmates. In some regions, this term also refers to the programs and classes for English learners.

Home language: The language, or languages, spoken in the student's home by people who live there. Also referred to as first language (L1), primary language, or native language.

Informal assessment: Appraisal of student performance during lessons; characterized as frequent, ongoing, continuous, and involving simple but important techniques such as verbal checks for understanding, teacher-created assessments, and other nonstandardized procedures. This type of assessment provides teachers with immediate feedback.

Instructional conversations (IC): An approach to teaching that is an interactive dialogue with an instructional intent. An IC approach encourages thoughtful discussion around a concept or idea with balanced participation between teacher and students.

Inter-rater reliability: Measure of the degree of agreement between two different raters on separate ratings of one assessment indicator using the same scale and criteria.

L1: First language. A widely used abbreviation for the first language learned. Also known as primary, home, or native language.

L2: Second language. A widely used abbreviation for the second (or additional) language learned.

Language minority: In the United States, a student whose native language is not English. The individual student's ability to speak English will vary.

Language objectives: Statements that identify what students should know and be able to do while learning English (or another language) in a given lesson. They support students' language development, often focusing on vocabulary, functional language, language skills in reading, writing, listening and speaking, grammatical knowledge, and language learning strategies.

Language proficiency: An individual's competence in using a language for basic communication and for academic purposes. May be categorized as stages of language acquisition. (*See Levels of language proficiency.*)

Learning strategies: Mental processes and plans that people use to help them comprehend, learn, and retain new information. There are several types of learning strategies, such as cognitive, metacognitive, and language-based, and these are consciously adapted and monitored during reading, writing, and learning.

Levels of language proficiency: Students learning language progress through stages. To date, the stages or levels have been labeled differently in a number of states. In seminal work in this area, Krashen and Terrell (1983) described the stages as the following: Preproduction, Early production, Speech emergence, Intermediate fluency, and Advanced fluency. At present, many states have levels similar to those in the WIDA's English language proficiency standards (WIDA, 2012):

Entering (Level 1): Lowest level, essentially no English proficiency. Students are often newcomers and need extensive pictorial and non-linguistic support. They need to learn basic oral language and literacy skills in English.

Beginning (Level 2): Second lowest level. Students use phrases and short sentences and are introduced to general content vocabulary and lesson tasks.

Developing (Level 3): Next level of proficiency. Students can use general and specific language related to the content areas; they can speak and write sentences and paragraphs although with some errors, and they can read with instructional supports.

Expanding (Level 4): Akin to an intermediate level of proficiency. Students use general, academic, and specific language related to content areas. They have improved speaking and writing skills and stronger reading comprehension skills (compared to the Developing level).

Bridging (Level 5): Akin to advanced intermediate or advanced level of proficiency. Students use general academic and technical language of the content areas. They can read and write with linguistic complexity. Students at this level may have exited the ESL or ELD program, but their language and academic performance is still monitored.

Reaching (Level 6): At or close to grade-level proficiency. Students' oral and written communication skills are comparable to those of native English speakers at their grade level. Students at this level have exited the ESL or ELD program, but their language and academic performance is still monitored.

Limited English proficient (LEP): A term used to refer to a student with restricted understanding or use of written and spoken English; a learner who is still developing competence in using English. The federal government continues to use the term *LEP*, while *EL* or *ELL* is more commonly used in schools.

Multi-tiered System of Support (MTSS): Although the terms RTI and MTSS are often used interchangeably, MTSS differs from RTI in that it is more comprehensive, addressing behavioral, social and emotional issues experienced by students while RTI focuses primarily on academic progress. (*See RTI.*)

Native English speaker: An individual whose first language is English. (*See English-only.*)

Native language: An individual's primary, home, or first language (L1).

Next Generation Science Standards (NGSS): A set of Grades K–12 science standards, adopted by about 15 states in the United States and the District of Columbia, as of the 2015–16 school year.

Non-English speaking (NES): Individuals who are in an English-speaking environment (such as U.S. schools) but who have not acquired any English proficiency. May also be referred to as non-native English speaker.

Non-native English speaker: Individuals who do not speak English as a first language. May be at any level of proficiency in English.

Nonverbal communication: Paralinguistic messages such as intonation, stress, pauses, and rate of speech, and nonlinguistic messages such as gestures, facial expressions, and body language that can accompany speech or be conveyed without the aid of speech.

PARCC (Partnership for Assessment of Readiness for College and Careers): A set of K–12 computer-based assessments developed and used by states to measure student attainment of the Common Core standards in English language arts/literacy and mathematics.

Primary language: An individual's home, native, or first language (L1).

Pull-out instruction: Students are “pulled out” from their regular classes for separate classes of ESL or ELD instruction, remediation, or acceleration. These are more commonly found in elementary programs.

Realia: Real-life objects and artifacts used to supplement teaching; can provide effective visual scaffolds for English learners.

Reliability: Statistical consistency in measurements and tests, such as the extent to which one assessment will repeatedly produce the same results given the same conditions and student population.

Response to Intervention (RTI): The intent of RTI is to identify at-risk learners early and, using a tiered system, provide effective instruction in general education first (typically called Tier 1) followed by targeted intervention (Tiers 2 and 3) as needed. This process is designed to reduce the number of students eligible for and in need of special education services. The focus is on finding ways to change instruction (or student

behaviors) so the learner can be successful. RTI involves documenting a change in behavior or performance as a result of intervention and assessments. SIOP instruction can be provided as Tier I instruction.

Rubrics: Statements that describe indicators of performance, which include scoring criteria, on a continuum; may be described as “developmental” (e.g., emergent, beginning, developing, proficient) or “evaluative” (e.g., exceptional, thorough, adequate, inadequate).

SBAC (Smarter Balanced Assessment Consortium): A set of K–12 computer-based assessments with adaptive technology that have been developed and used by states to measure student attainment of the Common Core standards in English language arts/literacy and mathematics.

Scaffolding: Support for student learning of new information and performance of the tasks. Often provided by the teacher through demonstration, modeling, verbal prompts (e.g., questioning), feedback, graphic organizers, language frames, and more, across successive engagements. These supports are gradually withdrawn, to transfer more autonomy to the learner, leading to independence.

Self-contained ESL class: A class consisting solely of English speakers of other languages for the purpose of learning English or a subject area. An effective alternative to pull-out instruction.

Sheltered instruction: A means for making content comprehensible for English learners while they are developing academic English proficiency. The SIOP Model is an empirically validated model of sheltered instruction. Sheltered classrooms may include a mix of native English speakers and English learners or only English learners. Sheltered lessons integrate language and content learning and may include culturally responsive instruction as well. (*See SIOP®.*)

SIOP®: The term for an empirically validated model of sheltered instruction designed to make grade-level academic content understandable for English learners while at the same time

developing their academic English language proficiency. Formerly spelled out as the Sheltered Instruction Observation Protocol, the authors recently decided to stop using the full acronym definition because the acronym SIOP is more commonly used in schools and in the professional literature. SIOP refers to the observation protocol and the lesson planning guide which ensure that teachers are consistently implementing practices known to be effective for English learners. It is often used as an adjective too, as in SIOP teachers, SIOP lessons, and SIOP classrooms.

Social language: Basic language proficiency associated with fluency in day-to-day situations, including the classroom. Also referred to as conversational language. (*See* Basic Interpersonal Communicative Skills [BICS].)

Sociocultural context: The environment or situation in which people live, work, or go to school that includes social and cultural elements. Student learning in a classroom may be influenced by social and cultural factors from outside the classroom, such as economic status, level of parental education, family structure, and discrimination.

Standards-based assessment: Assessment involving the planning, gathering, analyzing, and reporting of a student's performance according to the English language proficiency and/or content standards.

Validity: A statistical measure of an assessment's match between the information collected and its stated purpose; evidence that inferences from evaluation are trustworthy.

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Chapter 1

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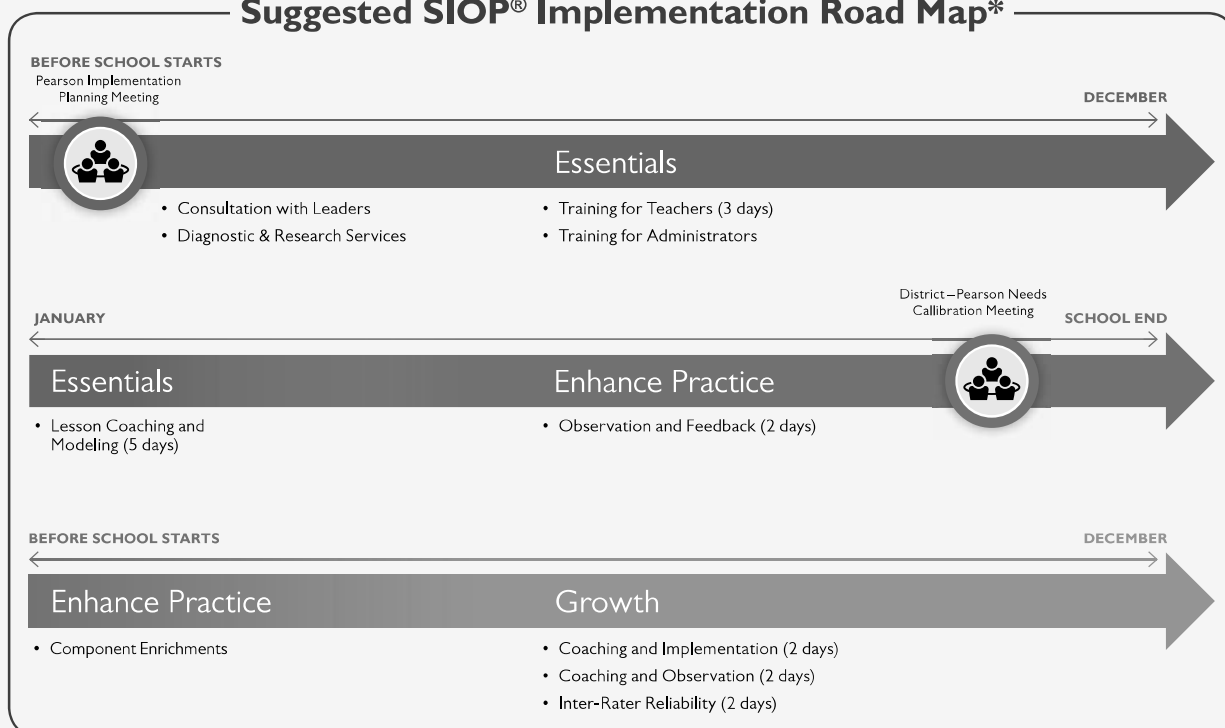
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