

DEVELOPING ACADEMIC LANGUAGE: THE FOUNDATION OF SCHOOL SUCCESS

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OBJECTIVES

Content

- Review research on integrating academic language and content for English learners
- Demonstrate instructional practices for academic language development through modeling and video clips

Language

- Identify features of academic language and how used in classrooms
- Practice writing language objectives that reflect academic language use
- Discuss and present techniques to introduce and emphasize key vocabulary

Quick - Write

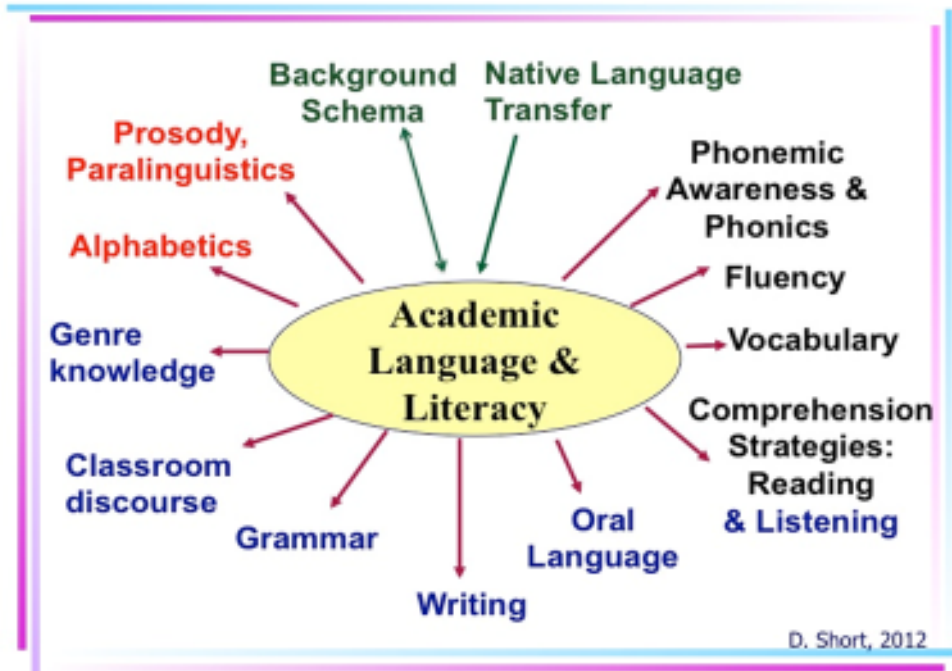
What is academic language?

RESEARCH ON ELL ACADEMIC LANGUAGE & LITERACY

- ELLs are at varying stages on the path to academic literacy. Some struggle, some do not. Individual student characteristics play a significant role in English literacy development.
- Oralcy and literacy can develop simultaneously.
- L1 transfers phonemic awareness; comprehension, language learning strategies; L1 oral knowledge.
- L1 literacy is not necessary for L2 literacy, but beneficial. Academic literacy in the native language facilitates the development of academic literacy in English.
- Teaching the five components of reading (NICHD, 2000) to ELLs is necessary but not sufficient to develop academic literacy. ELLs also need to develop oral language proficiency.
- Vocabulary development is a must.
- High quality instruction for English learners is similar to high quality instruction for other, English-speaking students, but ELLs need instructional accommodations and supports.

Elements of Academic Language and Literacy (for more, see Short & Echevarria, 2016)

Elements of Academic Language and Literacy



Academic Language: Examples of Challenging Terms, Syntax & Discourse

Vocabulary

1. *New technical terms* (e.g., biome, perimeter, metaphor)
2. *General academic terms* (e.g., result, conclusion, characteristics, identify, analyze)
3. *Multiple meaning words* (e.g., root, resolution, power)
4. *Similar terms with different meanings* (e.g., atomic mass vs., atomic number)
5. *Nominalizations* (i.e., verbs transformed into nouns) (e.g., evaporate > evaporation)
6. *Complex noun phrases* (e.g., least common denominator, frequency distribution)
7. *Synonyms* (e.g., add, increase, increase by, plus, more, and)
8. *Symbols* (e.g., +, =, %, H₂)
9. *Same symbol, different meanings* (e.g., x signifies a variable, an axis, or a chromosome)

10. *Multiple representations of a concept* (e.g., 20/5 and $20 \div 5$)
11. *Idioms* (e.g., rule of thumb, gut feeling, keep an eye on, start from scratch)

Syntax

1. *Comparatives* (e.g., greater than, six times as much, as many as)
2. *Preposition usage* (e.g., divided by, divided into)
3. *Articles and modifier usage* (e.g., One factor is more influential than another factor in plant growth.)
4. *Passive voice* (e.g., The ballots were distributed in November.)
5. *Word problems and Testing language* (e.g., Which type of relationship exists when...; Which process is represented by..., Determine the figurative language used...)
6. *Logical connectors* (e.g., if ..., then ___; given that ...)
7. *Similar language, different function* (e.g., I have 2 ounces. I add an additional 2. How many do I have? How many *more* do I have?)
8. *Embedded clauses* (e.g., relative clauses – A temperate rainforest which has more than one season differs from a tropical rainforest.)
9. *Multiple ways of expressing terms orally* (e.g., NaCl can be “sodium chloride,” “salt,” and “a compound of sodium and chloride atoms”).

Text Discourse

1. *Reading process*: Students read from left to right for sentences, but also right to left (as when reading an integer number line), from top to bottom or vice versa (as when reading from tables), diagonally (as when reading some graphs), and holistically and with detail analysis (as when reading diagrams and images).
2. *Text structures and styles*: Varied structures, sometimes embedded (e.g., cause-effect embedded in sequential structure in history). Textbooks are dense, using many abstract and technical terms with precise meanings for the subject but with different meanings in other contexts. They use long noun phrases, synonyms, conjunctions and other logical connectors, and reported speech.
3. *Background knowledge*: Student schema may not fit text assumptions. English learners may lack knowledge, have conflicting experiences or knowledge, or be unable to make inferences due to incomplete background schema.
4. *Tone*: Varied across disciplines; may be formal, authoritative, cautious or detached in tone.
5. *Point of View*: Maybe be first, second or third person in literature, first or third person in primary sources. Third person may also be omniscient.

THE SIOP MODEL: SHELTERED INSTRUCTION FOR ENGLISH LEARNERS

In the SIOP Model, language and content objectives are systematically woven into the grade-level subject curriculum that teachers present to students through modified instruction in English. The Sheltered Instruction Observation Protocol (SIOP) operationalizes the model. The protocol is composed of 30 items grouped into 8 components. (Echevarria, Vogt, & Short, 2008)

Lesson Preparation. Each SIOP lesson has separate language and content objectives that are linked to the curriculum & standards and taught systematically. Content concepts suit the grade and developmental level of the students. SIOP lessons include meaningful activities that integrate concepts with language practice and supplemental materials to support the academic text.

Building Background. Effective SI teachers make connections between new concepts and past learning and between concepts and students' personal experiences. These connections help students organize new information as part of their cognitive processing. Furthermore, teachers must explicitly teach and emphasize the key academic vocabulary of the concepts and provide opportunities for ELLs to use this vocabulary in meaningful ways.

Comprehensible Input. Accomplished SI teachers modulate their rate of speech, word choice, and sentence structure complexity according to the proficiency level of ELLs. They make content comprehensible through content-ESL techniques. SI teachers also explain academic tasks clearly, both orally and in writing, providing models and examples wherever possible.

Strategies. Teachers and students need to use strategies in SIOP lessons. Teachers must scaffold instruction, beginning at a level that encourages student success and providing support to move the students to a higher level of understanding and accomplishment. Teachers highlight study skills and learning strategies for students and create tasks and ask higher-order questions that require students to use the strategies and talk about them.

Interaction. High quality SIOP classes provide frequent opportunities for interaction and discussion between teacher and students, and among students. It is through discussion with classmates and with the teacher that ELLs practice important skills like elaborating, negotiating meaning, clarifying and confirming information, persuading, disagreeing, and evaluating.

Practice & Application. Effective SIOP lessons include activities that encourage students to practice and apply the content they are learning, AND practice and apply the language skills they are learning too. These activities are most beneficial when they include visual, hands-on, and other kinesthetic tasks.

Lesson Delivery. Successful delivery of a SIOP lesson means that the content and language objectives were met, the pacing was appropriate, and the students had a high level of engagement throughout the class period. All students must have opportunities to practice their language skills within the context of the academic tasks.

Review & Assessment. ELLs need to review key vocabulary and concepts, and teachers need to assess how well students retain the information—through frequent feedback to students and informal assessments throughout the lesson. SIOP teachers should offer multiple pathways for students to demonstrate their understanding of the content.

SIOP Lesson Preparation Component

- **Content objectives** clearly defined, displayed and reviewed with students
- **Language objectives** clearly defined, displayed and reviewed with students
- **Content concepts appropriate** for age and educational background
- **Supplementary materials** used to a high degree, making the lesson clear and meaningful (e.g., graphs, models, visuals)
- **Adaptation of content** (e.g., text, assignment) to all levels of student proficiency
- **Meaningful activities** that integrate lesson concepts (e.g., interviews, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking

Categories of Language Objectives (from Echevarria, Vogt & Short, 2013, pp. 33-34)

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; science, social studies, and math terms).

- *Content vocabulary:* These key words and technical terms are subject specific. ELLs need them to understand lesson concepts but they may be low frequency words (i.e., not regularly used outside of the classroom), particularly those in high school courses.
- *General academic vocabulary:* These words include cross-curricular academic terms (e.g., event, result, 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 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, they can begin to guess the meaning of words like vision, visual, invisible, and visualize.

Language Skills and Functions. The reading, writing, listening, and speaking skills students need to understand and convey meaning in a lesson and their purpose for using language.

- English learners need direct, progressive instruction in language skills (e.g., read and find evidence in text; orally justify a math solution) and opportunities to practice. The skills taught need to link to the topic and/or tasks of the lesson.
- Students have to use language for a specific purpose in a lesson—to describe, compare, or predict, for example. English learners need instruction particularly in ways (e.g., academic language frames) to articulate their descriptions or comparisons or predictions.

Language Structures and Grammar. The patterns, structures, rules, and descriptions of expressions in a language. It includes parts of speech, sentence formation, usage, and punctuation.

- Teachers teach the language structures in the written or spoken discourse of the subject (if-then clauses, superlative adjectives, passive voice).

- Having a list language structures and grammar points (like a scope and sequence) is a valuable reference tool for content and language teachers alike.

Language Learning Strategies. Mental strategies and ways of thinking that give students resources to learn on their own.

- Analytic strategies (e.g., use cognates, roots, or affixes to guess word meaning)
- Corrective strategies (e.g., reread confusing text)
- Self-monitoring strategies (e.g., make and confirm predictions)
- Prereading strategies (e.g., relate to personal experience, preview pictures)
- Language practice strategies (e.g., repeat or rehearse phrases, imitate a native speaker).

Sample Language Targets

<p>Academic Vocabulary</p> <p>synonyms</p> <p>sequence terms</p> <p>technical words</p>	<p>Language Skills/Functions</p> <p>making comparisons</p> <p>asking questions</p> <p>reading for specific information</p>
<p>Language Structures/Grammar</p> <p>comparative adjs/clauses</p> <p>if-then clauses</p> <p>past-tense verbs</p>	<p>Language Learning Strategies</p> <p>clarifying questions</p> <p>representing data</p> <p>rehearsing</p>

Identifying Language Targets in Texts

ACTIVITY: Read this passage and identify possible language targets. Record below.

Spanish conquistadors had brought horses and cattle to the Americas in the 1500s. Spaniards who lived in what is now the American Southwest employed local Native Americans, some of whom they called Pueblos, to tend their horses. Horses, and knowledge about riding them, spread from group to group. Once, Native Americans had hunted buffalo on foot, but with horses hunters could kill as many buffalo in a day as they had once killed in a week.

(U.S. History, Globe Fearon, 1999, p. 127)

Academic Vocabulary	Language Skills & Functions
Language Structures & Grammar	Language Learning Strategies

ACTIVITY: Think of a unit you will teach next month. Consider the students' proficiency levels and what they need to learn about academic English. List possible targets for these students for this lesson in chart.

Language Targets for a Unit on _____

Academic Vocabulary	Language Skills & Functions
Language Structures & Grammar	Language Learning Strategies

SIOP Building Background Component

- Concepts explicitly **linked to students’ background experiences**
- **Links** explicitly made **between past learning and new concepts**
- **Key vocabulary emphasized** (e.g., introduced, written, repeated, and highlighted for students to see)

Guidelines for Academic Vocabulary Instruction

1. **Select words carefully** (content-specific, general academic, and word parts) and connect to unit topic, theme, or essential question.
2. **Teach words with visual supports**, student-friendly examples, personal and bilingual connections.
3. Provide **extensive practice** with each key word.
4. Teach **word learning strategies**.
5. Develop **word consciousness**.

ACTIVITY: Select Key Vocabulary

Return to your unit idea. List 2-5 terms for *each* type of vocabulary in your unit:

Content: Subject-Specific and Technical:

General Academic: Cross-curricular/Process/Function:

Word Parts: Roots and Affixes:

Sample Vocabulary Activities					
4 Corners Vocabulary	<p>Students divide a piece of paper into four quadrants to define and practice with new words. They write the word in the top left hand corner, draw a picture of the word in the top right hand corner, provide a definition in the bottom left hand corner, and use the word in a sentence in the bottom right hand corner.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Word</td> <td style="width: 50%; text-align: center;">Picture</td> </tr> <tr> <td style="text-align: center;">Definition</td> <td style="text-align: center;">Sentence</td> </tr> </table>	Word	Picture	Definition	Sentence
Word	Picture				
Definition	Sentence				
Frayer Map	<p>Students place a new word in a small circle in the center of a paper and create 4 quadrants around it. In the quadrants they label and list essential characteristics, nonessential characteristics, examples, and non-examples. Other options for quadrants include synonyms and antonyms.</p>				
Word Sort	<p>Students are given a packet of terms and they sort them according to predetermined categories. The categories may be based on the topic or concept that they fall under, or the word sort may be based on the structure of the word. For example, students may sort words based on their prefixes (e.g., “inter-”).</p>				
List-Group-Label	<p>A variation of Word Sort. First students generate words related to a topic (list). Second, they look at the words and try to arrange them in groups (group). Third, they provide a category name for the groups they have established (label). Note, it is sometimes useful to allow an “Other” category.</p>				
Concept Definition Map	<p>A concept map is a graphic representation of important information about a key concept. The center circle may be a broad concept such as “habitat” and sections leading off the circle may be organized to respond to questions such as “What is it?,” “What are some examples?,” “Why is it important?” and “What are related terms?”</p>				
Shades of Meaning	<p>Students focus on word choice, synonyms by intensity (content-happy-gleeful-delighted; walk-jog-run-dash). Can use paint chip sheets to introduce to students.</p>				
Word Generation	<p>A root (or affix) is provided, and students brainstorm words that include that root. The class analyzes the meaning of each brainstormed word to figure out what the root means. If they cannot determine the meaning, the teacher may give hints or explain it. Then students apply the meaning to the words in the list.</p>				

RESOURCES

- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2): 213–238.
- Echevarria, 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.
- Echevarria, J., Short, D., & Powers, K. (2006). School reform and standards-based education. How do teachers help English language learners? *Journal of Educational Research*, 99 (4), 195-210.
- Echevarria, J., Short, D. & Peterson, C. (2012). *Using the SIOP Model with Pre-K and Kindergarten English Learners*. Boston: Allyn & Bacon.
- Echevarria, J., Short, D., & Vogt, ME. (2008). *Implementing the SIOP model through effective professional development and coaching*. Boston, MA: Pearson/Allyn & Bacon.
- Echevarria, J., Vogt, M.E., & Short, D. (2013). *Making content comprehensible to English learners: The SIOP model*. 4th ed. Boston: Pearson/Allyn & Bacon.
- Echevarria, J., Vogt, M.E., & Short, D. (2010). *The SIOP model for teaching mathematics to English learners*. Boston: Pearson Allyn & Bacon.
- Hiebert, E.H. (2005). *1,000 most frequent words in middle-grades and high school texts*. Available at www.textproject.org.
- Short, D., & Echevarria, J. (2016). *Developing academic language with the SIOP model*. Boston: Pearson Allyn & Bacon.
- Short, D., Cloud, N., Morris, P., & Motta, J. (2012). Cross-district collaboration: Curriculum and professional development. *TESOL Journal*, 3(3), 402-424.
- Short, D., Echevarria, J., & Richards-Tutor, C. (2011). Research on academic literacy development in sheltered instruction classrooms. *Language Teaching Research*, 15(3), 363-380.
- Short, D., Fidelman, C., & Louguit, M. (2012). Developing academic language in English language learners through sheltered instruction. *TESOL Quarterly*, 46(2), 333-360.
- Short, D., & Fitzsimmons, S. (2007). *Double the work: Challenges and solutions to acquiring language and academic literacy for adolescent ELLs*. Report to Carnegie Corporation of NY. Washington, DC: Alliance for Excellent Education. (<http://www.all4ed.org/publications/DoubleWork/index.html>)
- Short, D., Vogt, M.E., & Echevarria, J. (2011). *The SIOP model for teaching science to English learners*. Boston: Pearson Allyn & Bacon.
- Short, D., Vogt, M.E., & Echevarria, J. (2011). *The SIOP model for teaching history-social studies to English learners*. Boston: Pearson Allyn & Bacon.
- Vogt, M.E., Washam, M., & Echevarria, J. (2014). *99 MORE ideas and activities for teaching English learners with the SIOP® model*. Boston: Pearson Allyn & Bacon.
- Vogt, M.E., & Echevarria, J. (2008). *99 ideas and activities for teaching English learners with the SIOP® model*. Boston: Pearson Allyn & Bacon.
- Vogt, M.E., Echevarria, J., & Short, D. (2010). *The SIOP model for teaching English-language arts to English learners*. Boston: Pearson Allyn & Bacon.
- Vogt, M.E., & Echevarria, J. (2008). *99 ideas and activities for teaching English learners with the SIOP® Model*. Boston: Pearson Allyn & Bacon.
- Zwiers, J., & Crawford, M. (2011). *Academic conversations: Classroom talk that fosters critical thinking and content understandings*. Portland, ME: Stenhouse.