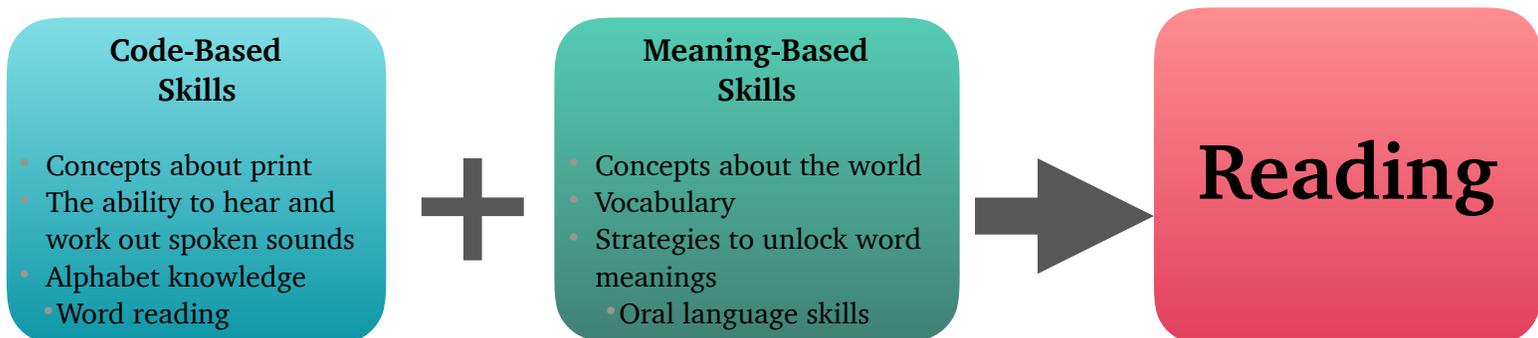# What Goes into Effective Reading Comprehension?

Produced for the New York State Education Department by Nonie K. Lesaux, PhD & Emily Phillips Galloway, EdD

Why is this important?

Despite receiving daily instruction, year-after-year, many students, including many English Learners, struggle to comprehend texts. But not all students struggle with complex reading for the same reason, and therefore instruction must be guided by these individual differences. This brief focuses on the two broad categories of skills that go into successful reading comprehension—and to be taken into account when designing instruction, intervention, and goals for our readers.

To become readers, students must develop both the skills and knowledge needed (1) to read the words on the printed page ('code-based' skills) and (2) to understand complex texts ('meaning-based' skills). As shown below, code-based skills are central to mastering what we think of as the "mechanics" of reading—these skills include the ability to effectively, and, with practice, automatically map letters to their respective sounds in combinations, and therefore to read the words on the page. To read words effectively, the reader has mastered the relationship between 26 letters and 44 sounds and their different combinations in written words. In the context of our ultimate goal for every reader to comprehend complex text, we think of code-based skills as necessary but not sufficient. Meaning-based skills are the skills that more directly relate to comprehending text. For instance, all language skills, such as oral language, vocabulary, and listening comprehension, are considered meaning-based skills because they are needed to access and apply a text's message.

Code-Based Skills	Meaning-Based Skills	Reading
• Concepts about print • The ability to hear and work out spoken sounds • Alphabet knowledge • Word reading	• Concepts about the world • Vocabulary • Strategies to unlock word meanings • Oral language skills	

In fact, vocabulary knowledge, in particular, is so important for literacy development and achievement that the acquisition, use, and interpretation of words and phrases is represented in today's anchor English language arts standards for: (1) reading literature, (2) reading information text, and (3) language (NYS Board of Regents, 2017). Cognitive strategies needed to facilitate meaning construction and learning (Alexander and Jetton 2000; Cain, Oakhill, and Bryant, 2004), such as those focused on comprehension monitoring and making inferences (Cain, Oakhill, and Bryant, 2004) as well as those focused on unlocking the meanings of words using knowledge of meaningful word parts (morphology), context, and native language connections (Baker et al. 2014), are also included under the umbrella of meaning-based skills. The skills associated with "prosodic" reading (a component of fluency), such as using appropriate expression, intonation, and phrasing, are often also included in the meaning-based skills category (Kuhn et al. 2010).

We focus on the distinction between code and meaning-based skills because providing effective reading instruction hinges on understanding students' strengths and needs. Further, to provide effective intervention, it is crucial to understand the source of struggle.

Consider two second graders in the same classroom who struggle to read a connected text fluently and accurately—and who receive the same comprehension score or level—but who may have very different profiles and needs.
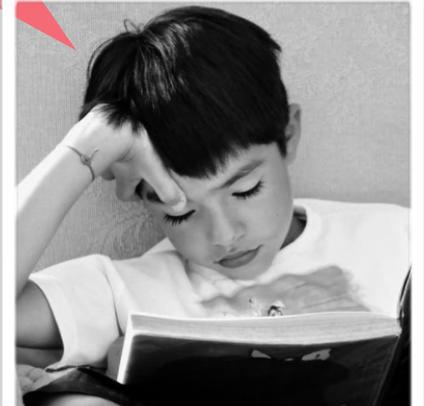
Student A struggles because of underdeveloped word reading skills (i.e., code-based skills); she reads each word slowly and laboriously.

Student B struggles because of underdeveloped vocabulary knowledge as it relates to the passage (i.e., meaning-based skills); he pauses as he tries to understand the text despite the unfamiliar words.

These readers need very different supports—and identifying these is a matter of understanding specifically what is causing the dysfluency[1].

How and when do these skills develop?

Both code-based and meaning-related skills contribute to all students' reading development and text comprehension[2]. To develop these skills among all readers, explicit intensive instruction is needed as part of a knowledge-building plan. But these skills differ in their developmental timetables and in the amount of instruction needed to acquire mastery. This has important implications for instruction and assessment.

Code-based skills are generally acquired by the 3rd grade and can be developed in a much shorter timeframe than meaning-based skills. As an example, approximately 20 minutes per day of phonics instruction from grades k-2 is adequate for typically-developing students to master sound-symbol correspondence. The same guideline applies to those who are acquiring English as an additional language in the primary grade classroom[3].

In contrast, meaning-based skills are not ever mastered and require instruction from early childhood through adolescence, at all grade-levels. Content- and idea-rich texts scaffold the thinking practices necessary to comprehend these texts through talk.

This is a shift in many early learning and elementary classrooms,

	Code-Based Skills	Meaning-Based Skills
Developmental Processes	• Typically mastered by 3rd grade • Constrained, i.e., mastery-oriented	• Develop from infancy through adulthood • Unconstrained, i.e., not mastered
Instructional Implications	• Requires explicitly systematic instruction, beginning in early childhood through third grade	• Require sustained instruction, beginning in early childhood through adolescence

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[1]Al Otaiba, S., Petscher, Y., Pappamihiel, N., Williams, R., Dyrlund, A., Connor, C., & Graesser, Arthur C. (2009). Modeling Oral Reading Fluency Development in Latino Students: A Longitudinal Study Across Second and Third Grade. Journal of Educational Psychology, 101(2), 315-329.; Schilling, S., Carlisle, J., Scott, S., & Zeng, J. (2007). Are Fluency Measures Accurate Predictors of Reading Achievement? *The Elementary School Journal*,107(5), 429-448.

[2] Gottardo, A., Mueller, J., & Graesser, Arthur C. (2009). Are First- and Second-Language Factors Related in Predicting Second-Language Reading Comprehension? A Study of Spanish-Speaking Children Acquiring English as a Second Language From First to Second Grade. Journal of Educational Psychology,101(2), 330-344; Mancilla-Martinez, Jeannette, & Lesaux, Nonie K. (2011). The Gap between Spanish Speakers' Word Reading and Word Knowledge: A Longitudinal Study. *Child Development*, 82(5), 1544-1560.

[3]Lesaux, Crosson, Kieffer, & Pierce. (2010). Uneven profiles: Language minority learners' word reading, vocabulary, and reading comprehension skills. Journal of Applied Developmental Psychology, *Journal of Applied Developmental Psychology*.

where the focus of literacy instruction is most often on code-based skill development. It was once thought that until grade three students were learning to read, and that after grade three they were reading to learn. We now recognize that this distinction is inaccurate—students should always be learning to read and reading to learn, and they must always be learning content if they are to develop adequate content and language knowledge to read proficiently.
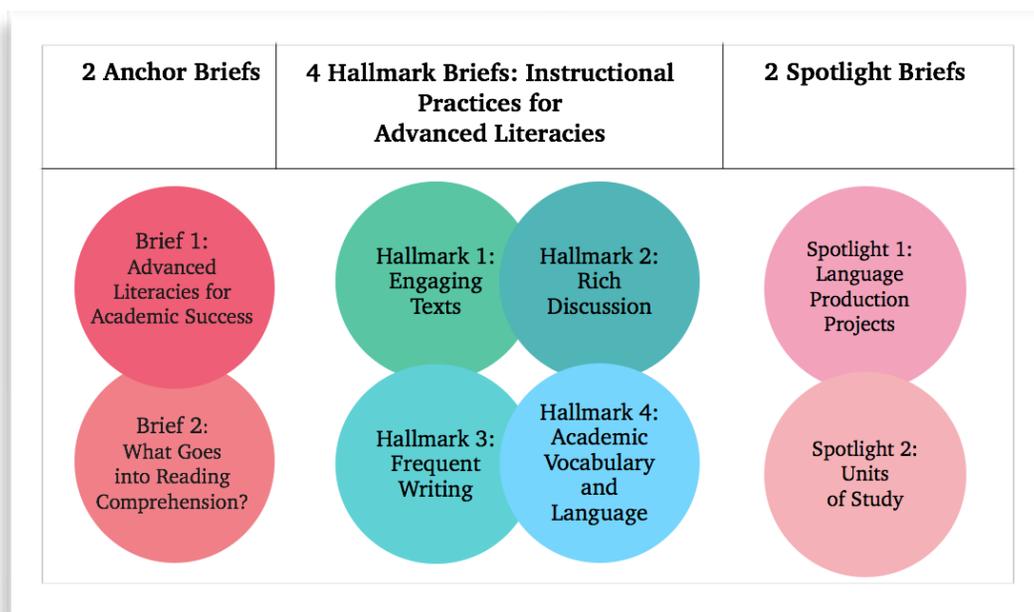
Using Home Language Resources

English Language Learners and Multilingual Learners bring knowledge of words (and their concepts) acquired in a home language to the classroom. The task for educators is to use instructional strategies and supports to help students establish connections between this knowledge and their developing knowledge in an additional language. In designing learning and teaching to support ELLs/MLLs, it is crucial to consider that word knowledge develops for students as they connect what they know about a word, in any language, with new information being taught.
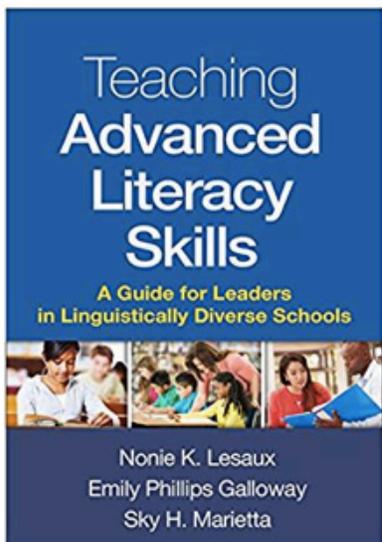
Quick Tip: Allow students to use home language resources as they are learning an additional language. If educators are not speakers of students' home languages, they can make students the experts by having them share the connections they are establishing across languages.

A Map of this Brief Series

This is Anchor Brief 2 in a series of briefs designed to aid New York State educators in implementing the revised standards, particularly in settings serving linguistically diverse learners. This series includes:

2 Anchor Briefs	4 Hallmark Briefs: Instructional Practices for Advanced Literacies		2 Spotlight Briefs
Brief 1: Advanced Literacies for Academic Success	Hallmark 1: Engaging Texts	Hallmark 2: Rich Discussion	Spotlight 1: Language Production Projects
Brief 2: What Goes into Reading Comprehension?	Hallmark 3: Frequent Writing	Hallmark 4: Academic Vocabulary and Language	Spotlight 2: Units of Study

For more on this, see...

Teaching Advanced Literacy Skills
A Guide for Leaders in Linguistically Diverse Schools

Nonie K. Lesaux
Emily Phillips Galloway
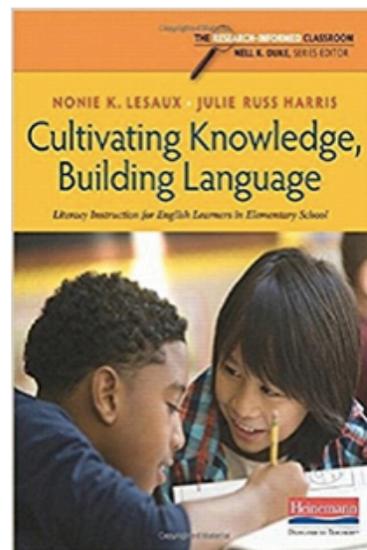Sky H. Marietta

Language Diversity & Literacy Development
RESEARCH GROUP

The **Lead for Literacy** initiative is a series of one-page memos that revisits assumptions that guide current policies and practices, outlines common pitfalls, and presents feasible solutions to pressing issues.

Access these briefs at https://langlit.gse.harvard.edu/lead-for-literacy

Cultivating Knowledge, Building Language

NONIE K. LESAUX · JULIE RUSS HARRIS

Literacy Instruction for English Learners in Elementary School

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