Examining text complexity in the early grades

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Common Core

Choosing texts for early-grade students is critical if educators hope to reach the Common Core goal of improving reading skills.

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The text-complexity standard in the Common Core was created with the goal of all students being college- and career-ready at the end of 12th grade. The Common Core authors argued that college and workplace texts are significantly more complex than those in high school, that higher-performing college students are differentiated from lower-performing peers in their ability to answer questions associated with complex text, and that the text-complexity gap between high school and college/workplace must be closed. To close the gap, all students throughout schooling should read more complex texts than they currently do.

Debate about the text-complexity standard is heated (Hiebert, 2012; Shanahan, 2011; Gamson, Lu, & Eckert, 2013). Some of the fuss is about a text-complexity staircase presented in the standards — a staircase that provides "grade-by-grade specifications (text-level bands) for increasing text complexity in successive years of schooling" (NGA Center for Best Practices & CCSSO, 2010, Appendix A, p. 4). Raising the text-complexity bar for beginning readers is especially controversial because the Core's 2nd/3rd-grade step ends at 820 Lexiles (L) — about one grade level higher than previous recommendations (Williamson, Fitzgerald, & Stenner, 2014). Historically, while many students have achieved a reading level at or above 820L by the end of 3rd grade, struggling readers have attained, on average, only about 400L by the end of 3rd grade (Williamson et al., 2014). For many children, making up the nearly 400L difference from kindergarten through 3rd grade may require Herculean effort (Williamson et al., 2014).

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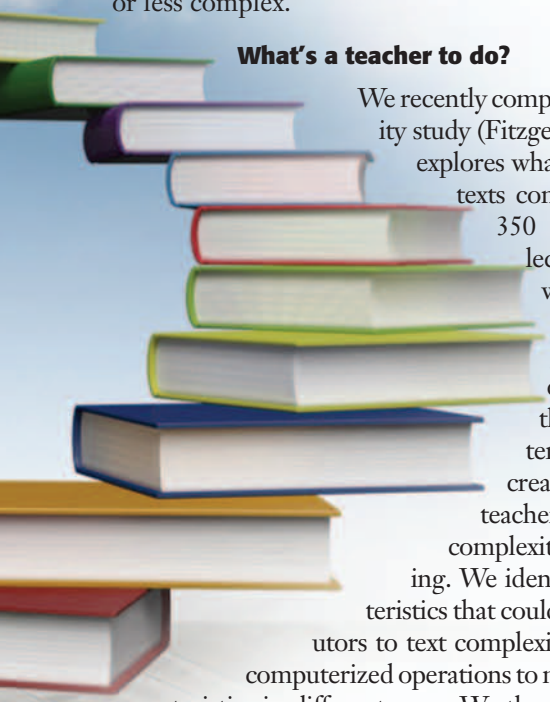
Still more fuss is about how early-grades teachers can evaluate texts to know which ones are more or less complex for their students (Hiebert, 2013). The Common Core provides four qualitative indicators:

- Levels of meaning or purpose;
- Structure;
- Language conventionality and clarity; and
- Knowledge demands (NGA & CCSSO, 2010).

Yet educators question the extent to which the four indicators are applicable to early-grades texts (Hiebert, 2013). While even the youngest of students are expected to read more complex texts than in the past, the standards are nearly silent on text-complexity factors for early-grades texts.

Still, the text-complexity standard is a standard, and early-grades teachers in states that adhere to the Common Core are bound by policy to shepherd all students to reach the standards' goals. As educators attempt to support young children to read increasingly complex texts, they need a firm understanding of what makes beginning-reading texts more or less complex.



What's a teacher to do?

We recently completed a text-complexity study (Fitzgerald et al., 2015) that explores what makes early-grades texts complex. We examined 350 digitized books selected to represent a wide range of kindergarten through 2nd-grade texts. Text-complexity levels for the books were determined using a scale created by combining teachers' judgment of text complexity and student reading. We identified 22 text characteristics that could be possible contributors to text complexity and created many computerized operations to measure the text characteristics in different ways. We then analyzed the digital texts using the computerized text-characteristic operations to determine which characteristics mattered most in relation to the assigned text-complexity levels. We learned a lot about early-grades text complexity — a lot that can help teachers.

Early-grades texts are special

Before teachers even look at the complexity in texts, they need the knowledge and awareness that early-grades texts differ from upper-grades texts in that they are designed specifically to facilitate young students' progress. Think about what beginning readers are mainly working on: cracking the code. Making meaning with texts is always the focus, but young children especially need to develop the ability to hear sounds in words, develop sight words, and acquire word recognition strategies (Fitzgerald & Shanahan, 2000).

What's in a text is important to children's reading growth because the presence of certain text features can actually facilitate the development of code cracking (Compton, Appleton, & Hosp, 2004), and it's not generally as clear-cut as easing back on word meaning difficulty and/or using shorter sentences to bring a text down to the beginning-reader level. Lots of word repetition in texts reinforces sight-word learning and development of the sounds associated with spelling patterns (Vadasy, Sanders, & Peyton, 2005). Rhyming words advance the ability to hear sounds in words, a critical factor in learning to read (Adams, 1990). Words that are familiar in meaning in oral language reduce challenges to meaning creation while reading, permitting more attention to word recognition (Muter et al., 2004). Repeated refrains or phrases also reinforce sight word development as well as scaffolding development of a variety of word recognition strategies, such as using context to make guesses at unknown words (Ehri & McCormick, 1998). Moreover, texts that combine several types of text-characteristic support may exponentially scaffold and boost children's early code-learning development.

Using text characteristics as indicators

With the understanding that early grades are special because their construction can springboard children into reading, teachers can then begin to examine texts to match "just right" complexity levels to particular children. They can think about four main groups of text characteristics. After examining the 350 books in our study, we found nine text characteristics that could be aggregated into four constellations:

- Word structure demand (decoding demand of words and the number of syllables in words);
- Word meaning demand (age at which word meanings are acquired, word abstractness, and word rareness);
- Sentence complexity; and
- Discourse-level characteristics (diversity of phrases across sentences, text density/information load, and how compressible the information in the text was or wasn't).

The essence of the discourse-level characteristics is that they signify the degree to which redundancy, repetition, or patterning occurs in a text. An additional key finding was that interplay among text characteristics was important for explaining the complexity of some books.

To better understand the text characteristics and the four constellations, check out the book *Funny Faces and Funny Places* (Modern Curriculum Press, 1996b) in Figure 1. The Lexile level of the text is 85, a low text-complexity level. The bottom graph shows how the book ranks against all 350 books in each of the nine text characteristics. So among all 350 of our K-2 books, the decoding demand of words in *Funny Faces and Funny Places* is somewhat elevated. There are lots of multisyllable words, word meanings are fairly easy for early-grade children, and sentences

FIGURE 1.

Text characteristics of *Funny Faces and Funny Places*

There are funny faces in all kinds of places.
There are funny faces on each clown.
There are funny faces upside down.
There are funny faces in each car.
There are funny faces on each star.
There are funny faces in all kinds of places.

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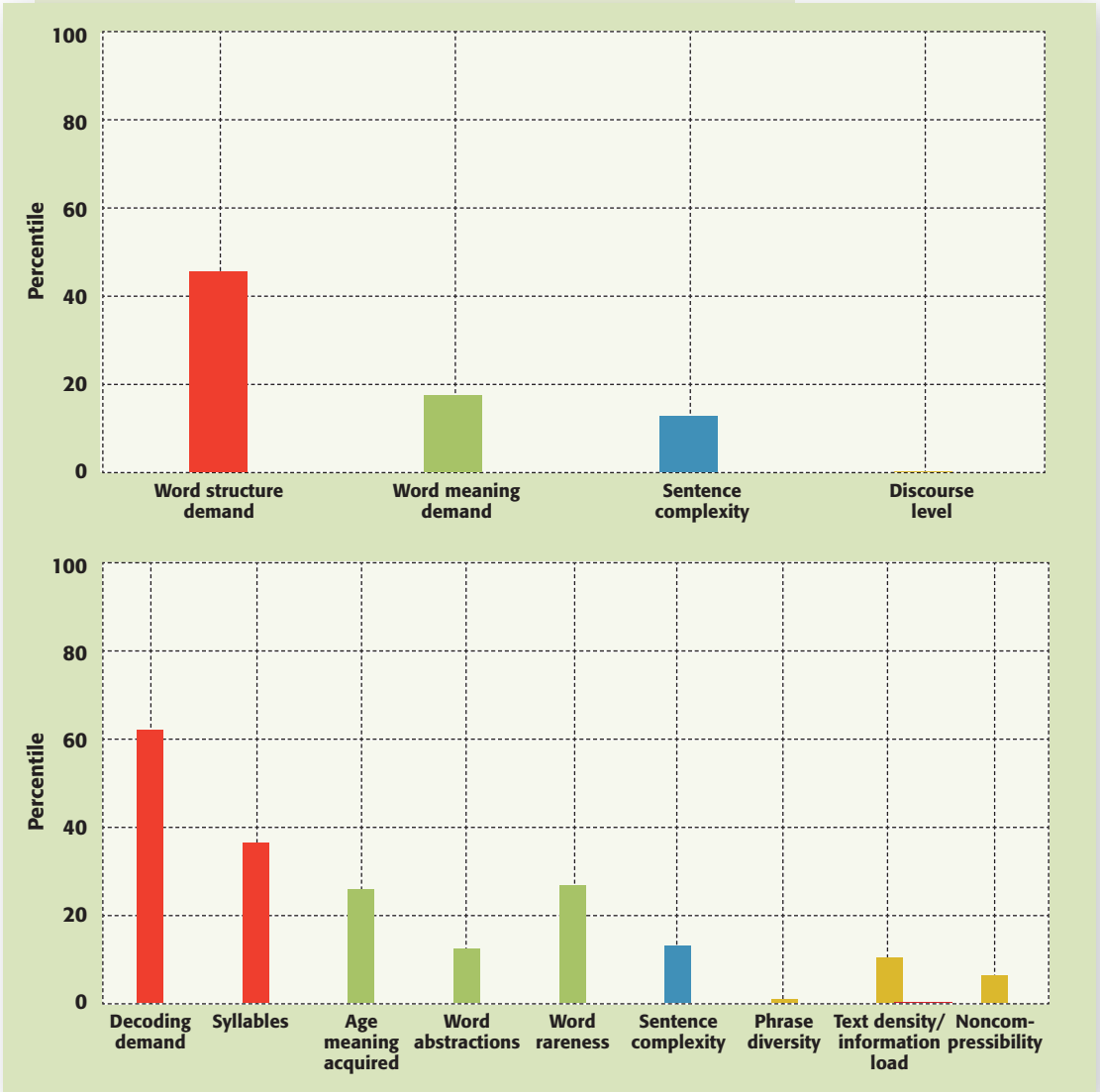

aren't very complex. On the other hand, the yellow bars suggest a considerable amount of repetition and redundancy. (Lower bars for all the characteristics, including discourse-level characteristics, mean "easier" texts. So the low bar for discourse-level means lots of repetition/redundancy/patterning). The top graph shows similar information but with four composites to represent the constellations of characteristics. The considerable redundancy in *Funny Faces and Funny Places* trades off the relatively high-level decoding demand of the text to bring down the Lexile level.

Teachers who want to select the "just right" text-complexity levels for students don't have to have graphs for books like the ones in Figure 1. The graph just shows the importance of the characteristics and how they can interplay with one another. Teachers can read part of a book and think about the broad constellations of word decodability and word meanings in relation to student ages, along with syntactic complexity and the extent of repetition and redundancy. Of course, the four broad constellations don't cover everything the teacher should think about. Whether students have sufficient background knowledge for the text, and whether students are English-language learners are among additional important factors.

The four constellations of characteristics make good sense when considering young children's needs for cracking the code. The specialness of early-grades texts is again apparent in that the four clusters are somewhat different from the four qualitative indicators noted in the Common Core. There is overlap between word meanings and the Common Core's "meaning/purpose" indicator, and redundancy/patterning could reference an aspect of the Common Core qualitative dimension, "structure." However, in the early grades, it is important to understand that a special aspect of structure — patterning and repetition — and word decoding demand are additional critical features.

FIGURE 2.
Text characteristics of *One Bee Got on the Bus*

Six bears got on the bus.
Five bunnies got on the bus.
Four butterflies got on the bus.
Three bats got on the bus.
Two bugs got on the bus.
One bee got on the bus.
Buzz! One bee is on the bus.

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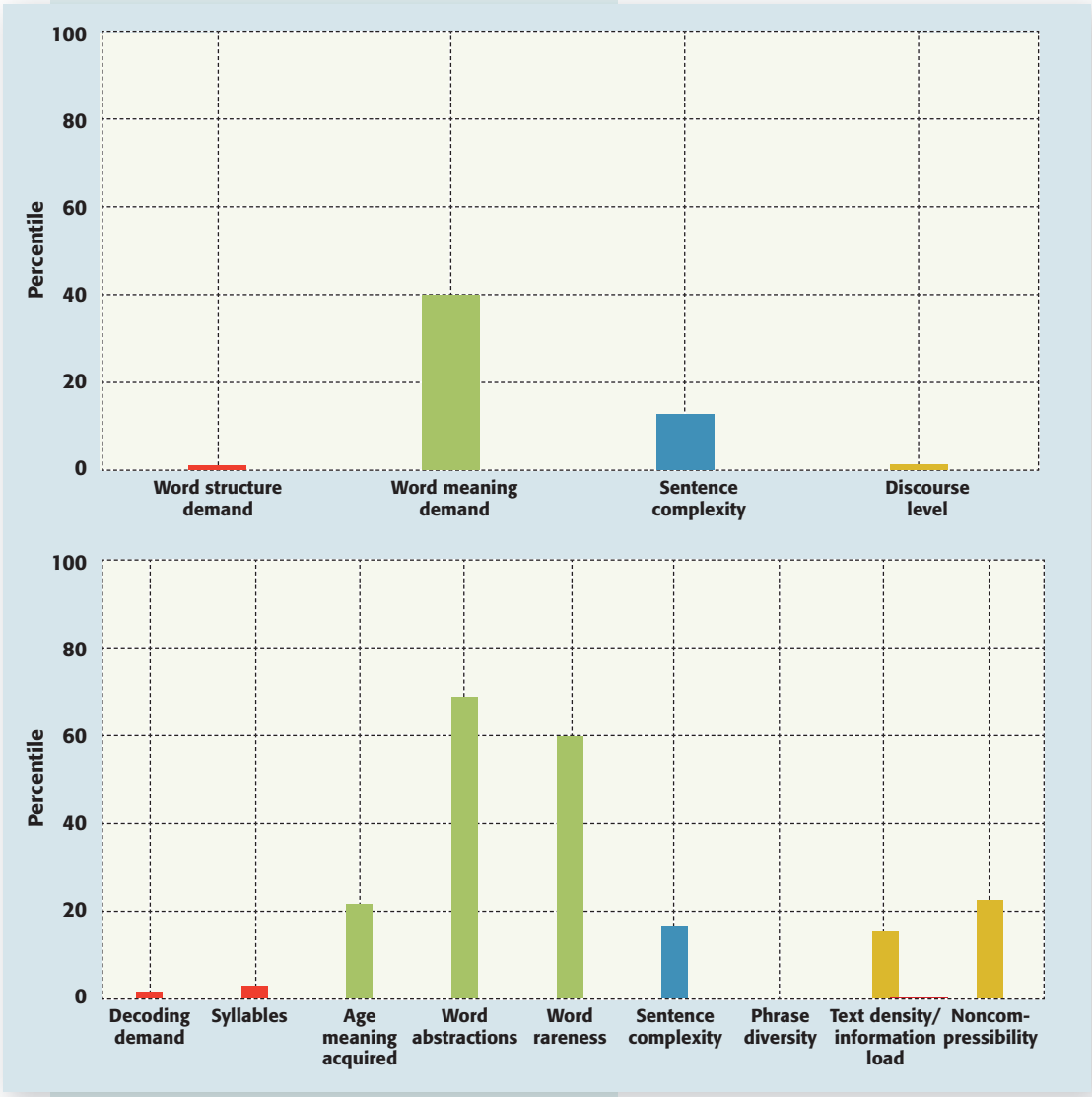

It's a balancing act

Teachers who are evaluating early-grade text complexity should consider how different text characteristics can balance one another. We've mentioned that for some texts, whether a text is more or less complex can depend more on the trade-off between selected text characteristics than on any isolated text characteristic.

Figure 2 shows another relatively low text-complexity book (37L) where the trade-off also matters. Notice that in *One Bee Got on the Bus* (Modern Curriculum Press, 1996a), the somewhat elevated word-meaning demand is counterbalanced by the large amount of discourse level repetition/patterning/redundancy (the low yellow bars represent a lot of repetition) and low decoding demand. Often, the presence of repetition, redundancy, and patterning can ease reading progress for children when texts have more challenging word structures and/or word meanings because that patterning can scaffold readers' word recognition strategies.

Rather than relying entirely on a quantitative indicator of text-complexity level or on individual text characteristics, teachers should think about how characteristics can modulate and balance each other to affect the demand on linguistic knowledge required of the reader. In light of evidence that today's reading programs tend to have difficult vocabulary, teachers might particularly observe degrees of repetition and patterning because no patterning or relatively little patterning may couple with the difficult vocabulary to result in relatively high challenge to students' comprehension.

Why text is challenging

Another finding from our research was that patterns across text characteristics in the K-2 range were more varied in lower text-complexity books than in higher text-complexity books. Texts that fell within a low quantitative range — 0L to 200L, for example — showed more differences in composite patterns than texts that fell within higher quantitative range (e.g., 300L to 500L). We can see in Figures 1 and 2 how different the text-characteristic patterns can be at low-complexity levels. On the other hand, *Lucy's Magic Wand* (Shaskan, 2008) at 380L has a pattern that's typical in higher text-complexity levels: Word structure demand is relatively high, word

FIGURE 3.

Text characteristics of *Lucy's Magic Wand*

Lucy loved to play with her magic wand. Her parents always said, "Be careful. Wands are for magic."

Lucy tasted her pumpkin soup. She said, "It needs to be stirred."

She held her wand like a spoon.

"Be careful," her mom said. "Wands are for magic."

Lucy stirred the soup with her magic wand. The soup suddenly turned green. It smelled like rotten eggs.

Lucy said, "I want to be a rock-n-roll fairy."

She found a pot to use as a drum.

She held her wand like a drumstick.

"Be careful," her dad said. "Wands are for magic."

Lucy hit the pot with her magic wand.

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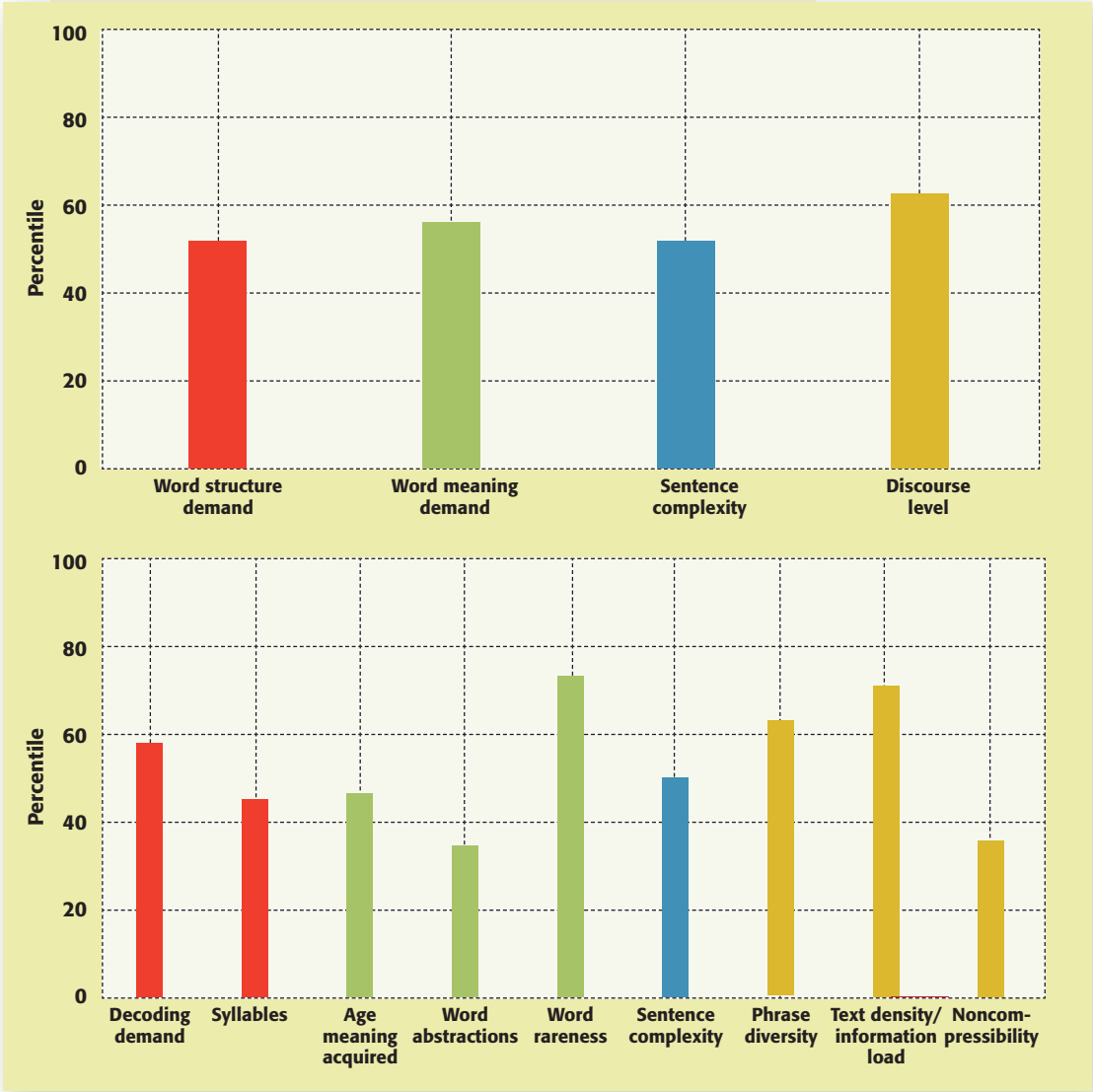

meaning demand is relatively high, and repetition/redundancy/patterning is relatively low.

Knowing the quantitative level of an early-grades text gives a teacher an entry point into considering the overall complexity level of the text. However, taking a few additional moments to evaluate which text characteristics might account for that complexity level can help a teacher decide whether to give that text to particular students for a particular purpose. For instance, think about label books — books that have a lot of pictures with a word label beside the picture, like, "zoo," "elephant," "giraffe," "bear." Label books in our study generally received relatively low quantitative levels. Why? In those books, the word structure or decoding demand was often quite high. But think about other text characteristics. Label books often have words that are highly familiar to young children, so word-meaning demand is low. Syntax demand is low because there is literally no syntactic complexity. However, there is no repetition that helps children to figure out words in the way that couplets or triplets do. And of course, children can simply say the name of the picture without reading the word at all.

So how could a teacher use her knowledge of the text characteristics to decide whether a book is a just-right book for a young student? Let's imagine she wants a group of children to learn that a spoken word matches to a printed word in a text — a significant early learning-to-read phase called one-to-one matching. She might use a label book for that purpose. Or if she has a group of English-language learners and she wants students to expand their English oral vocabulary, she might use a label book. But if she has a group of typically developing children, and she wants them to learn that a simple consonant-vowel-consonant pattern generally has a short vowel sound — one of the first orthographic patterns children learn to decode — a label book of the type described here isn't a good choice, *even though* it's

The Common Core State Standards raise the stature of texts to new heights. Anchor Standard for Reading 10 challenges all students, kindergarten through 12th grade, to read increasingly more complex texts.

one of the lower-level books. In short, all texts at a given text-complexity level are not created equal. Knowing the text characteristics in the book is just as important as knowing the text-complexity quantitative level.

Rising to the challenge

The early phases of learning to read are critical because they set the stage for later reading and academic performance and even are associated with later risk for social-emotional and health problems (Masten et al., 2009). Attaining a just-right text challenge level may be more critical in the emergent reading phase than at any other developmental period (Torgesen et al., 2001). In the midst of the text-complexity fuss, early-grades teachers can support students' reading growth by appreciating the specialness of early-grades texts, evaluating the most essential characteristics that make texts complex, looking for text-characteristic see-saw patterns, and realizing why a text is more or less challenging. Equipped with a firm grasp of what makes early-grades texts more or less complex, teachers can usher young children through texts that are sweet-spot matches to their developmental reading needs. K

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