



Neglected No More

Addressing Text Complexity in the Early Grades

By: Malbert Smith, Ph.D., and Jason Turner

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About MetaMetrics®

MetaMetrics, founded in 1984, is an educational measurement and technology organization whose mission is to connect assessment with instruction. The company's distinctive frameworks for reading and mathematics bring meaning to measurement and are used by millions to differentiate instruction, individualize practice, improve learning and measure growth across all levels of education.



The Need for Quantitative Tools to Differentiate Reading Instruction

To ensure that students are prepared for the reading demands of college and careers, it is vital to pay attention to the text complexity of the materials they encounter. While the work of the Common Core State Standards (CCSS) provides specific guidance for text complexity levels from the second to twelfth grades, there is a clear absence of specificity in kindergarten and first grade. Yet, Coleman and Pimentel—the architects of the CCSS—assert that educators should pay attention to text complexity at these early grades. In fact, they counsel, “Reading Standard 10 outlines the level of text complexity at which students need to demonstrate comprehension. This can start in kindergarten or even earlier with complex text read aloud to students” (Coleman & Pimentel, 2012, p. 4).

To help support the advancement through progressively more challenging texts in K–2 classrooms, MetaMetrics (developer of The Lexile® Framework for Reading) embarked on a series of studies to attempt to provide more guidance and resources for educators, publishers and policymakers. This guidance is necessary for a number of reasons. First, the need to better delineate and differentiate instruction at this level is just as important as it is at any grade level. This information is as vital to classroom educators in kindergarten and first grade as their counterparts in the higher grades. Second, an increasing number of governors, legislators and policymakers established the importance of having students reading on “grade level” by third grade. This focus has resulted in the national initiative embodied in “The Campaign for Grade-Level Reading.” In order to achieve this objective, educators need guidance to target student reading growth across these crucial grades. Third, there has been an absence of quantitative text measurement tools to help support students’ advancement through progressively more challenging texts. Historically, quantitative text measurement tools have been viewed as less reliable for K–2 books, which has led to the development of an array of subjective leveling systems. Fourth, our research suggests that a large proportion of growth occurs by the end of third grade (MetaMetrics, 2017).

To address these issues, MetaMetrics examined whether quantitative text measurement tools (such as the Lexile Analyzer®) could be enhanced to more accurately measure the unique features of K–2 classroom texts. MetaMetrics also sought to extend the Lexile scale in order to differentiate instruction for beginning readers. Historically, quantitative text measurement tools have been viewed as less reliable for K–2 books, which has led to the development of a number of subjective leveling systems, such as Fountas & Pinnell, DRA and Reading Recovery. As the authors of the CCSS state, “...texts for kindergarten and grade 1 may not be appropriate for quantitative analysis, as they often contain difficult-to-assess features designed to aid early readers in acquiring written language” (NGA Center and CCSSO, 2010, p. 8). As a result, this scope of research had been largely neglected.

Text Complexity and K–2 Books

To address this void, a team of researchers at MetaMetrics, along with experts from the field, conducted a series of studies (Fitzgerald et al., 2015a, 2015b) to examine whether the Lexile Analyzer could be enhanced to provide more precise measurement for books aimed at individuals learning to read.

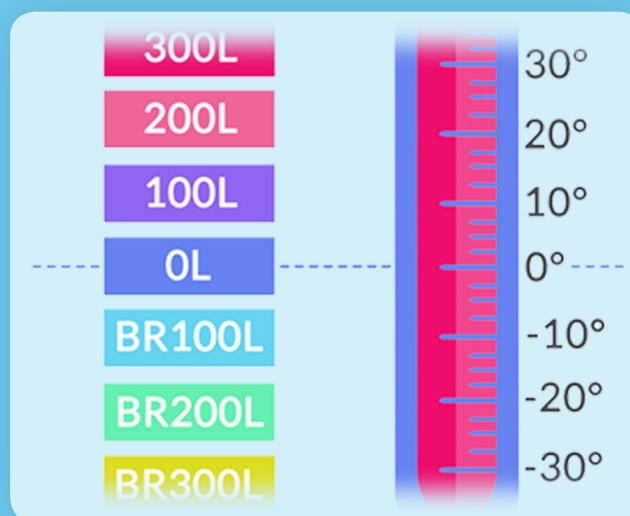
Previously, all books measuring below 0L were given a standalone “BR” (Beginning Reader) code. Now, as a result of extensive research, the Lexile Analyzer provides a Lexile® measure after the BR code. The addition of a Lexile measure allows for greater differentiation at the beginner level.

FIGURE 1. More Precise Measurement for Books



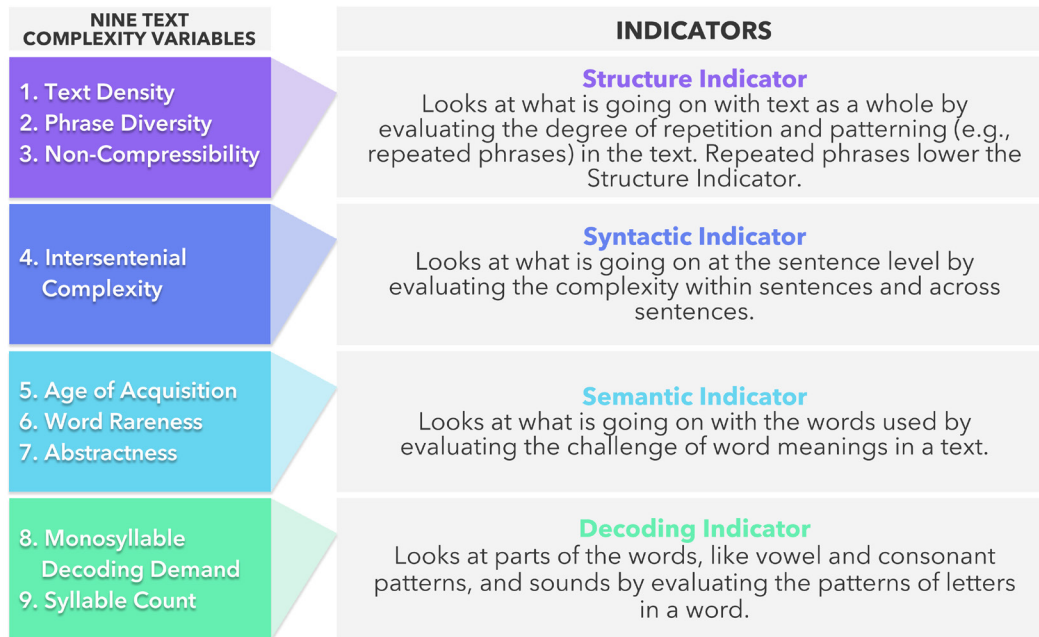
FIGURE 2. The Extension of the Lexile Scale

The numeric value of a Lexile measure has not changed, rather the scale itself has expanded. Beginning Reader (BR) is a code given to readers and texts that are below 0L on the Lexile scale. A Lexile measure of BR100L indicates that the Lexile measure is 100 units below 0L. Just like -10 degrees is warmer than -30 degrees on a thermometer, a BR100L book is more complex than a BR300L book. Said differently, the larger the number after the BR code, the less complex the text. Similarly, a BR300L reader is less advanced than a BR100L reader.

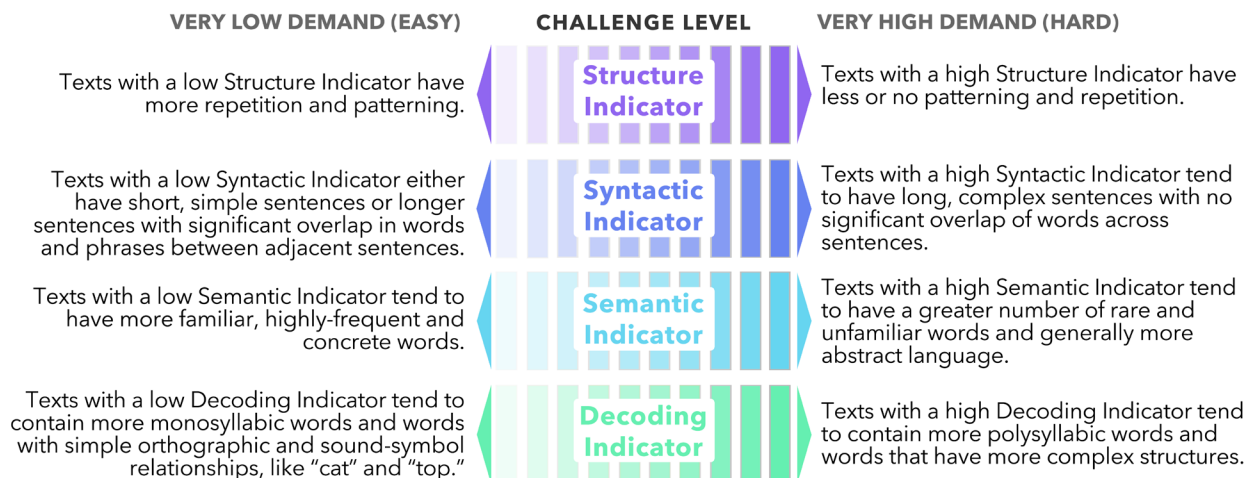


Variables that Best Predict Text Complexity of Books Intended for Beginning Readers

As any teacher or reading specialist at this level knows, all K–2 books are not created equally. The text complexity features and demands of the books in this space are varied and unique. Based on input from teachers and reading specialists and by conducting studies on the reading behaviors of young students, researchers spent several years analyzing over 200 text characteristics that influence text complexity. Through these research studies, nine variables were identified as most accurately and reliably measuring the text complexity of K–2 books. This nine-variable model is now incorporated to strengthen the algorithm that powers the Lexile Analyzer. These nine variables are categorized into four early-reading indicators to help identify important text features in early-reading books that could present less or more of a challenge to a reader.

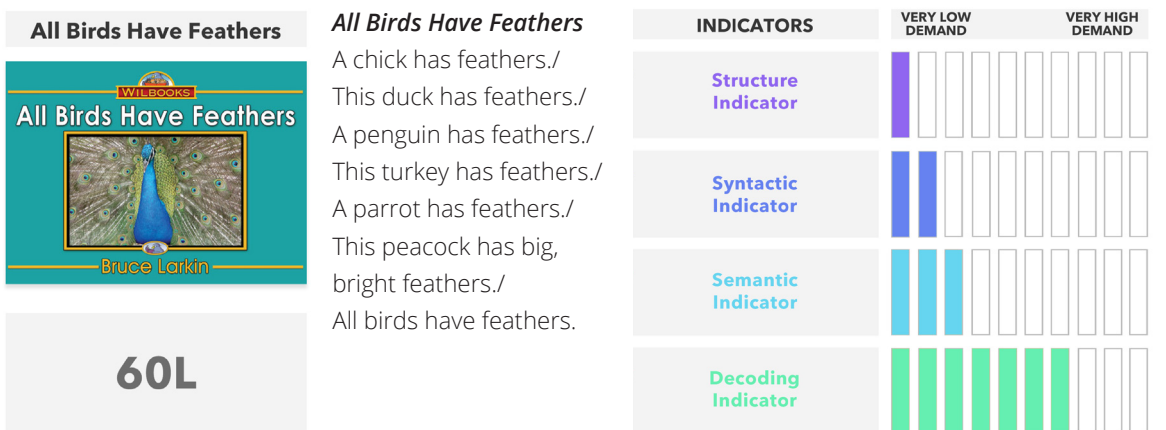
FIGURE 3. Early-Reading Indicators Derived from Nine-Variable Text Complexity Model

The Lexile Analyzer is used for all types of text, but when identified as K–2 text, it will offer a level of challenge (demand) for these four early-reading indicators along with the text’s Lexile measure. These levels range from very low and low demand, to medium demand, to high and very high demand—the higher the demand, the more challenge that indicator will present to a reader. This information will accompany other descriptive information, like mean sentence length and word count, that the Lexile Analyzer previously offered.

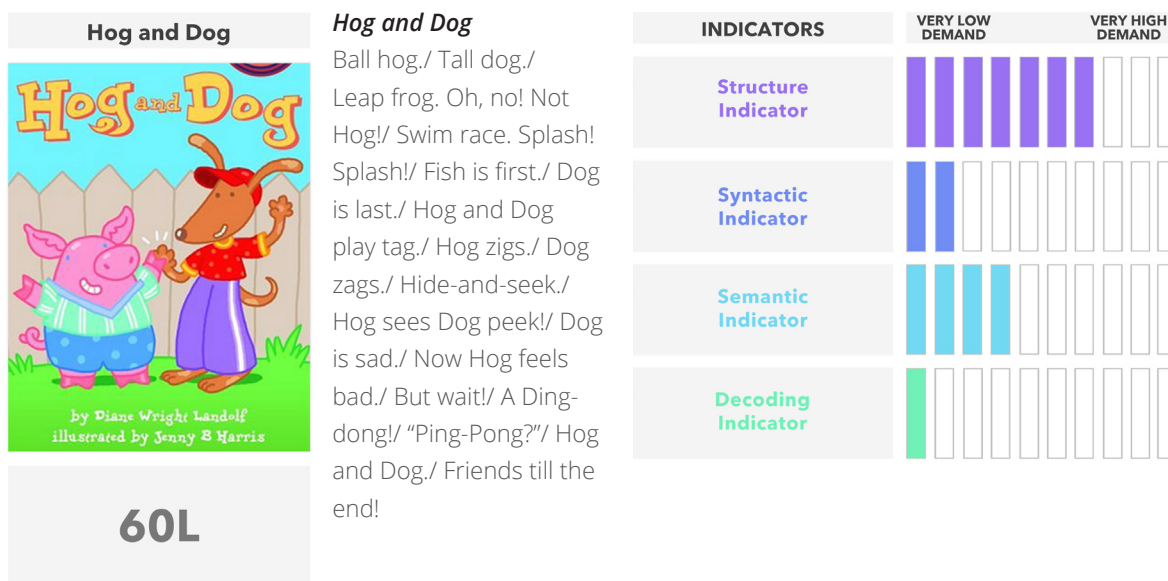
FIGURE 4. Early-Reading Indicator Demand and Text Characteristics

To illustrate these new enhancements, Figure 5 displays the text complexity characteristics of two well known early-reading books. *All Birds Have Feathers* by Bruce Larkin and *Hog and Dog* by Diane Wright Landolf have the same Lexile measure. However, the books have quite different characteristics, and consequently their profiles of the four early-reading indicators are different.

FIGURE 5. Early-Reading Indicator Profiles of Texts with Similar Lexile Measures



What do the early-reading indicators tell me about this book? *All Birds Have Feathers* contains many polysyllabic words and some irregular orthography (e.g. feathers), and consequently has a relatively high Decoding Indicator. Readers are able to use the parallel sentence structure to aid in recognizing more challenging words like feathers and penguin. This repetitive syntactic pattern is reflected in a very low demand for the Structure Indicator. Texts with repetitive patterns like this book can help build sight-word knowledge and support development of word recognition strategies.



What do the early-reading indicators tell me about this book? *Hog and Dog* is a book that uses words that are easier to decode. When reading this book, students can use their knowledge of letter-sound relationships and spelling patterns to say the words. The Structure Indicator offers moderately high demand since there is little emphasis on repetitive patterns beyond repeating the words dog and hog.

Different kinds of books, even with the same Lexile measure, can emphasize different text characteristics. Different text characteristics can contribute more or less to the overall complexity of the text. This is especially true for early-reading books. Early-reading indicators provide insight into which text characteristics in a book are more or less challenging. Books with different profiles of indicators can help to support the development of reading skills like decoding or using context to aid in word recognition.



Conclusion

Achieving a “just right” challenge level of texts for optimal reading growth is likely to be critical for beginning readers (Chall, 1996; Fitzgerald & Shanahan, 2000). As noted previously, current text complexity measurement systems do not reliably predict beginning reading text complexity levels (Hiebert & Pearson, 2010). To optimize reading growth, educators need to understand which text characteristics are most important to differentiate instruction at this level.

The Lexile scale has been extended in order to address the absence of empirical text complexity guidance in kindergarten through second grade. The benefits of completing this work across the kindergarten through 12 landscape are far-reaching in terms of implications and importance. First, text complexity and student reading growth can now be connected to the entire kindergarten through 12 continuum. Second, as a byproduct of this research, there is now an objective, empirical utility that is scalable and freely available to educators and parents. Finally, and most importantly, teachers will now be able to more accurately match beginning readers to the unique features of books that support the needs of each student.

References

- Chall, J.S. (1996). *Stages of Reading Development*. Fort Worth, TX: Harcourt Brace.
- Coleman, D., & Pimentel, S. (2012). *Revised publishers' criteria for the Common Core State Standards in English language arts and literacy, grades 3–12*. Retrieved from the Common Core Standards Initiative at www.corestandards.org/assets/Publishers_Criteria_for_3-12.pdf
- Fitzgerald, J., Elmore, J., Koons, H., Hiebert, E. H., Bowen, K., Sanford-Moore, E. E., & Stenner, A. J. (2015a). Important text characteristics for early-grades text complexity. *Journal of Educational Psychology*, 107, 4–29. DOI: 10.1037/a0037289
- Fitzgerald, J., Hiebert, E. H., Bowen, K., Relyea, E. J., Kung, M., & Elmore, J. (2015b). Text complexity: Primary grades teachers' views. *Literacy Research and Instruction*, 54, 19–44. DOI: 10.1080/19388071.2014.954086
- Fitzgerald, J., & Shanahan, T. (2000). Reading and Writing Relations and Their Development. *Educational Psychologist*, 35(1), 39–50.
- Hiebert, E.H., & Pearson, P.D. (2010). National Reports in Literacy: Building a Scientific Base for Practice and Policy. *Educational Researcher*, 39(4), 286–294.
- Mesmer, H. A., Cunningham, J. W., & Hiebert, E. H. (2012). Toward a theoretical model of primary-grade text complexity: Learning from the past, anticipating the future. *Reading Research Quarterly*, 47(3), 235–258.
- MetaMetrics Lexile Construct Norms (2017). Durham, NC.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects, Appendix A*. Washington, DC: Authors.
- Williamson, G. (2006). *Aligning the journey with a destination: A model for K–16 reading standards*. Durham, NC: MetaMetrics.

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