Knowing What’s Complex and What’s Not: 
Guidelines for Teachers in Establishing Text Complexity

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The Common Core State Standards (CCSS; NGA Center for Best Practices & CCSSO, 2010), for the first time in a standards document, addresses whether students are increasing their ability to read complex texts over their school careers. Previous standards described strategies that students should perform with “grade-level” reading materials without explicitly defining what grade levels were. The CCSS takes a different tack. Quantitative benchmarks in the form of Lexiles (in the initial CCSS documents) as well as five more quantitative systems in a supplement to the Standards (NGA for Best Practices & CCSSO, 2012) have been used to create a staircase of text complexity where specific levels are specified for grade bands from second grade through high school. CCSS writers recommended two other criteria for the establishment of text complexity: qualitative assessments of features of text (e.g., levels of meaning) and designation of reader-task variables by teachers. But neither of these components were described with the same level of specificity as the quantitative benchmarks.

Quantitative measures have real but limited utility for teachers evaluating texts to use with their students. Metrics like Lexiles and the Flesh-Kincaid (FK) readability formula are best used for sorting large groups of texts. They provide a single number on the Lexile scale (from 0 to 2000) or a grade level on the FK As the assignment of 1090 Lexiles (L) or the grade level of 5.9 on the FK for To Kill a Mockingbird illustrates, an overall omnibus measure of a single text
does not provide substantial insight into what features make the text complex (Hiebert, 2011). Teachers need detailed information to determine if the content and features of texts will increase their students’ capacity to read more sophisticated material. This paper is designed to provide teachers with guidelines on what to consider when evaluating whether texts are at appropriate levels of complexity for purposes and students in their classrooms. Specifically, the question addressed in this paper is: What should teachers be looking for in selecting texts that are appropriate in complexity for their students?

Before describing the seven actions, two questions that are germane to the issue of text levels and readers’ capacities are addressed. In answering these questions and also throughout the paper, six texts are used in the discussion of text complexity. The six texts, the titles of which appear in Table 1, represent the grade bands 2-3, 4-5, and 9-10 used throughout the Standards. All of the texts are ones that CCSS writers identified as appropriately complex texts at different grade levels (as presented in Appendix B of the Standards). For each grade-band, there is both an informational and a narrative example.

THE WHYS UNDERLYING THE SEVEN ACTIONS

Have texts in elementary grades been dumbed down? Are currently used texts sufficiently complex for student growth?

It is useful to first consider the level of complexity of reading curricula and how it has shifted over time. Knowing with confidence that material is level appropriate is vital for teachers to be able to help their students. In Appendix A of the CCSS, the statement is made that K-12 texts have been dumbed down over the past 50 years. The claim was debatable even based on evidence available at the time of the writing of the Standards. For one, kindergarten texts could hardly have been dumbed down since there were no required kindergarten texts as part of core
reading programs until the early 2000s, when NCLB demands ensured that texts for kindergartners were added to widely used programs (Hiebert & Martin, 2008). Further, the complexity of first-grade texts had accelerated after shifts in the policies underlying large-state textbook adoptions around 1990 (Foorman, Francis, Davidson, Harm, & Griffin, 2004; Hiebert, 2005).

At the very least the information about the sophistication of K-12 texts was incomplete. More recent research by Gamson, Lu, and Eckert (2013) shows that the two studies on which the CCSS writers based their claim of the dumbing down of texts over the elementary grades did not include school texts of the 1990s and early 2000s. When more recent texts are added to the mix, the evidence shows that texts for grades three and six are harder than they were prior to the 1990s (Hayes, Wolfer, & Wolfe, 1996) and 1960s (Chall, 1977).

At least in the elementary grades, the available evidence indicates that the texts are sufficiently rigorous. In fact, for many students, current texts in the elementary grades are difficult in relation to their reading proficiency (Hiebert, 2013). This does not mean that there should not be instruction and experiences aimed at increasing student’s capacity with more complex text; however, the initial goal should be developing facility with existing material, and then steadily increasing complexity as students gain strength and confidence in reading. A drastic increase in text levels could create even greater obstacles for the students who are most challenged in attaining proficient reading—the approximately two-thirds of an American fourth-grade cohort that performs at basic or below on the National Assessment of Educational Progress (NAEP; National Center for Education Statistics, 2013).

**Why isn’t information on Lexiles, Flesch-Kincaid, or Guided Reading Levels enough for selecting appropriately complex texts?**
Consider the information on guided reading levels (GRL), FK grade levels, and Lexiles for the six target texts in Table 1. The GRL steadily get higher as the grades get higher. The patterns of Lexiles and FK grade levels are fairly similar, although aberrations are apparent (e.g., *To Kill a Mockingbird*). It is no surprise that *Sarah, Plain and Tall (Sarah)* is identified as easier on all systems than *Birchbark House* (4.8 FK; 960L; GRL of T). But what does this mean for instruction? What is it about *The Birchbark House* that makes it more challenging than *Sarah*? And are the FK and Lexile designations for *To Kill a Mockingbird* accurate in designating the texts appropriate for fifth to sixth graders?

The questions in the last paragraph can be answered with a similar response: Overall or omnibus measures of a given text's complexity, whether gained from judgments of humans such as GRL (Fountas & Pinnell, 2012) or an algorithm developed by humans and executed by a computer such as Lexiles (Smith, Stenner, Horabin, & Smith, 1989) or FK (Flesch, 1948; Kincaid, Fishburne, Rogers, & Chissom, 1975) fail to give teachers enough specific information to know why a text has the designation it does. Without more descriptive information, teachers cannot identify texts appropriately or create appropriate instructional experiences for their students.

These “omnibus” measures are readily obtained and give a straightforward designation of a text’s complexity. But these results should be thought of as only a starting point, much as a number on a medical exam (e.g., blood pressure). The number can alert the physician that something is happening and requires further analysis and diagnosis. A quantitative index or a qualitative judgment (e.g., GRLs) can serve to direct attention to specific features of texts.

As they move from overall evaluations of texts such as Lexiles or GRLs to evaluations of specific features of texts, teachers need to better understand the features of texts that will
influence their students’ success with texts. To establish which texts are appropriate for particular students and how to best use texts to increase students’ capacity to comprehend increasingly more complex texts, teachers need guidance on what features of texts contribute to making comprehension challenging for students. The seven actions that follow provide such guidance.

THE SEVEN ACTIONS

Action 1: Select texts with content that furthers the goals of instruction.

Texts are where humankind shares and records knowledge. The texts of classroom experiences should offer significant insight into the various content areas of focus. Therefore, the right question isn’t "is it hard enough?" but rather “What will my students learn about the world from this text?” Another way to phrase the critical question is to ask whether a text is worthy of students’ time. If this criterion is satisfied, then educators can consider further what effect the styles, structures, and words of a text will have on students’ comprehension.

Each of the target texts in Table 1 fits the criterion of having sufficient intellectual grist to be worthy of instructional time. For example, MacLachlan, the author of Sarah, also provides a rich portrayal of the challenges and opportunities of life for early days of settlement of the Midwestern US by Europeans. Similarly, The Birchbark House gives students the opportunity to learn about the coming-of-age of a young girl, while at the same time gaining a substantial amount of information about the effects of European settlement on the indigenous peoples of the Americas. For second-third graders, A Medieval Feast provides the opportunity to explore what life was like for the aristocracy and for their servants during an age that is often fictionalized in stories and games.
When CCSS writers describe texts as having been dumbed-down or not sufficiently complex, it is the content that is either inconsequential or inappropriate for students at a particular grade level. An excerpt of such a text follows:

Monster trucks have been around for more than 30 years. At first, some people called them chrome crushers because the drivers drove them over cars and crushed the cars flat. (*Fast Track Reading, 2001, pp. 2-3*).

This excerpt comes from an intervention program for struggling readers in grades 4-5. The Lexile of the text—930—places it solidly in the grade 4-5 band recommended by the CCSS (740-1010) and is close to that of the two grade 4-5 exemplars in Table 1. It is typical of many of the texts offered as “easy” for interventions. Sentences are fairly long because, since sentence length is highly predictive of Lexiles (Hiebert, 2012a), using long sentences means that the text falls into the appropriate grade range. The ideas and vocabulary, however, fail to support students in developing either critical vocabulary or background knowledge. As is the case with many intervention texts, the content of this text is trivial. Students’ time would be better time with texts of equivalent complexity but dealing with content that furthers the goals of the curriculum—texts such as those in Table 1. Finding texts that support critical classroom learning goals should be the driving factor in teachers’ determinations of whether a text is appropriately complex for classroom use.

**ACTION 2: Establish how the knowledge in a text relates to students’ proficiency and how knowledge demands change over a text.**

As readers move through a text, they acquire knowledge from the text and integrate and assess the text’s content with what they already know on a topic or even genre. Whether the text is an article (e.g., an article on snowflake formation in *Science World*) or a full-length novel
(e.g., *The Birchbark House*), readers create a mental representation of a text’s content as they read. This knowledge or, what has been called a “situation model” (Kintsch & Van Dijk 1978) will typically change and/or grow in detail as readers progress through a text.

Both knowledge of the topic of a text and also general or overall knowledge have been found to influence comprehension. This pattern holds for readers at all levels—primary-grade students through adult professionals (Alexander, Murphy, Woods, Duhon, & Parker, 1997) and also across different text types, including expository texts and fictional narratives. Knowledge about the topic of a text aids comprehension for all students but some prior knowledge on the topic can be particularly beneficial for less proficient readers (Miller & Keenan, 2009).

In selecting appropriate texts for their students, teachers need to consider whether students have the relevant and necessary life experiences and knowledge to interact productively with a text. CCSS writers have been suggested that readers should stay "within the four corners of the text" and that connections to background knowledge should be minimized (Coleman & Pimenthal, 2010). But writers, especially writers of complex texts, assume that their readers will be able to fill in gaps and make connections. In any text—even a text oriented to beginning readers such as this example—writers assume that readers will draw on a schema related to the topic and, using this schema, will use relevant knowledge.

Another aspect of texts that teachers need to understand, especially as they design instruction, is the manner in which texts typically vary in their challenge at different points in a text. Even for a 70,000-word text such as *To Kill a Mockingbird*, a quantitative system such as Lexiles gives a single index for the text (1090) and a qualitative system such as guided reading levels gives a single level (Z). Typically, though, the 1st page and the 100th page of a text are not of uniform complexity. The initial section or chapters of a text create the setting, the characters
with their backstories, and the central problem takes shape. New concepts with accompanying vocabulary are introduced. This vocabulary and the foundational context-setting material become the basis for the remainder of the text. To put it plainly, the beginning tends to be a lot harder. If we can get students “over the hump” of difficult beginnings, the text becomes easier for them and picks up pace.

As teachers make decisions about what texts to teach and how to teach them, they should be thinking about the challenges that topics and the treatment of those topics might present to their students. Among the questions that should be addressed by teachers are:

- What is involved in the “start-up” of a text or the chapter within a text?
- What particular knowledge might be useful as background for reading the text or chapter?
- What content needs to be carried forward from section to section of the text?

**ACTION 3: Establish the vocabulary demands of the text.**

Typically, complex texts have a critical portion of vocabulary that students have not encountered previously. This feature is usually the most visible to students. Further, instruction of vocabulary can produce substantial pay-off in students’ proficiency with complex texts since vocabulary is the best predictor of comprehension (Just & Carpenter, 1980).

To make informed choices on their own or to evaluate the recommended words in published programs, teachers can benefit from having several fundamental ideas about vocabulary in texts. With an understanding of how vocabulary contributes to text complexity, teachers can select appropriate strategies to select texts and build students’ facility with new words.
A first fundamental idea about vocabulary is that a small group of words—4,000 simple word families (e.g., help, helps, helping, helped, helper)—accounts for about 90% of the words in most texts (Hiebert, 2012b). Even complex texts such as those identified by Common Core writers as exemplars of complex text have a high percentage of the core vocabulary, as is evident in the information in Table 2. The core vocabulary accounts for 89% to 96% of the target texts, indicating that the majority of the words in all of the texts come from the core vocabulary.

A second basic point about vocabulary pertains to the extended vocabulary—the words not in the core vocabulary. For the six target texts, the percentage of words in the extended vocabulary ranges from a low of 4% to a high of 11% (see Table 2). Whereas the core vocabulary consists of a small group of words, a huge number of words comprises the extended vocabulary—as many as 300,000 words by some counts with approximately 88,000 word families (Nagy & Anderson, 1984). These words occur rarely in text but, when they do occur, they are critical to the nuances of stories and to the specificity of content-area texts.

Teachers need to consider both the proportion and type of words within the extended vocabulary when selecting appropriate texts for their students. For example, two exemplar texts—A Medieval Feast and Cod—have the same percentage of words in the extended vocabulary. But excerpts in Table 3 show that most words in the former represent concrete objects/people (e.g., trenchers, cockentrice), while many rare words in the latter represent abstract concepts (e.g., enigmatic, indecipherable).

Differences in percentages of extended vocabularies of texts such as Sarah and Birchbark House—6% and 7.5%, respectively—may not seem great. When viewed from the vantage point of 1,000 words of text, however, a rate of 6% means 60 rare words, while a rate of 7.5% means
about 75 rare words. One or two additional rare words in every 100 words can significantly increase the challenge of a text for some students.

A third fundamental distinction about vocabulary relates to differences in the extended vocabulary of narrative and informational texts. A perusal of example words from the extended vocabularies of narrative and informational texts become apparent in Table 3. The extended vocabulary of informational texts often convey complex terms (e.g., repression and monarchies in Cod), while words in narrative texts are less-used synonyms for familiar concepts such as predilection for preference or habitually for usually in To Kill a Mockingbird.

Content-area standards are explicit about critical concepts for topics (Marzano, 2004)--words such as magnetic attraction, repel, and polarity in a physics unit. The situation is a different one with narrative texts where authors vary words to communicate actions, traits of characters and places, emotions, and ways of communicating. These rare words are typically not repeated but the ideas (e.g., traits of a character) reappear as synonyms. Examinations of vocabulary can give teachers a sense of the appropriateness of texts for their students (see, Hiebert, 2012c for a more extended discussion).

**ACTION 4: Examine the text for unique uses of language.**

There are numerous ways in which authors use language in unique ways. One type of language use involves dialects or words and phrases from languages other than English, as is the case with Birchbark House where many Ojibwa words are included. Unique uses of language go much beyond dialects, however. What distinguishes high-quality literature from narratives and informational texts that fall into the “pulp fiction” category is the use of figures of speech and other rhetorical devices. Moreover, an author of a literary text does not use a single figure of speech or rhetorical device but, rather, sprinkles the use of different devices throughout a text. To
grow in capacity of comprehending complex texts is to become increasingly adept at understanding the meanings of figures of speech and rhetorical devices from literal use of language.

A number of figures of speech and/or rhetorical devices at the word level are presented in Table 4. Not included are devices common to poetry (e.g., alliteration, assonance, onomatopoeia) and text-level devices (e.g., flashbacks, allegories, parody).

Figurative language is most prominent in narrative, as evident in the excerpts of the target texts in Table 5. But, while figurative language is not as prominent in informational texts (especially in textbooks), instances of figurative language occur in informational trade books. Even at the primary-level, a text such as A Medieval Feast can have unusual language, as the author uses numerous archaic terms to convey the unique activities of the period. A History of US uses present-day colloquial expressions and idioms to, presumably, engage contemporary students with history.

Teachers need to have a grasp of figurative devices if they are to guide their students in increasing their capacity for complex texts. With insight into figurative language use, teachers can select appropriate texts for their students and also create lessons with these texts that support their students’ increasing capacity to comprehend complex text.

**ACTION 5: Examine the variation in the complexity of a text’s sentences.**

In most quantitative systems such as the Lexile system, average sentence length weighs heavily in the classification of a text’s complexity. 88% of the variance in text assignments is accounted for by average sentence length, while the frequency of words accounts for approximately 30% of the variance in text difficulty (Hiebert, 2012a). But how does this impact
comprehension? Do long sentences necessarily indicate a complex text and short sentences a simple text?

Syntax has been shown to predict comprehension (Graesser, Swamer, Baggett, & Sell, 1996), but, when sentence length has been manipulated in experiments, the same effect has not been found (Arya, Hiebert, & Pearson, 2011). In fact, shortening sentences in the hope of making a text more comprehensible can have the opposite effect (Beck, Omanson, & McKeown, 1982). An explanation for this finding is that, when a long sentence is divided into shorter sentences, words that connect ideas are often omitted (e.g., because, since, so), making it necessary for readers to be adept at making more complex inferences.

Further, teaching students to develop expertise in juggling syntactic complexity, while useful in writing (Graham & Perin, 2007), is difficult to do in reading. In writing, teachers can model how to combine simple sentences into complex ones. But in reading a text, readers are confronted with the choices made by authors. If sentence structure is particularly complex as is the case in the excerpt from Cod in Table 4, readers must unpack the ideas within the text. There is no magical rule for unpacking ideas in complex sentences within texts. Sentences can be broken apart and ideas extracted. But to do this for every single sentence in a complex text can be a tedious process—and the overall ideas can be lost in the process.

More complex syntax typically represents the communication of more complex ideas (McNamara, Kintsch, Songer, & Kintsch, 1996). When it comes to reviewing complex texts for potential instructional scaffolding, teachers should consider the core ideas in a text that may require syntactic unpacking. A simple index of sentence length is not useful. Where teachers need to focus is on the variation of sentence structures and length across texts. Further, learning to navigate the syntax of complex texts also requires extensive reading and discussion of texts.
In looking at the excerpts from target texts in Table 4, the variation in sentence structure and length in even 50-word excerpts of text is evident. Variation appears greater in narrative than informational texts. For example, for the two grade 4-5 texts, the level of variation across sentences in a chapter from the informational text (*A History of US*) is 6.9 words, while the metric for a chapter from the narrative text (*Birchbark House*) is 9.5 words. For example, the average length of the four sentences in the excerpt from *Birchbark House* of 13 words is close to that of the text overall—14.2 words. But sentences differ greatly in the number of ideas they contain. The final sentence is particularly complex with 15 propositions in 28 words. The pattern in the excerpt is emblematic of the sentence structure in *Birchbark House* and in many other narratives as well—long sentences with crucial information about the context and characters’ dispositions sprinkled with short sentences of dialogue. Teachers will need to choose which of the complex sentences are necessary for students to unpack in order to grasp critical parts of the story.

Writers of informational text appear to be more consistent in the types of sentences that they use. But, as the content of informational texts becomes more complex, the sentence structure does too, as evident in the additional 10 words per sentence in *Cod* than *A History of US*. The ideas in complex texts are frequently embedded in clauses and phrases that require readers to make inferences and connect ideas within and across sentences. Awareness on the part of teachers in selecting texts and also choosing the parts of texts for in-depth study is critical to ensuring that students grow in their ability to comprehend increasingly more complex texts across a school year and also school career.
Action 6: Determine how the length of the text (and the length of the task with the text) will influence students’ engagement in the text.

The length of the text can challenge, fail to challenge, or defeat students depending on the strength of their cognitive processing and memory. This is especially an issue for less proficient readers. Many American students can read a short text (i.e., 350-450 words) with comprehension but, when presented with a text of 800-1,000 words, the comprehension of many students breaks down (Calfee & Hiebert, 2011). How much text students are asked to read in a single reading session can make a big difference to students’ comprehension of texts.

Another example of how the length of a text matters is when students do a novel study or when they need to compare and contrast several texts. Remembering the traits of characters (especially when some traits are suggested in early sections of a story but do not become relevant till some time later) can be a drain on memory, especially for students who are slow readers. If students are reading an extended text over a period of time, they need to retain information from one day to the next. There is also the scenario—one that is critical to the performance assessments that are part of both of the assessment consortium—of reading two or more texts and integrating knowledge from those texts.

Teachers need to strike a balance between supporting students by using texts that are shorter in overall length and less material per session and challenging them with longer sittings and extended material. As length increases, students can read texts in chunks, which get progressively longer as time passes. Another possibility is to find creative ways externalize the memory needed for multi-session extended complex text. Drawings of characters or concept maps could prompt students to recall what they've already learned and train them to engage with longer material.
**Action 7: Determine how the features of the task and context may influence students’ comprehension and engagement.**

The features of the tasks in which students need to use and apply their knowledge from texts and the instructional/learning context are yet another powerful influence on comprehension (Valencia, Wixson, & Pearson, in press). Numerous features of tasks and contexts in fact influence comprehension—and such influences can be different for students of varying proficiency levels. Teachers are responsible for selecting and presenting texts that reflect the diversity of task requirements that students are likely to encounter. Small- or large-group lessons, collaborative team projects, and independent reading all provide different opportunities in learning from text. Within writing tasks, the process that is called upon—comparing and contrasting versus summarizing, for example—influence comprehension as well.

One context that is especially of interest to educators at the present time is the unique context of the computer assessments in which students will be assessed for attainment of CCSS standards. Consideration of tasks and contexts should not be limited to the assessment venue. But state leaders in the two consortia that are creating the new generation assessments have put a heavy premium on a particular configuration of tasks within a particular context—students reading and responding to text on the computer. On the PARCC assessment, third graders will need to read and respond in a computer-based context for 60 minutes with an increase of 10 minutes at the computer for students at fourth grade and higher. On the Smarter Balanced assessment, the length of time at the computer is one hour and 45 minutes (presumably distributed across more than one period), beginning with third grade.

If the assessment event is the first time that students are asked to read silently on their own for 45 minutes or more, it should not be a surprise to teachers, students, parents, citizens, or
legislators that students do not do particularly well. To ensure that more students can participate fully with the texts and in the tasks of the assessments, teachers can take particular actions right now. Hiebert (in press) has identified a number of these actions:

1. Give students responsibility for the first read of texts.
2. Be explicit about the degree of challenge.
3. Increase the amount that students are reading.
4. Have students make explicit goals for increased stamina and reading.
5. Use magazine articles to develop background knowledge on a variety of topics.
6. Increase connections between texts and tasks—including homework and independent reading.
7. Have monthly “on your own” sessions, using available sample assessments.

Summary

For the first time in a standards document, the CCSS ask that teachers select texts that are sufficiently complex for students. This paper has developed a view of text complexity where text is viewed from the perspective of readers, tasks, and contexts as well as the text itself. The seven actions described above are very practical tools that teachers should consider as they reflect on what material will create the best opportunities for their students.

I also hope that the ideas presented here are more than merely a fill in for what we might consider "missing documentation" within the CCSS. I would like for teachers to use these techniques to reclaim the joy of building literacy among students. Some educators fret that they are being forced to teach towards artificial standards or that their hands are tied with respect to curriculum choices. I believe that by incorporating the seven techniques outlined here, teachers will regain a sense of agency and creativity. Becoming intimately aware of text features and the
different kinds of impact that they have on students, teachers can craft a tailored approach to their classroom and their individual learners. I am confident that the seven actions are a solid point of departure for a teacher-student collaboration towards lifelong literacy.
References


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http://www.corestandards.org/assets/Publishers_Criteria_for_3-12.pdf


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http://textproject.org/professional-development/text-matters/core-vocabulary/

http://textproject.org/professional-development/text-matters/unique-words-require-unique-instruction/


WHAT’S COMPLEX, WHAT’S NOT

better? Interactions of text coherence, background knowledge, and levels of understanding in learning from text. *Cognition and instruction, 14*(1), 1-43.


*Children’s Literature*


Table 1

*Grade Bands and Text Difficulty Levels for Target Texts*

<table>
<thead>
<tr>
<th>Target Text</th>
<th>Grade Band on CCSS</th>
<th>Guided Reading Level</th>
<th>Flesch-Kincaid Mean</th>
<th>Lexile Mean</th>
<th>Mean Sentence Length</th>
<th>Mean Vocabulary</th>
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</thead>
<tbody>
<tr>
<td><em>Sarah, Plain and Tall</em></td>
<td>2-3</td>
<td>R</td>
<td>2.3</td>
<td>540</td>
<td>8.6</td>
<td>3.59</td>
</tr>
<tr>
<td><em>A Medieval Feast</em></td>
<td>2-3</td>
<td>Q</td>
<td>3.9</td>
<td>810</td>
<td>11.9</td>
<td>3.51</td>
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<tr>
<td><em>Birchbark House</em></td>
<td>4-5</td>
<td>T</td>
<td>4.8</td>
<td>960</td>
<td>14.2</td>
<td>3.45</td>
</tr>
<tr>
<td><em>A history of US</em></td>
<td>4-5</td>
<td>W</td>
<td>6.0</td>
<td>790</td>
<td>11.7</td>
<td>3.53</td>
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<tr>
<td><em>Cod</em></td>
<td>9-10</td>
<td>Not</td>
<td>10.1</td>
<td>1290</td>
<td>21.1</td>
<td>3.36</td>
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<tr>
<td><em>To Kill a Mockingbird</em></td>
<td>9-10</td>
<td>Z</td>
<td>5.9</td>
<td>1090</td>
<td>17.18</td>
<td>3.48</td>
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¹Mean Log Word Frequency
### Table 2

_Distribution of Core and Extended Vocabulary: Six Target Texts_

<table>
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<tr>
<th></th>
<th>Sarah, Plain and Tall</th>
<th>A Medieval Feast</th>
<th>The Birchbark House</th>
<th>A History of US</th>
<th>To Kill a Mockingbird</th>
<th>Cod</th>
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<td>92.5</td>
<td>96</td>
<td>91</td>
<td>89</td>
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<tr>
<td>Extended Vocabulary (%)</td>
<td>6</td>
<td>11</td>
<td>7.5</td>
<td>4</td>
<td>9</td>
<td>11</td>
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</table>
Table 3

*Illustrative Extended (Rare) Vocabulary of Six Target Texts*

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<th>Sarah, Plain and Tall</th>
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<th>The Birchbark House</th>
<th>A History of US</th>
<th>To Kill a Mockingbird</th>
<th>Cod</th>
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<td>deemed</td>
</tr>
<tr>
<td>candlelight</td>
<td>cockatrice</td>
<td>namesake</td>
<td>stampede</td>
<td>strictures</td>
<td>repression</td>
</tr>
<tr>
<td>housekeeper</td>
<td>redecorated</td>
<td>vanquished</td>
<td>blizzards</td>
<td>fancies</td>
<td>commodity</td>
</tr>
<tr>
<td>troublesome</td>
<td>illegally</td>
<td>pliable</td>
<td>tornadoes</td>
<td>assuaged</td>
<td>monarchies</td>
</tr>
<tr>
<td>hearthstones</td>
<td>poaching</td>
<td>insistence</td>
<td>woodlands</td>
<td>tyrannical</td>
<td>assimilate</td>
</tr>
</tbody>
</table>
### Table 4

*Types of Figurative Language & Other Rhetorical Devices*

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allusion</td>
<td>Reference to a place, person or something happened, real or imaginary (including paintings, opera, folklore, mythical figures, or religious manuscripts)</td>
<td>&quot;She was almost ready to go, standing before the hall mirror, putting on her hat, and he, his hands behind him, appeared pinned to the door frame, waiting like Saint Sebastian for the arrows to begin piercing him.&quot; (Flannery O'Connor, <em>Everything That Rises Must Converge</em>)</td>
</tr>
<tr>
<td>Anaphora</td>
<td>Repetition of word or words beginning a series of parallel syntactical units</td>
<td>&quot;It rained on his lousy tombstone, and it rained on the grass on his stomach. It rained all over the place.&quot; (J.D. Salinger, <em>The Catcher in the Rye</em>)</td>
</tr>
<tr>
<td>Antithesis</td>
<td>Juxaposition of contrasting ideas in balanced phrases or clauses</td>
<td>It was the best of times, It was the worst of times (Charles Dickens, <em>A Tale of Two Cities</em>)</td>
</tr>
<tr>
<td>Apostrophe</td>
<td>Direct address of an abstraction or of someone absent</td>
<td>&quot;Oh! Stars and clouds and winds, ye are all about to mock me;&quot; (Mary Shelley, <em>Frankenstein</em>)</td>
</tr>
<tr>
<td>Connotation</td>
<td>an idea or feeling that a word invokes in addition to its literal or primary meaning</td>
<td>Words or phrases for a young person: small fry, brat, urchin, juvenile, minor</td>
</tr>
<tr>
<td>Double epithet</td>
<td>Several words of identical or almost identical meaning in a phrase</td>
<td>“Thou subtle, perjur’d, false, disloyal man!” (Shakespeare, <em>The Gentlemen of Verona</em>)</td>
</tr>
<tr>
<td>Hyperbole</td>
<td>Deliberate overstatement for effect</td>
<td>I’ve told you a million times.</td>
</tr>
<tr>
<td>Idiom</td>
<td>A set expression of two or more words that means something other than the literal meanings of its individual words</td>
<td>Chip on his shoulder</td>
</tr>
<tr>
<td>Imagery</td>
<td>Using words that evoke one of the five senses: olfactory, tactile, visual, gustatory, kinesthesia</td>
<td>“In the daytime, in the hot mornings, these motors made a petulant, irritable sound; at night, in the still evening when the afterglow lit the water, they whined about one's ears like mosquitoes.&quot; (E.B. White, <em>Once More to the Lake</em>)</td>
</tr>
</tbody>
</table>
### Irony
Words are used in such a way that their intended meaning is different from the actual meaning of the words

| The name of the biggest dog was “Tiny.” |

### Litotes
Understatement, usually through double negatives

| “Not improbably, it was to this latter class of men that Mr. Dimmesdale, by many of his traits of character, naturally belonged.” (Nathaniel Hawthorne, *The Scarlet Letter*) |

### Metaphor
Word or phrase denoting one kind of object or idea in place of another to suggest a likeness or analogy between them

| Kisses are the flowers of love in bloom. |

### Oxymoron
Deliberate combination of seemingly contradictory words

| Pretty ugly |

### Periphrasis
Substituting a descriptive phrase for a precise word

| Elongated yellow fruit for banana |

### Personification
Attributing animation to something inanimate

| She did not realize that opportunity was knocking at her door. |

### Simile
An explicit comparison using like or as

| As busy as a bee |
Table 5

*Illustrative Sentences From Six Target Texts*

<table>
<thead>
<tr>
<th>Text</th>
<th>Excerpt</th>
<th>Figure of Speech</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Sarah, Plain and Tall</em></td>
<td>I sank <em>like a bucket filled with water</em> and came up sputtering. But Caleb lay on his back and learned how to blow streams of water high in the air <em>like a whale</em>. The cows stood on the banks of the pond and stared and stopped their chewing. Water bugs circled us. “Is this like the sea?” asked Caleb.</td>
<td>Simile</td>
</tr>
<tr>
<td><em>A Medieval Feast</em></td>
<td>They shared goblets of wine, and between courses, the Ewerer appeared with water for them to wash their fingers. They ate some of their food with spoons. The rest they ate with their fingers. They cut pieces from the meat the carver put on their trenchers with knives they had brought with them.</td>
<td>Archaic vocabulary</td>
</tr>
<tr>
<td><em>The Birchbark House</em></td>
<td>Relieved, Omakayas walked past the other dogs straight up to the old woman and stood before her. &quot;Ahneen, my auntie,&quot; she said. &quot;Mino aya sana.&quot; She wished the old woman good health, and called her &quot;Auntie&quot; because it was a sign of affection, though Omakayas was really not sure exactly what she felt.</td>
<td>Words from another language</td>
</tr>
<tr>
<td><em>A History of Us</em></td>
<td>Many Indians elsewhere in North America live in communities where almost everything is shared, sometimes even leadership. That is not true here. These Indians care about wealth, property, and prestige (<em>it means importance and reputation</em>). They value private property, and they pass their property on to their children and grandchildren.</td>
<td></td>
</tr>
<tr>
<td><em>To Kill a Mockingbird</em></td>
<td>“Yeah, that’s all,” said Dill. “He’ll probably come out after you when he sees you in the yard, then Scout’n’ me’ll jump on him and hold him down till we can tell him we ain’t gonna hurt him.” We left the corner, crossed the side street that ran in front of the Radley house, and stopped at the gate.</td>
<td>Dialect, Hyperbole</td>
</tr>
<tr>
<td><em>Cod</em></td>
<td>In the Mediterranean world, where there were not only salt deposits but a strong enough sun to dry sea salt, salting to preserve food was not a new idea. In preclassical times, Egyptians and Romans had salted fish and developed a thriving trade. Salted meats were popular, and Roman Gaul had been famous for salted and smoked hams.</td>
<td></td>
</tr>
</tbody>
</table>

1Italics added to illustrate figurative language