Determining Text Complexity

Mid-Continent Comprehensive Center (MC3) Regional ELL/CCSS Task Force
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Text Complexity

“The Common Core Standards hinge on students encountering appropriately complex texts at each grade level in order to develop the mature language skills and the conceptual knowledge they need for success in school and life” (p. 3).

Reading Anchor Standard

R.CCR.10. Read and comprehend complex literary and informational texts independently and proficiently.
Definition

**Text complexity** is defined by the CCSS as a three-part model consisting of quantitative and qualitative dimensions as well as reader and task consideration.

- **Quantitative measures** include analysis of word frequency and sentence length, which are typically best measured by computer software.
- **Qualitative** factors include levels of meaning, structure, language conventionality, clarity, and knowledge demands.
- **Reader and Task** considerations include students' motivation, knowledge, and background interests, and are best made by the teacher.
Determining Text Complexity

Four Step Process

1. Determine the quantitative measures of the text.
2. Analyze the qualitative measure of the text.
3. Reflect upon the reader and task considerations.
4. Recommend placement in the appropriate text complexity band.
Step 1: Quantitative Measures

Measures such as the following:

- Word length
- Word frequency
- Word difficulty
- Sentence length
- Text length
- Text cohesion
Resources for Selecting Texts
Quantitative Measures

- Lexile Find a Book (Lexile measure)
  http://lexile.com/findabook

- The Accelerated Reader BookFinder (ATOS book level)
  http://www.arbookfind.com/

- Questar Degree of Reading Power - DRP Analyzer
  (Textbook readability score)
## Grade Bands and Associated Ranges

### Multiple Measures from different sources

<table>
<thead>
<tr>
<th>Common Core Band</th>
<th>ATOS</th>
<th>Degrees of Reading Power®</th>
<th>Flesch-Kincaid 8</th>
<th>The Lexile Framework®</th>
<th>Reading Maturity</th>
<th>SourceRater</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd – 3rd</td>
<td>2.75 – 5.14</td>
<td>42 – 54</td>
<td>1.98 – 5.34</td>
<td>420 – 820</td>
<td>3.53 – 6.13</td>
<td>0.05 – 2.48</td>
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<tr>
<td>4th – 5th</td>
<td>4.97 – 7.03</td>
<td>52 – 60</td>
<td>4.51 – 7.73</td>
<td>740 – 1010</td>
<td>5.42 – 7.92</td>
<td>0.84 – 5.75</td>
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</table>

ATOS: Accelerated Reader - Renaissance Learning
Degrees of Reading Power: Questar
Flesch-Kincaid: Readability Formulas
The Lexile Framework: Meta Metrix
Reading Maturity: Pearson Reading Maturity Metric - Pearson Education
Source Rater: Educational Testing Service
Example of Using the Lexile Analyzer

Imagine we want to see where a text falls on the quantitative measures “leg” of the text complexity triangle, using the Lexile text measures.

For illustrative purposes, let’s choose Patricia MacLachlan’s 1986 book, *Sarah, Plain and Tall*. 
Using the Lexile Analyzer

For texts with not in the Lexile database: www.lexile.com/analyzer/

- Free registration is required.  
  http://www.lexile.com/account/register/

- Allows user to receive an “estimated” Lexile score

- Accommodates texts up to 1000 words in length

- Texts of any length can be evaluated using the Professional Lexile Analyzer. Educators can upgrade to this tool for free by requesting access.  
  http://www.lexile.com/account/profile/access/
Passage from *Sarah, Plain and Tall*

The Lexile® Framework for Reading

<table>
<thead>
<tr>
<th>About Lexile Measures</th>
<th>Using Lexile Measures</th>
<th>Common Core</th>
<th>Lexile Tools</th>
<th>Lexile Training</th>
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</tbody>
</table>

Lexile Analyzer: Results

In order to measure your file we had to change some character formatting. Please review the changes to ensure that text was not corrupted or incorrectly changed.

These results are not saved in any retrievable way. You should print this screen and note your filename or the title of your sample text. If you do not print or record the results, you will have to re-analyze your sample text to know its Lexile measure.

Submit another file

File to Analyze: [Browse...]
Step 2: Qualitative Measures

Measures such as the following:

- Levels of meaning
- Levels of purpose
- Structure
- Organization
- Language conventionality
- Language clarity
- Prior knowledge demands
Step 2: Qualitative Measures

Qualitative Measures Rubrics for Literary and Informational Text


The rubric for literary text and the rubric for informational text allow educators to evaluate the important elements of text that are often missed by computer software that tends to focus on more easily measured factors.
### Text Complexity: Qualitative Measures Rubric - Literary Texts

#### Levels of Meaning
- **High**
  - Multiple Levels of Complex Meaning
- **Middle High**
  - Multiple Levels of Meaning
- **Middle Low**
  - Single Level of Complex Meaning
- **Low**
  - Single Level of Simple Meaning

#### Structure
- **High**
  - Narrative Structure: complex, implicit, and unconventional
  - Narration: many shifts in point of view
  - Order of Events: not in chronological order
  - Use of Graphics: sophisticated graphics, essential to understanding the text, may also provide information not otherwise conveyed in the text
- **Middle High**
  - Narrative Structure: some complexities, more implicit than explicit, some unconventional
  - Narration: occasional shifts in point of view
  - Order of Events: several major shifts in time, use of flashback
  - Use of Graphics: some sophisticated graphics, may occasionally be essential to understanding the text
- **Middle Low**
  - Narrative Structure: largely simple structure, more explicit than implicit, largely conventional
  - Narration: few, if any, shifts in point of view
  - Order of Events: occasional use of flashback, no major shifts in time
  - Use of Graphics: largely simple graphics, supplementary to understanding the text
- **Low**
  - Narrative Structure: simple, explicit, conventional, no shifts in point of view
  - Narration: no shifts in point of view
  - Order of Events: chronological
  - Use of Graphics: use of simple graphics, unnecessary to understand the text

#### Language Conventionality and Clarity
- **High**
  - Meaning: implicit or inferred meaning, heavy use of figurative or ironic language, may be purposefully ambiguous or misleading at times
  - Register: generally unfamiliar, archaic, domain-specific, or overly academic
- **Middle High**
  - Meaning: some implicit or inferred meaning, use of figurative or ironic language
  - Register: occasionally unfamiliar, archaic, domain-specific, or overly academic
- **Middle Low**
  - Meaning: largely explicit and literal meaning, subtle use of figurative or ironic language
  - Register: largely contemporary, familiar, conversational, rarely unfamiliar, archaic, domain-specific, or overly academic
- **Low**
  - Meaning: explicit and literal meaning, little or no use of figurative or ironic language
  - Register: contemporary, familiar, conversational

#### Knowledge Demands
- **High**
  - Life Experiences: explores complex, sophisticated, multiple themes; experiences portrayed are not fantasy but are distinctly different from the common reader
  - Cultural/Literary Knowledge: many references/allusions to other texts (intertextuality) and cultural elements
  - Subject Matter Knowledge: requires extensive, perhaps specialized content knowledge
- **Middle High**
  - Life Experiences: explores multiple themes of varying levels of complexity; experiences portrayed are not fantasy but are uncommon to most readers
  - Cultural/Literary Knowledge: some references/allusions to other texts (intertextuality) and cultural elements
  - Subject Matter Knowledge: requires moderate levels of content knowledge
- **Middle Low**
  - Life Experiences: explores a single complex theme; experiences portrayed are common to many readers or are clearly fantasy
  - Cultural/Literary Knowledge: few references/allusions to other texts (intertextuality) and cultural elements
  - Subject Matter Knowledge: requires some content knowledge
- **Low**
  - Life Experiences: explores a single theme; experiences portrayed are everyday and common or are clearly fantasy
  - Cultural/Literary Knowledge: no references/allusions to other texts (intertextuality) and cultural elements
  - Subject Matter Knowledge: requires only everyday content knowledge
Step 2: Qualitative Measures

- Our initial placement of *Sarah, Plain and Tall* into a text complexity band changed when we examined the qualitative measures.

- Remember, however, that we have completed only the first two legs of the text complexity triangle.

- The **reader and task considerations** still remain.
Step 3: Reader and Task Considerations

Considerations such as the following:

- Motivation
- Knowledge and experience
- Purpose for reading
- Complexity of task assigned regarding text
- Complexity of questions asked regarding text
Step 3: Reader and Task Considerations

Questions for Professional Reflection on Reader and Task Considerations


The questions provided in this resource are meant to spur teacher thought and reflection upon the text, students, and any tasks associated with the text.

(They are largely open-ended questions without single, correct answers, but help educators to think through the implications of using a particular text in the classroom.)
Step 3: Reader and Task Considerations

Based on our examination of the Reader and Task Considerations, we have completed the third leg of the text complexity model and are now ready to recommend a final placement within a text complexity band.
Step 3: Reader and Task Considerations

Lexile Text Measure: **560L**

State or LEA System — Book Level: **2-3**

Reflecting on the questions posed for Reader and Task Considerations and both Quantitative and Qualitative measures, we have the following information to make a decision:
Step 4: Recommended Placement

Based on all the information—*all three legs of the model*—the final recommendation for *Sarah, Plain and Tall* is ....

In this instance, Appendix B confirms our evaluation of the novel. *Sarah, Plain and Tall* is placed within the grade 2-3 text complexity band.
Text Complexity Analysis of *Sarah, Plain and Tall*

### Qualitative Measures

**Levels of Meaning an Purpose:**
Numerous levels of meaning: pioneer story but also story of a motherless family

**Structure:**
Follows a fairly conventional narrative sequence

**Language Conventions and Clarity:**
Use of language is simple but elegant. Some archaic words (e.g., *hearthstones*).

**Knowledge Demands:**
High: Knowledge of pioneer life and effects on life of geography

**Reader and Tasks:**
Appropriate for teacher-led discussions with 3rd graders (i.e., early Stage 2 readers)

### Quantitative Measures

A Lexile Measure for this book is 560L. Accelerated Reader (AR) identifies this title as a 2.8-3.4 grade level. Developmental Reading Assessment (DRA) identifies this title as a 40 or 4.2 grade level. The complexity of the book’s themes and knowledge of geographic differences would indicate a higher level of skills are necessary for an independent level of reading.

### Reader-Task Considerations
These are to be determined locally with reference to variables such as students’ motivation, knowledge, and experiences as well as purpose and complexity of the task assigned and the questions posed. Topics could include westward expansion, changes or new experiences, death/grief/loss, or blended families.

### Recommended Placement
Being mindful of the quantitative and qualitative measures and taking into consideration the Reader and task considerations, the Common Core Standards Text Exemplars also place this book at the 3rd grade level.
Reader and Task Considerations about Cognitive Capabilities

- Does the reader possess
  - the necessary attention to read and comprehend this specific text?
  - the necessary critical/analytic thinking skills to understand the relationships between the main idea, purpose, and/or theme of the text and the various details used to support that main idea, purpose, and/or theme?

- Will the reader be able to make connections among the various details presented in this specific text to remember them?

and/or

- Will this specific text help to develop the attention, memory, and critical/analytic thinking skills necessary for future reading endeavors?
Reader and Task Considerations about Reading Skills

- Does the reader possess
  - the necessary inferencing skills to “read between the lines” and make connections among elements that may not be explicit in this specific text?
  - the necessary visualization skills to imagine what is occurring or what is being described in this specific text?
  - the necessary questioning skills to challenge the ideas being presented in this text and consider those ideas from multiple points of view?

and/or

- Will this specific text help to develop the inferencing skills, visualization skills, questioning skills and comprehension strategies necessary for future reading endeavors?
Reader and Task Considerations: Motivation and Engagement with Task and Text

- Will the reader understand the purpose—which might shift over the course of the reading experience—for reading this specific text (i.e., skimming, studying to retain content, close reading for analysis, etc.)?

- Will the reader be interested in the content of this specific text?
Considerations for English Language Learners (ELLs)

- With our ELL population, it is imperative to go to deeper levels when analyzing a text to identify the linguistic features that might provide additional difficulties.

- Advances in cognitive science, linguistics, and computer technology are opening new doors on the text-complexity front. The information provided can inform teachers and specialists of the factors that may need to be pretaught or in which mini-lessons will need to be developed for ELLs to access the text.
Instructional Implications

1. Need for mini-lessons on specific grammar conventions prior to reading text
2. Building background before text exposure
3. Teaching vocabulary required
4. Considerations when creating questions to guide students through text
5. Helping students build meaning out of complex text
Additional Resources


For additional information, please contact

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