Stretching Elementary Students in Complex Texts: Why? How? When?

A webinar given by
Heidi Anne E. Mesmer, Ph D
Virginia Tech
Sec<ons

• What is complex text?
• What is stretch text?
• Why stretch students?
• How to stretch?
• Messages for the classroom
WHAT IS COMPLEX TEXT?
CCSS-ELA’s definition

• The ability to read and comprehend text with consideration given to both reader and task variables
CCSS-ELA:
Three-Part Model For assessing Text Complexity
Text Complexity - Another View

- Text Complexity = Text Features
- For example
  - Length of sentences
  - Difficulty of words
  - Number of complex sentences.
  - Number of prepositional phrases.
  - Number of syllables per word

Text Difficulty-Another View

• Connecting the features of texts (text complexity) to READERS performance.

## Quantitative

<table>
<thead>
<tr>
<th>Common Core Band</th>
<th>ATOS</th>
<th>Degrees of Reading Power®</th>
<th>Flesch-Kincaid®</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>
</tr>
<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>
</tr>
</tbody>
</table>

Source: Supplemental Information for Appendix A of the Common Core State Standards for English Language Arts and Literacy: New Research on Text Complexity
## Standard 10 Range of Reading and Text Complexity

<table>
<thead>
<tr>
<th>2nd Grade</th>
<th>3rd Grade</th>
<th>4th Grade</th>
<th>5th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehend information texts including history/social studies, science, and technical texts at the high end of the 2-3 band</td>
<td>Comprehend information texts including history/social studies, science, and technical texts at the high end of the 2-3 band</td>
<td>Comprehend history/social studies, science, technical text, in 4-5 text complexity band</td>
<td>Comprehend history/social studies, science, technical text, in 4-5 text complexity band</td>
</tr>
<tr>
<td>with scaffolding as needed at that higher levels</td>
<td>independently and proficiently.</td>
<td>with scaffolding as needed at that higher levels</td>
<td>independently and proficiently.</td>
</tr>
<tr>
<td>450-790</td>
<td>770-980</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WHAT IS A STRETCH TEXT?
• Students need opportunities to stretch their reading abilities but also to experience the satisfaction and pleasure of easy, fluent reading within them, both of which the Standards allow for.

• Students deeply interested in a given topic, for example, may engage with texts on that subject across a range of complexity. Particular tasks may also require students to read harder texts than they would normally be required to. (Appendix A, page 9)
Traditional Reader-Text Match Standards

**Independent Texts**
Texts that can be read without assistance.
100-99% word accuracy
76-100% comprehension

**Instructional Texts**
Texts that can be read with assistance.
95-99% word accuracy
75% comprehension

**Frustrational Texts**
Texts that cannot be read with or without assistance.
0-89% word accuracy
0-74% comprehension

Stretch Parameters?

**Stretch Paradigm**

**Independent Texts**
- Texts that can be read without assistance.
- 100-99% word accuracy
- 76-100% comprehension

**Instructional Texts**
- Texts that can be read with assistance.
- 95-99% word accuracy
- 75% comprehension

**Frustrational Texts**
- Texts that cannot be read with or without assistance.
- 0-89% word accuracy
- 0-74% comprehension

**Text Length**

**Interest**

**Reader Development**
Shift in Reader-Text Paradigms

Traditional reader-text paradigm

Heavily Emphasized the Avoidance of Frustration
Shift in Reader-Text Paradigms

CCSS-ELA Reader-Text Paradigm

Heavily Emphasizes Avoidance of Stagnation
Avoid the inevitable swing . . .

Strike a Balance: Optimal Challenge

Avoid Frustration

Avoidance Stagnation
We need an empirically based paradigm of challenge

• How much can kids be stretched before they break?
• What text and task features influence stretch?
• When developmentally are kids stretched and within which contexts?
WHY?

STRETCH
Rationale 1: HS Text Complexity Chasm

High School Texts  

College and Career
Rationale 2: Data supporting aspirational text standards

Rationale 3: Traditional Reader-Text Boundaries are Not Research Based

**Independent Texts**
- Texts that can be read without assistance.
- 100-99% word accuracy
- 76-100% comprehension

**Instructional Texts**
- Texts that can be read with assistance.
- 95-99% word accuracy
- 75% comprehension

**Frustrational Texts**
- Texts that cannot be read with or without assistance.
- 0-89% word accuracy
- 0-74% comprehension
Why?

• Bett’s standards based on oral reading
• Younger readers may be able to read instructionally at levels as low as 83-85% (Powell, 1970; Stahl & Heubach, 2005)
RATIONALE 4:

IS GOOD. . .
BUT OVERWHELMING FRustration IS NOT.
HOW AND WHEN TO STRETCH READERS
How to Stretch Students?
Consider:

- Length
- Word Accuracy Levels
- Stretch Toolkit
- Text Levels
- Stamina
- Readers’ History
- Genre
GENRE INFLUENCES STRETCH: INFORMATIONAL VS. NARRATIVE
Title: Boy

Author: Roald Dahl

Total Words in Sample: 99 Total Sentences in Sample: 3
Average Number of Words Per Sentence: 33.0
Words Not Matched to Dale Familiar 3000-Word List: 10
Percentage of Words Not Matched to Dale Word List: 10.10
Dale-Chall Readability Index: 6.86
Raw Score; 7-8th Grade Level

My four friends and I had come across a loose floorboard at the back of the classroom, and when we pried it up with the blade of a pocketknife, we discovered a big hollow space underneath. This, we decided, would be our own secret hiding place for sweets and other small treasures such as conkers, and monkey-nuts, and birds eggs. Every afternoon, when the last lesson was over, the five of us would wait until the classroom had emptied, then we would lift up the floorboard and examine our secret hoard, perhaps adding to it or taking something away."
The Price of **Ivory**

DOZENS OF AFRICAN ELEPHANTS SLAUGHTERED. That headline has become all too common. Last month, **poachers** killed at least 86 elephants in Chad and in Cameroon. Both countries are in a **region** of Africa that has lost more than 60% of its elephants to illegal hunters in the past decade, according to a recent study from the Wildlife Conservation Society. In 2012 alone, experts say, 30,000 elephants were killed in countries across Africa. "We're seeing the highest levels of **poaching** since our record-keeping began," Crawford Allan, of the World Wildlife Fund, told TFK. Why are so many elephants being killed? The answer lies thousands of miles away from Africa, in a handful of Asian countries.

In China, business is **booming** in fancy shops that sell expensive statues and jewelry made of ivory. The material comes from elephant **tusks**. But for many **ivory** purchasers, the gentle giants are not only out of sight but also out of mind. "Surveys indicate that seven out of 10 Chinese citizens don't realize that an elephant has to die in order [for them] to get **ivory," says Will Travers, of the Born Free Foundation. In recent years, as China's **economy** has grown, so has the demand for **ivory**.

**Readability Estimation**
**Formula Value**
Dale-Chall 7-8
HOW TO STRETCH: WORD ACCURACY LEVELS
Word Accuracy

• 83-85% for first and second graders with support (Powell, 1970; Stahl & Heubach, 2005).
• 94% for the sixth graders (Powell, 1970).
• Silent reading and oral reading behaviors are not the same (Halladay, 2012).
• Tolerance for not knowing words may be higher in books below 90% (Halladay, 2012).
HOW TO STRETCH: TEXT LEVELS
How far can readers be stretched?

Our Results

- Stretch texts
  - 76L above level
- Mean Comprehension = 61%

- Difficult texts
  - 200L above level
- Mean Comprehension = 49%

May be able to go a little over ½ Grade Level above or 75L

200L is TOO HIGH
HOW TO STRETCH: LENGTH
ASSESS LENGTH

1st Grade
50-250 Words

Increase of 1750 words

4th Grade
2000 Words

Afflerbach, et al. 2001

Average Change in length
Impact of Text Length in fourth grade

61% “proficient” Calif. State Test

23% “proficient” NAEP

Hiebert & Calfee, 2010
Length Compounds Difficulty

Comprehension %

- 400 Lexiles: 1000 Wds (90%), 200 Wds (80%)
- 600 Lexiles: 1000 Wds (70%), 200 Wds (60%)
- 800 Lexiles: 1000 Wds (50%), 200 Wds (40%)

Legend:
- Purple: 1000 Wds
- Light Purple: 200 Wds
Don’t increase length and difficulty at the same time.
HOW TO STRETCH: STAMINA
Stamina

• Ability to persevere with success during a difficult task
• Students (below level) had good reading rates and comprehension on beginning portions of a text
• After beginning portions they had increased rates of reading but lower comprehension scores (Hiebert, Wilson, & Trainin (2010))
HOW TO STRETCH: CONSIDER READERS’ HISTORY
Readers don’t all respond in the same ways to stretch levels

• Stretch texts
  – 76L above level
• On/Above = 64%
• Below = 59%

• Difficult texts
  – 200L above level
• On/Above = 53 %
• Below = 47%

Below level readers could not handle the same levels of “stretch”
Readers don’t all respond in the same ways to length
HOW TO STRETCH: CONSIDER READERS’ HISTORY
HOW TO STRETCH: STRETCH TOOLKIT

Know Reading Levels
Know Text Levels
Strategies Teacher Reads

• Shared Reading Experience (Holdaway, 1982),
  – teacher reads most of the text
• Think-alouds
  – Teacher models comprehension strategies.

Strategies: Students listen and reread

• Repeated Oral Reading

• Fluency-Oriented Reading Instruction (Stahl & Heubach, 2005)
  – Listen to Teacher, Echo reading, Choral reading, Partner reading,
CREATE A DIFFERENT TRAJECTORY
Vary the Text Difficulty Trajectory

FOR NOW: MESSAGES FOR THE CLASSROOM
Stretch ≠ Frustration
Balance the paradigms

- Teach for challenge, watch for frustration
The “read aloud” solution

• Don’t make students’ *only* exposure to challenging text the read aloud.
Challenge is individual: What stretches one student will not stretch another
Resist the district-level misinterpretation

- Every classroom reads “on level” texts.
Scaffold for Stamina

• As you increase length and difficulty, have a training plan
  – Support motivation
  – Support comprehension
Consider reading history: Readers with less success will need more support as they are “stretched.”
Thank You!
Heidi Anne Mesmer
hamesmer@vt.edu