OSTP ELA and Math,
The Lexile® Framework for Reading,
and
The Quantile® Framework for Mathematics

MetaMetrics. Linking Assessment With Instruction
Session Overview

• OSTP Spring 2017 Linking Study
• Performance Levels and Lexile/Quantile measures
• Lexile/Quantile Growth Planner
• Resources for instructional connections
• Questions and Answers
What is a Linking Study?

The goal of a linking study is to establish a relationship between two separate scales.
During Spring 2017, linking studies were conducted to establish a relationship between the OSTP ELA and the Lexile Framework and the OSTP Math and the Quantile Framework.

Why Link? To connect state assessment results with instructional information.
OSTP Linking Study Overview

• Design
  – Lexile and Quantile items were embedded into the OSTP ELA and Math tests

• Sample
  – All students participating in the Spring 2017 OSTP ELA and Math test administrations

• Data
  – Student performance data was collected on the Lexile and Quantile items and the OSTP ELA and Math items

• Linking Function
  – A statistical relationship was established to connect OSTP ELA and Math student performance with the Lexile and Quantile Frameworks
OSTP Linking Study Results

Much like temperature can be reported in Celsius or Fahrenheit, student reading ability can now be reported in the OSTP ELA scale and the Lexile scale.

Likewise, student math ability can now be reported in the OSTP Math scale and the Quantile scale.
OSTP Performance Standards

- OSTP performance standards were established through standard-setting by Oklahoma stakeholders.
- Proficient Students demonstrate mastery over challenging grade-level subject matter and that they are on track to be college- and career-ready.
- The performance standards reflect the expectations for students learning the Oklahoma Academic Content Standards
There are numerous examples of when it is easy to confuse underlying measurement scales with the labels we attach to various points on the measurement scales. For example, while 70°F Fahrenheit is the same temperature in Boston as it is in Miami, the labels or judgments we make about the temperature are very different. Residents in Boston consider 70°F a “warm” day whereas residents in Miami consider it “cold.”

In another example, while the underlying measurement scale for reporting vehicular speed is the same across our nation, the maximum allowable speed limit across states varies from 60 mph to 80 mph. Consequently, what we consider “speeding” varies across states as well.
Performance Standards VS Scales

When a child at a theme park asks “Can I go on this ride alone?” the answer is “If you’re tall enough.” But what does “tall enough” mean? This is a standard describing how tall you must be to go on the ride. In order to answer the question we need to know which theme park the child is in. “Tall enough” means different things in different theme parks. For example,

- The sign for the Space Mountain® ride at Walt Disney World® says you must be 44 tall to ride.
- The sign for the Space Mountain® ride at Disneyland® says you must be 40” tall to ride.
Scale and Performance Standards

While proficient standards may vary, the Lexile and Quantile scales do not change.
# OSTP Proficient Level

## OSTP ELA Proficient Level in Lexile

<table>
<thead>
<tr>
<th>Grade</th>
<th>OSTP ELA Cut Score Range</th>
<th>OSTP ELA Range in Lexile</th>
<th>CCR Text Complexity Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>300-328</td>
<td>700L–890L</td>
<td>520L to 820L</td>
</tr>
</tbody>
</table>

## OSTP Math Proficient Level in Quantile

<table>
<thead>
<tr>
<th>Grade</th>
<th>OSTP Math Cut Score Range</th>
<th>OSTP Math Range in Quantile</th>
<th>Math Lesson Range (4th Grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>300-320</td>
<td>710Q-905Q</td>
<td>390Q to 680Q</td>
</tr>
</tbody>
</table>
Lexile and Quantile Grade Ranges

Student Ranges

• These ranges provide information for descriptive purposes.

• The goal is to give you a sense of how a student’s Lexile/Quantile measure (reading/math ability) compares to Lexile/Quantile measures for students in the same grade.

• The ranges are not intended to be a guide or standard that students are expected to reach.
Lexile and Quantile Grade Ranges

Text/Math Lesson Ranges

• The Lexile text ranges represent the demand of text that students should be reading to be college- and career- ready.

• The Quantile math lesson ranges represent the difficulty level of math skills that students encounter on their way to college- and career-readiness.
Lexile and Quantile Grade Ranges


The Lexile & Quantile Growth Planner
Math and Reading Demands of Career Entrance

Career Preparedness

The Lexile and Quantile measure are the only metrics available to compare and describe the reading and mathematics demands of careers.

Electrician Career has a reading demand of 1270L and requires mathematics skills capability of 1045Q.
The Growth Planner overlays the reading demand of different occupations. Here the complexity of texts typically encountered by a video game designer is shown.
The Lexile & Quantile Growth Planner

Lexile® Growth Planner:
https://growth-planner.lexile.com/lexile/OK

or

Quantile® Growth Planner:
https://growth-planner.lexile.com/quantile/OK
How Can I Use The Quantile® Framework?
Using Quantile Measures in the Classroom

Teachers can use Quantile measures to:

• Sequence materials by increasing the difficulty of skills and concepts throughout the year

• Provide re-teaching/pre-teaching of prerequisite skills necessary for understanding of the lesson

• Locate additional resources for remedial and enrichment activities
Using Quantile Measures at Home

Parents can use Quantile measures to:

• Locate additional instructional materials both within and below a child’s Quantile range to help ensure positive and motivating experiences

• Celebrate a child’s math accomplishments—the Quantile Framework provides an easy way to track and monitor growth.

• Communicate with a child’s teacher
Quantile Tools and Resources

www.Quantiles.com

• Guide to Quantile Tools and Resources
  – http://tinyurl.com/hpwhthne

• Find Your Textbook
  – https://math-tools.quantiles.com/find-your-textbook/

• Math Skills Database
Quantile Tools and Resources

www.Quantiles.com

• Quantile Teacher Assistant
  – https://math-tools.quantiles.com/quantile-teacher-assistant/

• Math@Home
  – https://math-tools.quantiles.com/math-at-home/
Lexile Tools and Resources

www.lexile.com

• Lexile® Overview Video
  – https://www.youtube.com/watch?v=AcrUb8pI10c

• Lexile® Map
  – http://www.lexile.com/tools/lexile-map/

• Find a Book
  – https://lexile.com/fab/
Lexile Tools and Resources

www.lexile.com

• Lexile® Analyzer
  – https://www.lexile.com/analyzer/

• Online Databases
  – http://libraries.ok.gov/digital-prairie-resources/
Question and Answer
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