



West Virginia DEPARTMENT OF
EDUCATION

Career Preparedness Projections

Reading and Mathematics Demands of Careers

September 13, 2023

Career Preparedness Study Overview

Goal: Analyze the West Virginia General Summative Assessment (WVGSA) performance of middle school students and project their anticipated preparedness for the entry-level reading and math demands for each of 33 careers.

- Study conducted in partnership with MetaMetrics (the developer of the Lexile and Quantile scales).

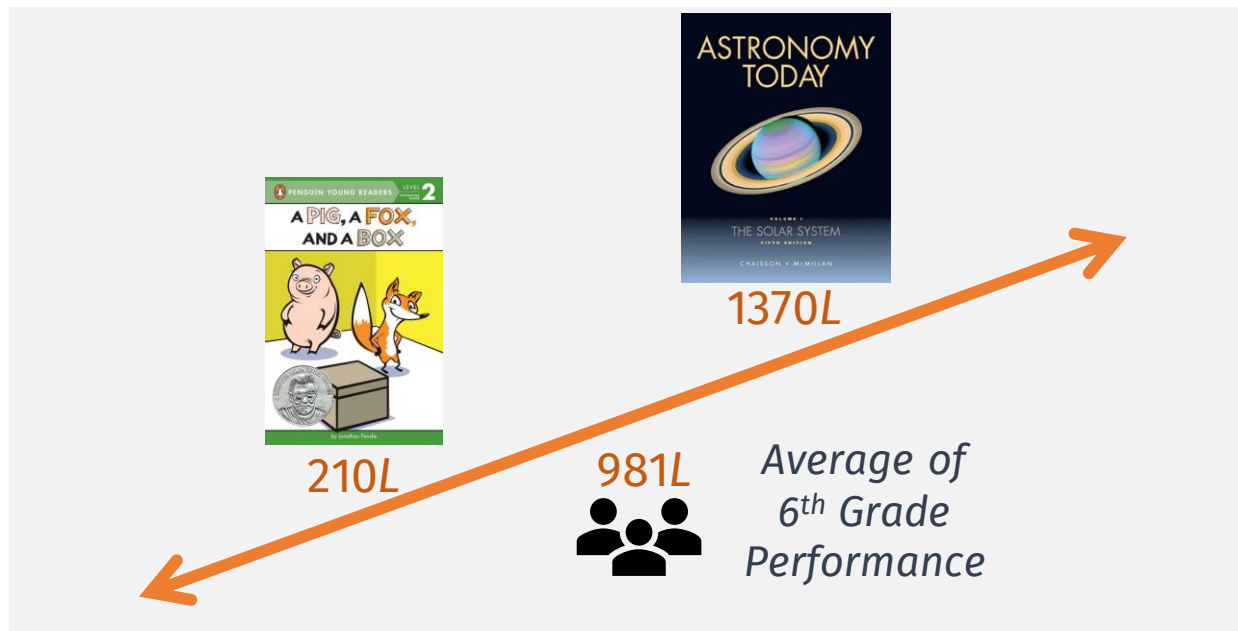


- Data from the Spring 2022 WVGSA administration were used.

Lexile and Quantile Fundamentals

Lexile® Framework for Reading

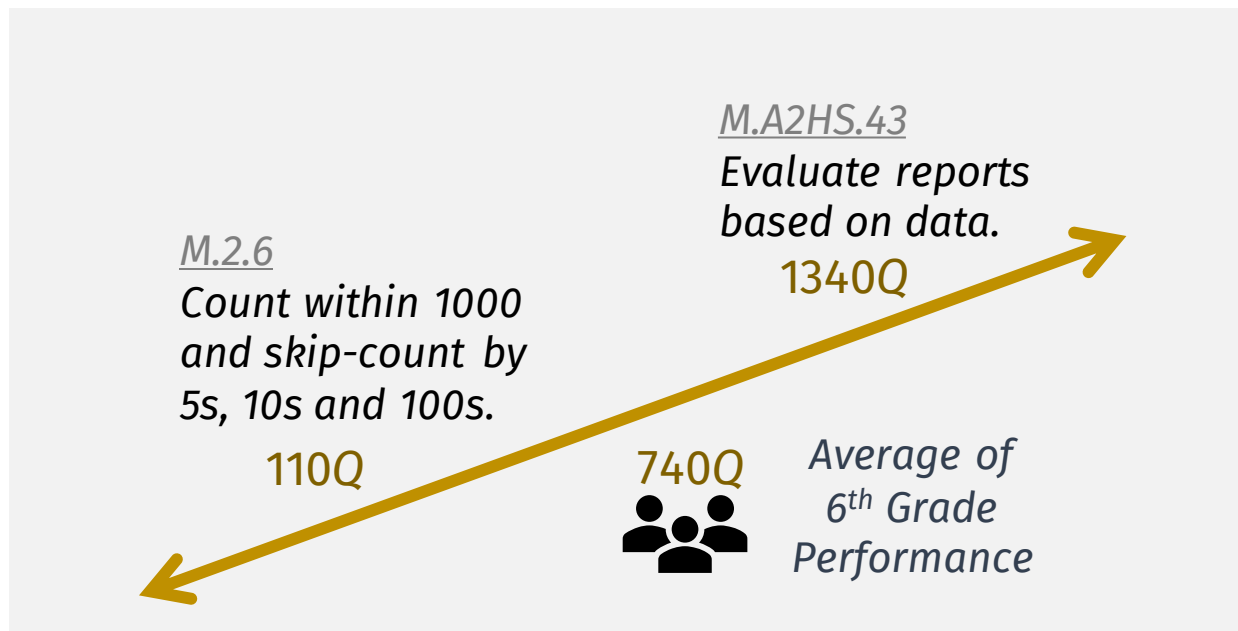
- Places text complexity and student comprehension level on the same scale.



Lexile and Quantile Fundamentals (cont.)

Quantile® Framework for Mathematics

- Places mathematical skills and concepts and student math performance on the same scale.



Lexile and Quantile Linkage to WVGSA

- The Lexile Framework has been linked to the West Virginia General Summative Assessment (WVGSA) for English Language Arts in Grades 3 – 8, and the Quantile Framework has been linked to the WVGSA for mathematics in Grades 3 – 8.
- As part of the WVGSA reports, students and their families receive a Lexile measure for ELA and a Quantile measure for mathematics.

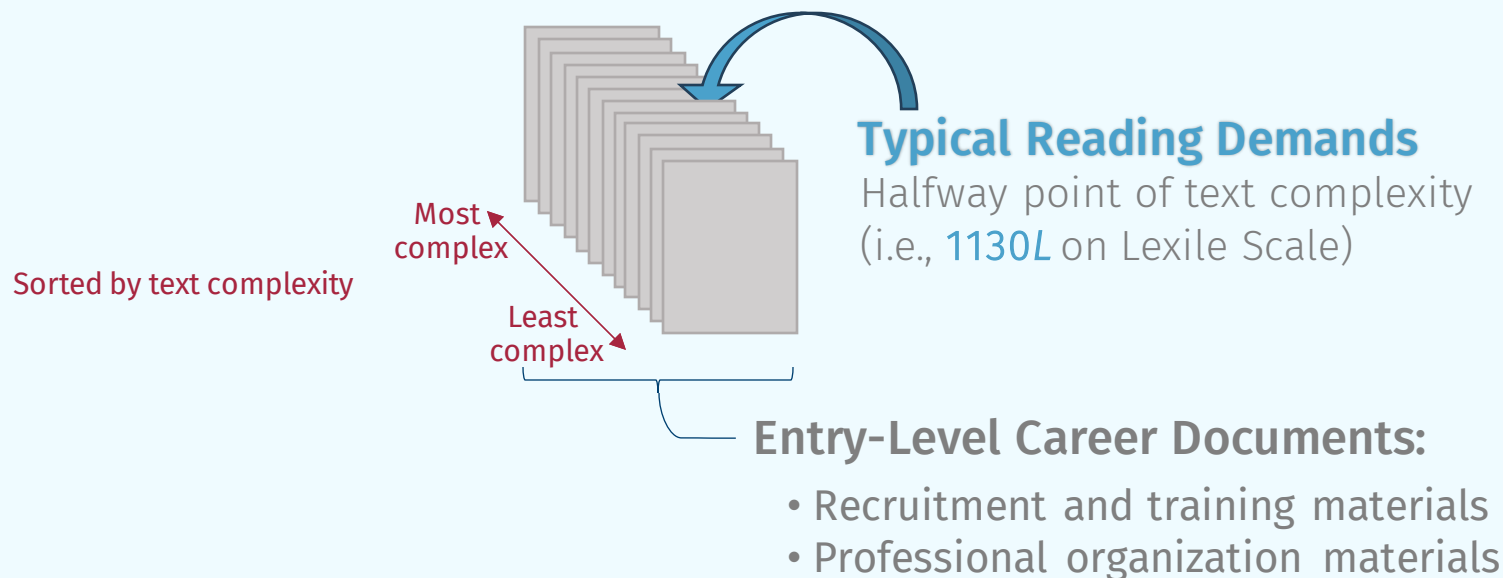
Example: 8th Grade Student

Subject Area	WVGSA Score	Translates to	Lexile/Quantile Measure
English Language Arts	656	→	1170L
Mathematics	587	→	1088Q

Entry-Level Reading and Math Demands

- Example:

Industry:	Architecture & Construction
Career:	Carpenter



Entry-Level Reading and Math Demands

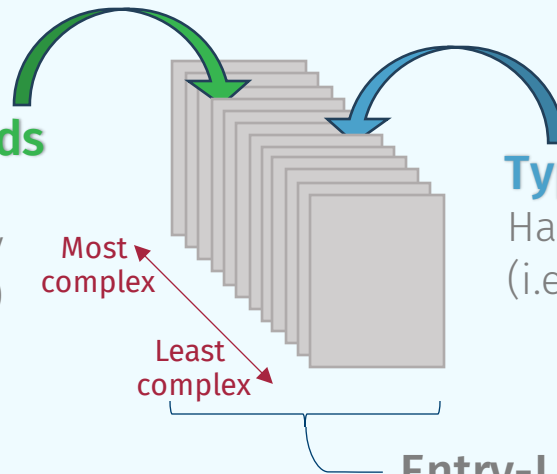
- Example:

Industry:	Architecture & Construction
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Most Reading Demands

Three-quarters point
of text complexity
(i.e., **1180L** on Lexile Scale)



Typical Reading Demands

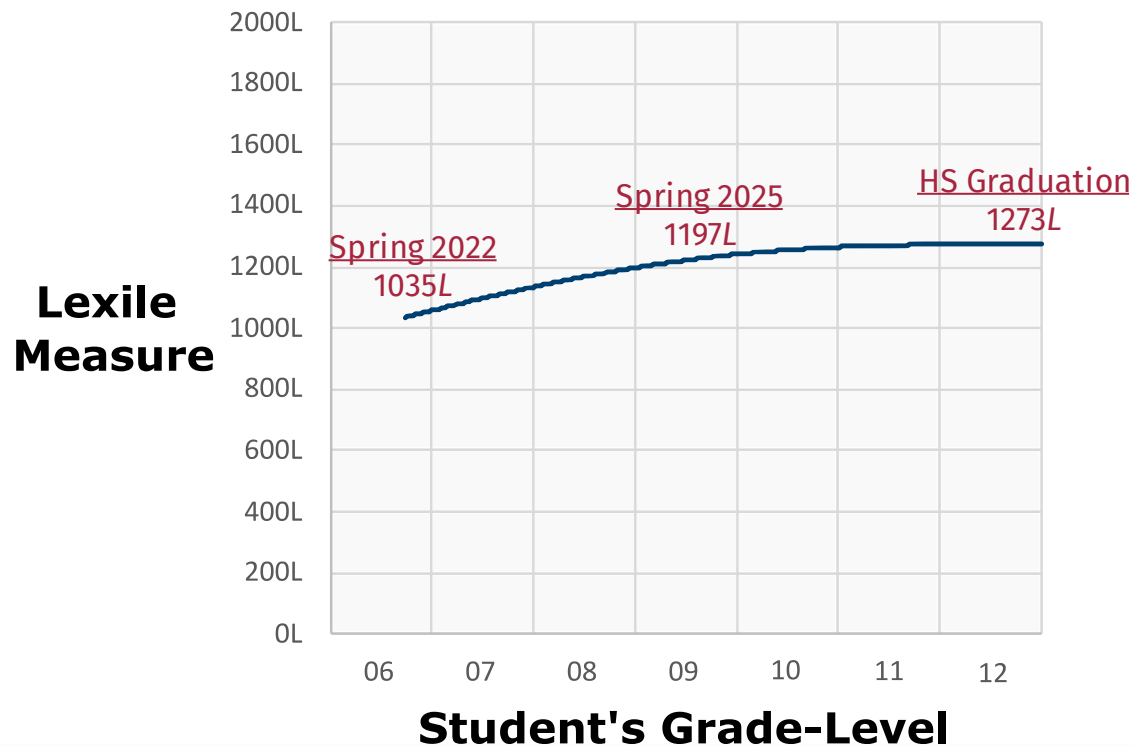
Halfway point of text complexity
(i.e., **1130L** on Lexile Scale)

Entry-Level Career Documents:

- Recruitment and training materials
- Professional organization materials

Sample Lexile Growth Projection

- Assuming we have a student who received a 1035L in the 6th Grade on the ELA assessment of the WVGSA in Spring 2022:



Sample Results for the Carpentry Career

- Thresholds used by subject area and preparedness level:

Subject Area	Typical Demands	Most Demands
ELA (<i>Lexile</i>)	1130L	1180L
Mathematics (<i>Quantile</i>)	1000Q	1160Q

JOB OUTLOOK

Carpenter



AVG SALARY

\$44,590



EDUCATION LEVEL

High school preferred, plus long term, on-the-job training



JOB OUTLOOK

Stable

- Percent of students on-track for entry-level reading demands:

Preparedness Level	Grade 06	Grade 07	Grade 08
Typical Entry-Level Reading Demands	89%	82%	81%
Most Entry-Level Reading Demands	72%	63%	63%

Sample Results for the Carpentry Career (cont.)

- Thresholds used by subject area and preparedness level:

Subject Area	Typical Demands	Most Demands
ELA (<i>Lexile</i>)	1130L	1180L
Mathematics (<i>Quantile</i>)	1000Q	1160Q

JOB OUTLOOK

Carpenter



AVG SALARY

\$44,590



EDUCATION LEVEL

High school preferred, plus long term, on-the-job training



JOB OUTLOOK

Stable

- Percent of students on-track for entry-level mathematics demands:

Preparedness Level	Grade 06	Grade 07	Grade 08
Typical Entry-Level Math Demands	73%	74%	72%
Most Entry-Level Math Demands	46%	49%	49%

Benefits for Students and Schools

- Allows for discussion of middle school assessment results to focus on anticipated preparedness for specific careers.
- Allows for existing assessment data to be used without additional testing burden.
- The results are indicative that students may be more prepared for certain careers than what is reflected in WVGSA proficiency results.
- Caveat: Multiple external factors can influence the projections, so the numbers are best viewed as a data-informed estimate and not the actual learning trajectory that students will necessarily have.



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Thank you!

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