



Higher scores on Newsela quizzes linked to greater ELA achievement

A Newsela validity report



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Executive Summary

- Newsela usage and performance in the 2020 - 2021 school year was compared to MAP Growth scores for ~10,000 students from 16 different states.
- Higher scores on Newsela ELA quizzes were associated with better MAP Growth outcomes in the spring.
- Students who averaged 80% or higher on Newsela quizzes over the school year reached the 80th percentile on average on their Spring MAP Growth assessment.
- Students who improved their quiz scores throughout the year showed corresponding growth on MAP Growth from fall to spring.
- All students benefited from Newsela equally, regardless of demographic variables such as income and race.
- Previous research indicates that MAP Growth is highly correlated with many summative assessments. As such, these outcomes show that Newsela scores can be a helpful leading indicator in understanding any student's ELA performance.



KEY FINDING

When students take Newsela quizzes, they're getting exposure to the types of questions being asked on high stakes reading assessments.

As students improve their scores on Newsela quizzes, they're demonstrating standardized reading growth as well.



Background

This study examines how [student behavior and performance on Newsela relates to English Language Arts \(ELA\) achievement and growth](#) within a single school year. Newsela is a digital instructional content platform offering teachers engaging and relevant texts for their classroom instruction in subjects such as ELA, Social Studies, and Science. Newsela's content library features over 15,000 informational texts written at 5 different reading levels as well as fiction stories and multimedia content. In addition to leveled content, Newsela also offers standards-aligned quizzes, writing prompts, and vocabulary-building exercises. Newsela ELA quizzes are composed of 4 or 8 multiple-choice questions, each of which is aligned to state-specific reading standards. In this report, [quiz score](#) is defined as percent correct on these ELA quizzes (i.e., the result of dividing total questions answered correctly by total questions attempted).

ELA achievement was measured using MAP Growth. The Northwest Evaluation Association (NWEA) Measures of Academic Progress® (MAP) Growth™ is an online adaptive interim assessment typically taken by students at

three points throughout the school year (Fall, Winter, Spring). Interim assessments like MAP Growth provide information to teachers, administrators, and parents about students' academic achievement and growth over time. Previous research indicates that MAP Growth is highly correlated with many summative assessments (NWEA, 2016) (NWEA, 2021).

The analyses presented here focus on the MAP Growth's Reading subject test, which covers vocabulary, informational comprehension, and literary comprehension. Students who take MAP Growth receive a MAP Percentile Rank for each administration of the assessment based on their performance and grade. Percentile ranks are calculated based on nationally representative norming studies.

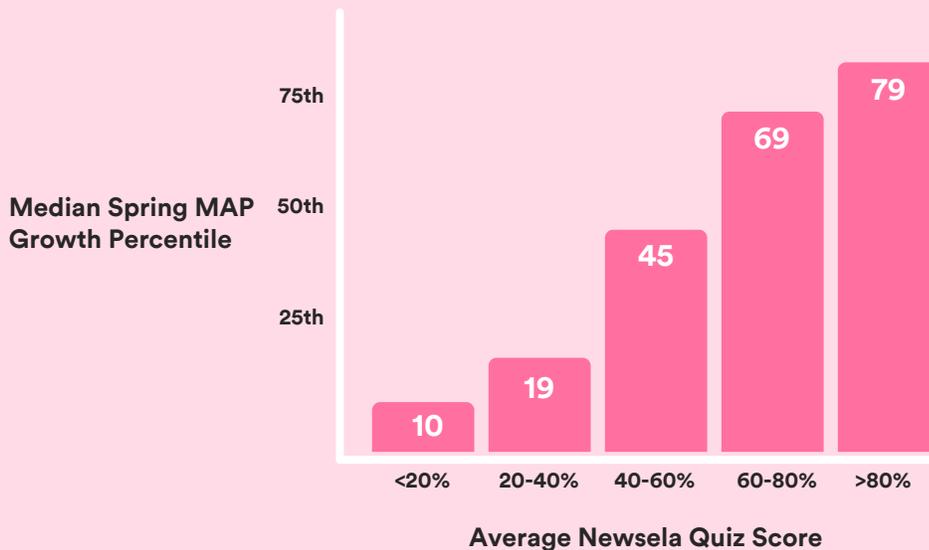
Results

Higher Scores on Newsela Quizzes Linked to Higher Achievement on MAP Growth

School-year Newsela ELA quiz scores show a strong positive correlation with students' Spring MAP percentile even after taking into account Fall MAP Growth percentile. The correlation between quiz score and Spring MAP Growth is 0.53,¹ reflecting a large effect size.² Students who averaged 80% or higher on Newsela quizzes over the school year reached the 80th percentile on average on their Spring MAP Growth assessment. Given the strong relationship between quizzes and MAP Growth scores, [teachers should be able to use Newsela ELA multiple-choice quizzes as effective low-stakes indicators of ELA achievement between administrations of MAP Growth.](#)



Performance on Newsela quizzes is highly correlated with performance on MAP Growth



Newsela ELA quiz scores and MAP Growth outcomes are highly correlated. Students who showed higher quiz scores over the school year also exhibited stronger performance on the Spring MAP Growth assessment.

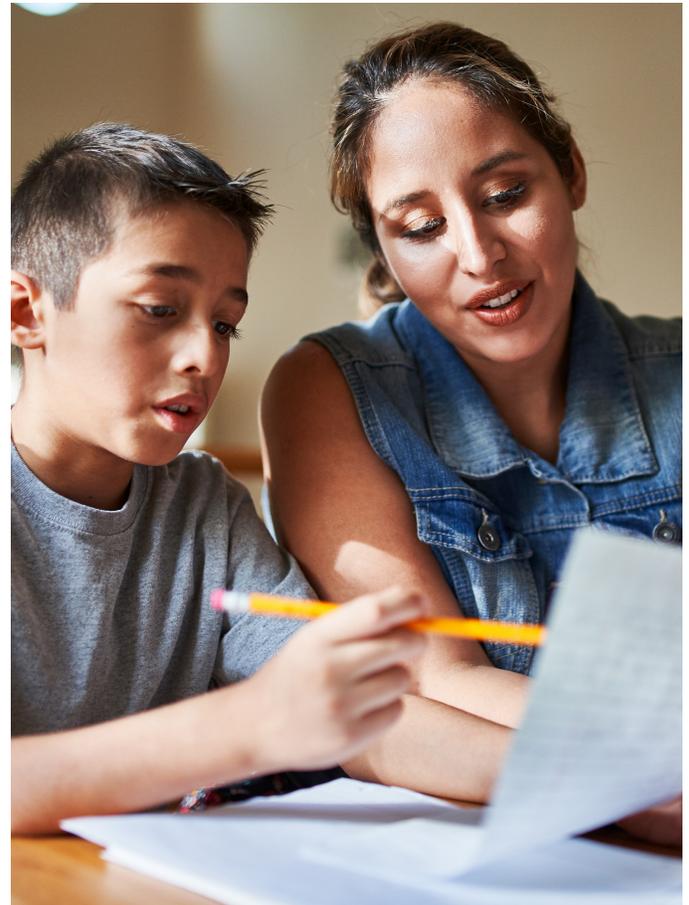
1 $r(9624) = 0.53, p < .001$. After accounting for Fall MAP percentile, the correlation is 0.21; $r(9624) = 0.21, p < .001$.

2 Correlation effect sizes: 0.10 - 0.29 = small; 0.30 - 0.49 = medium; 0.50+ = large (Cohen, 1992).

Results

Improvement in Newsela Quiz Scores Predicts School-Year ELA Growth

Another way to look at quiz scores is to see how they change over time. In this analysis, students' quiz score trajectories (how their scores fluctuate from month to month) were compared to change in their MAP Growth scores from Fall to Spring.³ This approach revealed that the more a student's quiz scores improve over the course of the school year, the more their MAP Growth scores increase as well.⁴ For example, if a student's **Newsela quiz average increased by 5 percentage points over the school year**, we would expect to see their MAP Growth percentile increase by almost two points. Thus, as long as students are taking quizzes on a regular basis,⁵ **teachers can use quiz performance trends as an indicator of underlying ELA growth or loss between MAP Growth administrations**. This could help teachers monitor struggling students as well as identify strategies associated with student growth.



Actual Change in Quiz Score (Sept - May)	Predicted Change in MAP Growth (Fall - Spring)
0%	+0.01
+5%	+1.76
+10%	+2.95

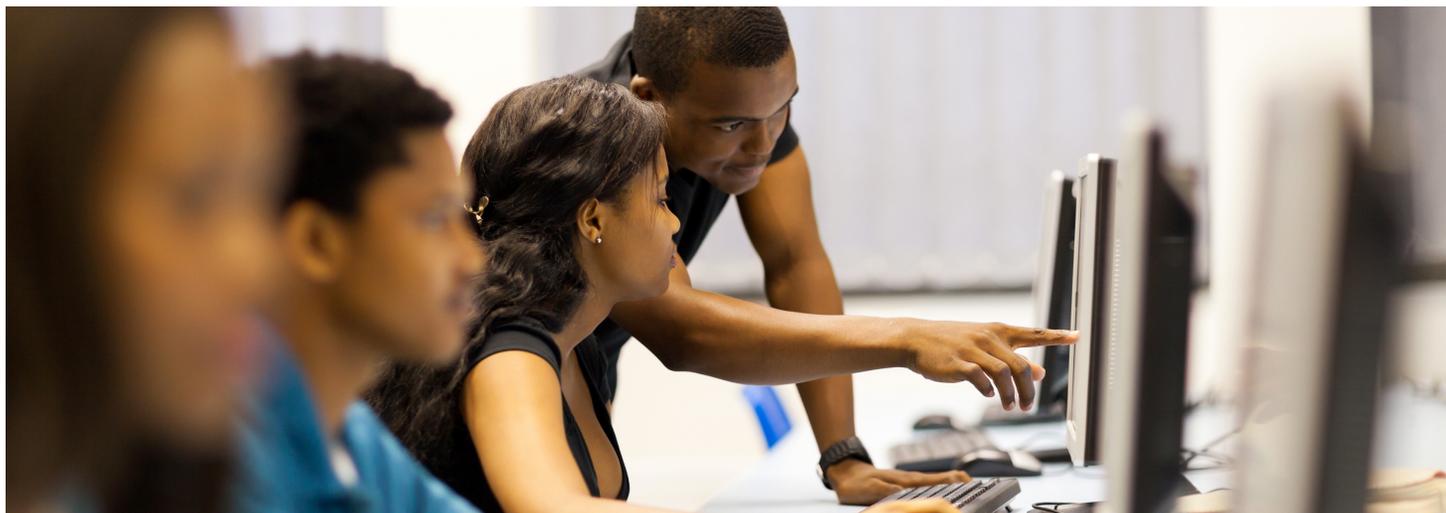
Table 1. Improving quiz scores over time is associated with improvements on MAP Growth percentile. Predicted change in MAP Growth is based on the statistical model described in footnote 3.

³ Growth curve analysis (Mirman, 2017) was used to fit linear time terms to each student's quiz score trajectory.

These terms were then used to predict change in MAP scores.

⁴ $b = 21.59, t(1029) = 3.05, p = .002.$

⁵ In this sample, students took quizzes at least once a month.



Results

Newsela usage affects different populations in an equitable way.

Academic achievement is related to multiple different demographic factors, such as race and socio-economic status (SES) (Hegedus, 2018; Paschall, Gershoff, & Kuhfeld, 2018). Newsela's editorial staff currently employs a culturally responsive lens and framework when evaluating content to add to the Newsela website, focusing on content that inspires students to be knowledgeable and active global citizens who are well-informed, culturally inclusive and aware. Our texts are selected to serve as mirrors and windows for Newsela's diverse readership, teaching students about those different from themselves as well as giving them opportunities to identify with people within the content.

With this approach in mind, a series of school-level analyses were completed to investigate how demographic factors, Newsela usage, and student academic outcomes were related. These analyses revealed that all students benefited from Newsela similarly,⁶ regardless of multiple demographic factors, including class size, SES, and race/ethnicity.

This suggests that Newsela has an equitable impact on literacy skills regardless of a student's race/ethnicity or socioeconomic status.

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⁶ Newsela usage group was determined by comparing the number of teachers and students within a school who used the platform once a month or more to the total number of teachers and students who used the platform at all during the school year. Any school where more than 30% of users logged in monthly (or more) was classified as a "higher usage" school, while those with less than 30% monthly users were classified as "lower-usage." 30% represents the average percentage of monthly users for any given school within the core sample.

Citations

Cohen, J. (1992). A power primer. *Psychological bulletin*, 112(1), 155.

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Northwest Evaluation Association (2020). 2020 NWEA MAP Growth normative data. Retrieved from <https://teach.mapnwea.org/impl/MAPGrowthNormativeDataOverview.pdf>.

Paschall, K. W., Gershoff, E. T., & Kuhfeld, M. (2018). A Two Decade Examination of Historical Race/Ethnicity Disparities in Academic Achievement by Poverty Status. *Journal of Youth and Adolescence*, 47(6), 1164–1177. <https://doi.org/10.1007/s10964-017-0800-7>