The impact of Newsela on at-risk 7th and 8th grade students

A summer learning study
Executive Summary

- This study was designed to meet ESSA standards for “Promising” research.

- Students who received low scores on their state end-of-year reading assessment were invited to participate in a 3-week summer learning program.

- Participants worked through customized Newsela Bridge Units, covering literacy skills such as synthesizing information to create new understandings, evaluating details to determine key ideas, and using text evidence to support responses.

- Students exhibited a statistically significant 5.25% increase in vocabulary performance.

- Overall, students demonstrated a more modest 3% increase in comprehension.

- Students using Newsela with more experienced middle school ELA teachers exhibited a more pronounced 11% increase in comprehension. If the program had continued with students learning at the same rate, they would have met Newsela national averages and closed the gap in terms of comprehension performance relative to other Newsela users in another 3-4 weeks.

“I’m just glad I did summer school, because I had heard of Newsela, but didn’t know all of the different things you could do with it. And now I’m like, ‘Oh! I want to use this more in the classroom.’”

~ Summer school teacher
Introduction

Research dating back over a century documents summer learning “loss”, “slide”, or “setback” — a phenomenon where, over the summer, students forget some of the skills they worked hard to master the previous school year.¹ Seminal research suggests loss is proportionately greater at the secondary level² and for students who exhibited below-level performance during the previous school year.³

In analyses conducted shortly before the COVID-19 pandemic, NWEA estimated that today’s students average about 1-2 months of loss in reading every summer, with considerable variability between students depending on a variety of factors, such as whether students are able to attend high quality summer learning programs.⁴ This year, educational policymakers nationwide have been concerned that summer learning loss would exacerbate any lost learning opportunities induced by COVID, prompting funding for new summer learning programs.⁵

Many prior summer learning programs have succeeded in preventing summer loss even for at-risk readers.⁶ One review found that for traditional summer learning programs leveraging books and other print-based materials, learning outcomes tend to be greater for reading comprehension than vocabulary.⁷ This may be because the traditional programs included in the review did not prioritize vocabulary learning opportunities.⁸ Another review aimed at better understanding the impact of technology-based learning programs found larger effects for vocabulary than other literacy outcomes,⁹ possibly because educational technology programs can include dictionary-like features to promote vocabulary learning with or without explicit, teacher-driven instruction and have the functionality to predict or track the words students are exposed to over the course of the educational program.
In the present research study, we hypothesized that below-level readers in 7th and 8th grade would exhibit vocabulary and comprehension gains following intensive use of Newsela in a 3-week summer learning program. Newsela is a digital instructional content platform offering teachers engaging, standards-aligned lessons and content materials. Newsela offers a robust content library with over 15,000 informational texts at five reading levels and fiction texts, as well as multimedia content. Texts include formative assessment opportunities, such as standards-aligned multiple choice quizzes measuring text comprehension. Newsela also has a vocabulary instruction tool called “Power Words”, where readers are exposed to clickable student-friendly definitions and pronunciations of Tier II vocabulary (i.e., high frequency academic vocabulary terms), along with a pair of accompanying multiple choice questions for each target word. Students collect practiced words on a “Word Wall”. Previous research has demonstrated Newsela’s positive impact on general reading ability in the context of regular school-year use.¹⁰

This study was designed to adhere to “Promising” standards set forth by the Every Student Succeeds Act (ESSA). ESSA stipulates that educational programs purchased with certain federal funds (e.g., Title I) be backed by sound efficacy evidence. This evaluation is a well-designed and -implemented correlational study with statistical controls for selection bias, meeting ESSA’s rigorous standards for evidence-based interventions. The ESSA framework gives additional value to studies that include a control or comparison group that does not use the focal learning program (in this case, Newsela). In this study, we determined it would be more ethical to allow ALL participants to use Newsela. Otherwise, some students would not have been set up to succeed, because the district was launching a completely new summer program and did not have an alternate resource that “control” classes could have used if denied Newsela.
The participating district invited rising 8th and 9th grade students with low 7th and 8th grade state reading test scores to participate in a summer learning experience. Teachers received three hours of Newsela training in advance of the program. Newsela partnered with a large district in north central Texas for this study. The figure below shows their demographic breakdown. The district is slightly more diverse than Texas state averages.

The intervention was delivered by 6 teachers. Two (2) teachers were experienced middle school ELA teachers with 5+ years of teaching experience, 2 were novice middle school ELA teachers with one year of teaching experience, and 2 were experienced elementary teachers with 15+ years of teaching experience.

Because this was an optional summer learning program just for students with poor 7th and 8th grade state reading test performance, the program itself was fairly small. Forty-one (41) students (51% 7th grade) participated in the full program with complete pre- and post-test data.
NEWSELA UNITS

Newsela adapted previously created “Texas Bridge Units” for use in this study. Bridge Units were developed to spiral key concepts and skills for summer and back-to-school use cases in order to maximize students’ exposure to grade-level concepts.

The unit targeted the following standards-based reading skills:

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<tr>
<th>Skill</th>
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<td>Generate questions before, during, and after reading to deepen understanding and gain information</td>
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<tr>
<td>Make and correct or confirm predictions using text features, characteristics of genre, and structures</td>
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<tr>
<td>Create mental images to deepen understanding</td>
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<tr>
<td>Make connections to personal experiences, ideas in other texts, and society</td>
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<tr>
<td>Evaluate details read to determine key ideas</td>
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<tr>
<td>Synthesize information to create new understanding</td>
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<tr>
<td>Describe personal connections to a variety of sources, including self-selected texts</td>
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<td>Paraphrase and summarize texts in ways that maintain meaning and logical order</td>
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The unit was structured so that students practiced target literacy skills while reading high-interest texts. Most days, lessons provided students the opportunity to choose between two texts: one fiction and one nonfiction option. Lessons included daily teacher-facing “before reading”, “during reading”, and “after reading” activity suggestions centered around a focal reading skill. Lessons also included several ELA and SEL extension activity suggestions and differentiation strategies to help teachers maximize their instructional time and tailor instruction to their individual classes.
ASSESSMENTS

We leveraged existing Newsela content to create custom assessments for pre- and post-test.

Vocabulary

The session contained two mandatory fiction texts featuring 8 vocabulary words – a mix of grade 5 and grade 7 Tier II terms. Because all students present when these texts were assigned would gain significant exposure to these words, we determined that they were suitable choices for our pre- and post-assessments to gauge vocabulary learning.

On the Newsela platform, each vocabulary word is assessed via two different multiple choice questions. We randomly divided these questions between the pre- and post-test.

Comprehension

Our pre- and post-tests each contained two non-fiction Newsela texts and corresponding quizzes. These quizzes primarily assessed students' ability to identify main ideas and key details, skill areas heavily emphasized in the summer program. Newsela historical data indicated that the quizzes we selected were not of equivalent difficulty. We therefore transformed students’ raw scores to account for uneven difficulty. Scores of 300 equal performance on par with Newsela national averages across all assessment texts. Lower scores reflect performance below the Newsela national average, and higher scores reflect above average performance. Unsurprisingly, the average score among this population of at-risk readers at pretest was 240 (Range = 125 -350), falling about 20% below the Newsela national average.

Vocabulary words featured

- dispersed
- fascinating
- translated
- resplendent
- precision
- eternity
- embrace
- consumed
Results

Students logged in to Newsela an average of 10.66 days over 15 days (3 wk period).

They completed 3.55 quizzes per week on average.

Thirty-seven percent completed Power Word questions.

NEWSELA IMPLEMENTATION

During our site visits, we noted that overall implementation fidelity was high, with experienced middle school teachers demonstrating particularly strong instructional practices. In all observed classes, teachers were using the target unit.

In 63% of classes observed, teachers engaged in the recommended “before reading” activity, and in 88% of classes, teachers engaged in the recommended “after reading” activity. On average, students read 1.5 of the 2 target texts available in each instructional set used during observations. Teachers complemented the structure of each lesson, which contributed to strong implementation and ease of planning.

Two teachers (one experienced middle and one experienced elementary teacher) also reported regularly checking and implementing the unit’s extension activities to provide students with more practice opportunities and engaging in class discussion around challenging vocabulary within texts. More experienced middle school teachers also engaged in more regular checks for understanding extending beyond the program’s written instructions.

“The biggest thing I really like is the structure. You have the ‘before reading’, ‘after reading’. You have this expectation of what you’re going to do everyday, and you come in and you do it.”
Results

LEARNING OUTCOMES

On average, students gained a statistically significant .42 points in vocabulary – the equivalent of a 5.25% increase. Students also gained 7.2 points in comprehension – not statistically significant but directionally positive.

Given our observations about implementation varying somewhat between teachers, we explored in follow-up analyses whether outcomes varied as a function of teacher experience. Vocabulary gains were robust across classrooms. For comprehension, students of experienced middle school ELA teachers gained 27 points – an 11% increase.

Had students continued learning at that rate, they would have met Newsela national average performance levels and closed the gap in terms of comprehension performance relative to other Newsela users after an additional 3 to 4 weeks of instruction.
Conclusion

The at-risk middle school students in this study would have been prime candidates for summer slide in the absence of any intervention. Newsela use not only helped to prevent slide for participants, but promoted vocabulary and comprehension growth for many students. Driving vocabulary learning, Newsela’s Power Words feature provided rich exposure to important Tier II vocabulary terms that students could practice with their teachers or independently could see used in context, click for pronunciation and definitions, or complete multiple choice practice activities. Collectively, these opportunities for exposure likely prompted the vocabulary gains observed in this study. Newsela also supported meaningful and engaging comprehension practice and learning opportunities. One teacher commented on the high quality of the standards chosen for the unit: “I thought the different concepts we’re looking at are kind of targeting some of the major concepts that we target [during the year].”

Another noted that the content itself was engaging for students, saying the unit featured “really good topics that are relevant to their [students’] age bracket”.

Comprehension outcomes, therefore, are likely attributable to Newsela’s turnkey lessons featuring important skills and high-interest texts. Given that attendance was somewhat inconsistent (as is typical of summer learning programs¹⁴), these vocabulary and comprehension outcomes are all the more remarkable.

Learning outcomes may have been greater in both domains had attendance been higher or the intervention a few weeks longer. Again, we predict that below-level readers taught by experienced middle school teachers would have achieved national average performance levels with an additional 3-4 weeks of instruction – aligned with other recommendations for summer learning programs to span 5 or more weeks for maximum learning.¹⁵

“I'd fall flat on my face probably without Newsela this summer. I don’t know what I would have done without it. I appreciate it, because it gives me direction.”

~ Summer school teacher
Regardless of timing, summer learning staff might benefit from occasional opportunities to connect and share best practices – either in person or using tools like the Newsela Community. Experts have pointed to the value of these kinds of community-building opportunities,¹⁶ and we suspect that in the present study, the less experienced teachers could have benefited from learning strategies from their more experienced colleagues.

Nevertheless, the outcomes of the present study should be celebrated. Participants will be entering 8th and 9th grade with a reinforced and in some cases more robust toolkit of literacy skills, increasing their preparedness for scholastic success in the year ahead.

² ibid
⁸ ibid
¹¹ Using the rstatix package in R, a repeated measures ANOVA with Teacher specified as a between subjects factor found a significant intervention effect, F(1, 36) = 8.84, p = .005, partial $\eta^2 = .197$.