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Literacy gains from weekly Newsela ELA use

A quasi-experimental evaluation of content-rich instruction

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Author: Lisa B. Hurwitz, Ph.D. (learning-research@newsela.com)

Executive summary

- This study compared upper elementary classes that used Newsela ELA throughout an entire school year to control classrooms within the same school.
- Fourth grade Newsela users exceeded the state's reading performance average and demonstrated the equivalent of about **three (3) additional months of literacy skill growth** more than peers in comparison classrooms when evaluated against national normative growth benchmarks.
- Results were most pronounced for fourth graders who read at least two (2) Newsela articles and completed one (1) multiple-choice quiz per week.
- **Newsela classes read 44% more nonfiction texts** and engaged in more frequent multiple choice practice than comparison classes.
- Newsela teachers were less reliant on Google to source classroom texts.
- This study meets **ESSA criteria for Moderate/Tier II** efficacy evidence.

Introduction

In America, for decades, only about one in three fourth-grade students are proficient readers, with proficiency rates recently trending downward.[1] The causes of reading difficulty at the elementary level are complex. We may attribute them in part to low-quality texts/instructional materials in many classrooms, such as fiction stories with little to no plot.[2] Low rates of elementary reading proficiency are problematic because at around the fourth-grade mark, students should shift from "learning to read" to "reading to learn." This means that they need to apply reading skills to a wide range of texts to achieve success across the curriculum. Students who are unable to read proficiently at this pivotal time are ill-prepared for the rigors of secondary education. Their reading difficulties cause more struggles throughout the rest of their education, lower high school graduation rates, and adverse long-term economic outcomes.[3]

To address these challenges, many schools and districts have pursued integrated curricular approaches that provide opportunities for students to practice reading comprehension skills and strategies in subjects like social studies or science.[4] Integrated approaches include both interdisciplinary instruction, where teachers address multiple subject areas simultaneously, and transdisciplinary instruction, which is more project-based and driven by student interests and real-world problems.[5] In theory, such approaches allow educators to address multiple learning goals—like building content area knowledge and strengthening reading skills—across subject areas efficiently and simultaneously.[6] They also provide a richer and more meaningful context for reading instruction[7] and create a foundation for future learning across the curriculum.[8] Mounting evidence demonstrates that this kind of thematically-rich instruction can boost ELA achievement.[9]

Definition: Integrated instruction
A content-rich, holistic form of teaching that brings together lessons across subjects such as ELA, social studies, and science.

Still, it can be challenging and time-consuming for teachers to implement integrated instruction without the right materials.[10] When using traditional core instructional resources, turnkey resources (e.g. lesson plans; texts) may not exist for all topics, especially in cases where student interest drives topic selection. Only about half of elementary teachers (50%) believe that the instructional materials available to them support connecting literacy instruction to other content areas.[11] Just 52% believe they provide sufficient nonfiction reading opportunities.[12] Whether they want to implement integrated instruction or simply supplement a more traditional curriculum, the average educator spends over 30 hours a month searching for instructional resources.[13] Most elementary teachers (95%) search Google for resources rather than going straight to more vetted sources, such as state Department of Education websites.[14]

This study aimed to explore whether Newsela ELA could enable integrated instruction and lead to stronger reading outcomes for students in upper elementary school. Newsela ELA is a knowledge and skill building platform with over 15,000 texts spanning more than 20 genres, including current events, primary sources, reference materials, speeches, opinions, interviews, biographies, court opinions, narrative nonfiction, fiction, myths, legends, and folktales. Each informational text on Newsela ELA is available at five different instructional levels. Newsela ELA also features a growing catalog of multimedia content, including interactive videos. Content on Newsela ELA is paired with formative assessment opportunities, including standards-aligned multiple-choice quizzes. Texts and curations include teaching suggestions for bringing the content to life in lessons, like before-reading activities, recommended pathways, and pacing guides. Teachers can access student performance data in a teacher-facing dashboard and use that data to inform future instruction.

This study meets the Every Student Succeeds Act (ESSA) standards for “Moderate - Tier II” research. ESSA is America’s primary education law and it provides a framework for evaluating the effectiveness of educational programs. Tier II research evaluations are well-designed and well-implemented quasi-experimental studies that compare a treatment group using a target program (in this case, Newsela ELA) to a comparable/matched comparison group.

This study addressed the following:

- What is the instructional context in participating classes? How does the nature of instruction vary between classes using Newsela ELA and business-as-usual comparison classes?
- Students who use Newsela ELA will demonstrate higher scores on a standardized reading assessment.
- Which patterns of engagement with Newsela ELA result in the strongest learning outcomes?

Method

Research Protocol

Students in this study completed reading assessments as a fall pretest in September and spring posttest in early May.

As described in more detail in the ELA Curriculum section of this report, the participating district had dedicated reading instruction blocks and transdisciplinary blocks dedicated to integrated social studies, science, and ELA instruction. Throughout the research study year, all eight participating teachers delivered both traditional ELA and integrated instruction. All eight teachers also allowed researchers to observe their classrooms twice (once in late October and once in early April) and completed a survey in late April/early May.

Four of the eight teachers opted to be in a Newsela treatment group. They committed to using Newsela ELA on a weekly basis to support their integrated and/or literacy instruction. They had access to the entire digital platform and could select texts, videos, and other content as they deemed instructionally appropriate. To aid in their use of Newsela ELA, these teachers completed three virtual synchronous professional learning sessions held in August, October, and November. They also participated in two interviews scheduled in tandem with the classroom observations and completed additional survey questions describing their use of Newsela ELA.

Participants

District and School
For this research study, Newsela partnered with Dexter Community Schools, a suburban mid-sized district near Detroit and Ann Arbor, Michigan with over 3,000 PreK-12 students. All third- and fourth-grade students across the district (approximately 500 students altogether) attend a single elementary school.

Teachers
Eight third- and fourth-grade teachers volunteered for this research study. Specifically, four teachers (two in third grade and two in fourth grade) volunteered to be in a Newsela treatment group that committed to weekly use of Newsela ELA. The remaining four teachers (one in third grade and three in fourth grade) were in the comparison group delivering business-as-usual instruction.

Teachers were highly experienced, ranging from 6-10 years to 21-25 years in the classroom, with an average of 13 years. Four of the teachers had bachelor's degrees and four had master's degrees.

Students
Altogether, 188 students participated in the study.[15] All were in classes taught by one of the teachers who opted into the study. The majority of students were white (94%), with a fairly even mix in gender (56% male). About one in five students (18%) received free or reduced-price lunch, and 18% were also on Individualized Education Plans (IEPs).

There were more third graders in the Newsela treatment than the comparison group as an artifact of which teachers opted into the study. But there were no other significant differences between students across study conditions.

ELA Curriculum

The participating district developed a transdisciplinary program called Spark. Implemented in the district's third- and fourth-grade school, Spark encouraged teachers to identify themes and topics that might interest their students and craft project-based units around them. Teachers were meant to support literacy skills and strategy practice while addressing science or social studies learning standards. During the study year, classes focused on a variety of topics including local animals (e.g., Kirtland's Warbler) and owls, local and national government structure, local legislative debates, and national parks. The school also provides a separate block of more traditional ELA instruction.

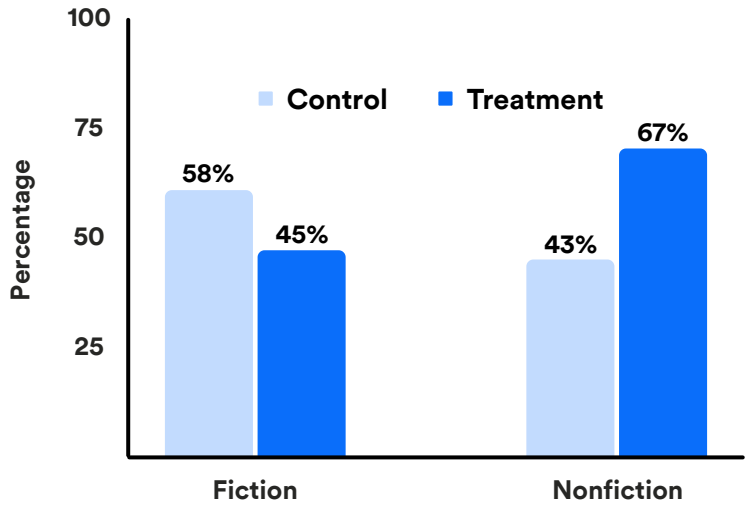
Reading Achievement Measure
Reading achievement was measured through NWEA's MAP® Growth™ assessment in reading (hereafter referred to as "MAP"), which assesses students in vocabulary and informational and literary text comprehension.[16] MAP is computer-adaptive, and students typically finish the reading assessment in about an hour. MAP generates a number of different scores to quantify reading achievement. In this report, we focus on percentile ranks, a measure of how well a student performs relative to other same-grade students nationally. As an illustration, a third grader who scored at the 40th percentile on MAP performed as well as, or better than, 40% of third graders in the MAP national norming study but scored below the remaining 60% of third graders.

Results

Classroom context

For the most part, instruction was similar across the Newsela treatment and comparison classrooms. In both conditions, teachers reported delivering approximately 6.8 hours of instruction per week in reading, writing, or language arts across all instructional blocks. They all reported providing daily or near-daily teacher-led read-alouds and student independent reading. They also reported about 2 hours per week of instruction in social studies and 1.6 hours in science. Across the school year, they administered about four Spark units, each lasting about three weeks.

Despite those similarities, three key differences emerged between the Newsela treatment and comparison classes. Each pointed to Newsela resulting in higher quality instruction in a few important areas. First, **Newsela treatment classes read 44% more nonfiction texts than comparison classes**—a difference approaching statistical significance.[17] Both sets of teachers were asked to estimate the percentage of time that their classes engaged with fiction and nonfiction texts.[18] Newsela treatment teachers reported that their students engaged with nonfiction texts about 67% of the time. That's compared to a nonfiction reading rate of only 43% among the control classes.



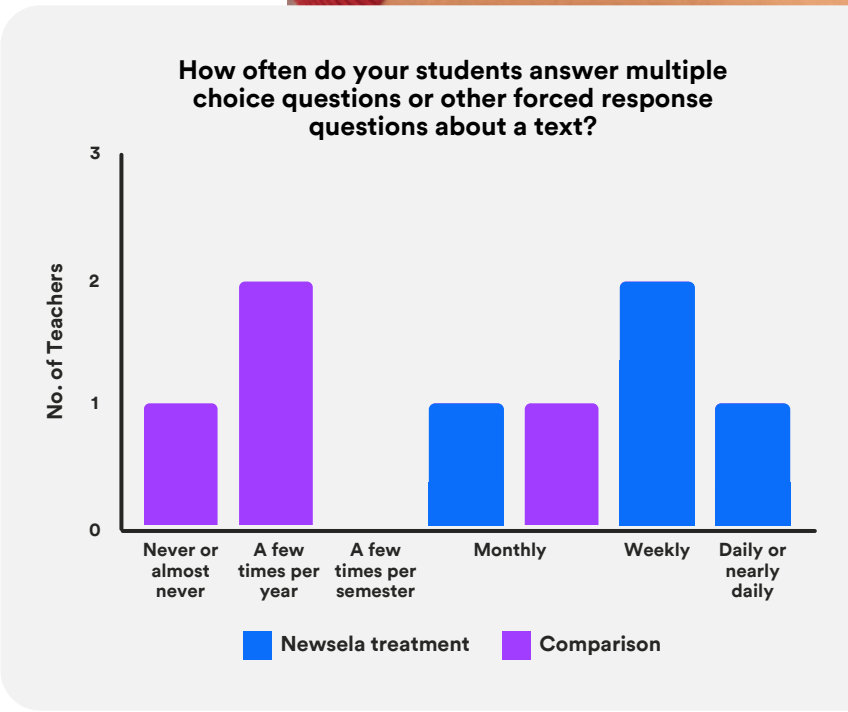
In a recent policy statement, the National Council of Teachers of English called for more nonfiction reading across K-12 classrooms.[19] Today, all 50 states have learning standards explicitly calling for informational/nonfiction text reading.

Because Newsela ELA's library of current events and nonfiction texts is robust, it is unsurprising that using Newsela resulted in students encountering more nonfiction content.

Second, Newsela and comparison teachers relied on different text sources for their integrated instruction. In response to questions asking them to rank their text sources by frequency of use, Newsela treatment teachers reported that Newsela was their top source. In contrast, comparison group teachers reported that Google was their top source. For Newsela teachers, Google was, on average, sixth on their lists. As such, **Newsela teachers were significantly less likely to resort to Google to source texts for transdisciplinary instruction**.[20] Together, these two findings paint a picture of higher-quality instruction in the Newsela classrooms. Students were engaging with more nonfiction texts and were more likely to be using quality, vetted, and standards-aligned content.

Finally, Newsela teachers reported providing more frequent opportunities for their students to practice multiple-choice or other forced-response questions about a focal text.[21] Because multiple-choice and forced-response questions are commonplace on high-stakes state assessments that students begin to take in third grade, this practice is extremely valuable. **The average Newsela treatment teacher reported providing multiple-choice practice weekly**, while the average comparison teacher reported providing this kind of practice only a few times per year.

Newsela teachers reported that the quizzes on Newsela ELA served a unique role in their instruction by providing students with practice opportunities for standardized reading assessments. This was practice students weren't getting elsewhere and was more authentic than traditional "test prep." As one third-grade Newsela teacher explained, "I feel like [Newsela ELA] has been ***really good test prep*** for [my students]. Just the practice of going back into the [text for evidence]. 'Cause ***we never did in the past any test prep.***" Her fourth-grade colleague noted that the quizzes created space for practicing test-taking strategies: "I've been working with [students] a lot on ***just the skill of when you take a multiple-choice quiz***, how it's helpful to read the questions first.

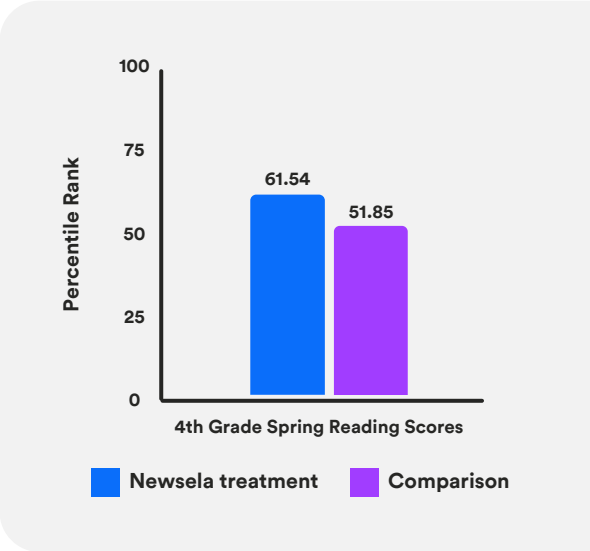


And then I'm holding them accountable by pulling them in small group and then going over the ones that they missed to learn from your past mistakes, ***some little tricks that sometimes come up in those questions***. And then tips too that the author of the quiz gives like capitalizing things or telling you to reread a part of a text."

Additionally, the quizzes helped reveal gaps in students' literacy skills. For example, a third-grade Newsela teacher noted, "I feel like a lot of times on the quizzes they'd be like, 'Where's the introduction?' And I was like, 'It's the first paragraph of your article.'" These questions reflected a lack of awareness that her students had with the concept of an introduction in a text. Her fellow third-grade Newsela teacher expressed the opinion that "**those are good conversations that other people might not be having 'cuz they don't have the questions.**"

Reading performance outcomes

After a year of Newsela ELA use, fourth-grade **students in the Newsela treatment group outperformed students in the control group by nearly 10 percentiles**. This difference was statistically significant.[22] For context, similar Michigan students scored at the 57th percentile in the spring.[23] This means that **Newsela users exceeded the state average for similar students by nearly 5 percentiles.**



A report published by the Institute of Education Sciences (IES) provides guidelines to help translate the results of educational efficacy research into more practically meaningful metrics, such as months of disciplinary growth.[24] That report explains that if you compare the effect size of a particular intervention against the amount of growth students normally achieve in any given year, you can convert a statistical effect into a measure of time. In a typical year in the absence of any special intervention, third- and fourth-grade students typically demonstrate gains of around .36 standard deviations on nationally-normed reading tests. In the present study, fourth-grade Newsela users gained .11 standard deviations more than their control group counterparts.[25] This translates to about **three months of additional growth for fourth-grade Newsela users**.

Results were less pronounced, but directionally similar, for third graders. In the spring, third-grade Newsela users averaged a percentile rank of 65.29, while the average for students in the control group was 59.59. This was a difference of 5.7 percentiles favoring Newsela users, with both groups exceeding the state average for similar students. This difference is not statistically significant but is encouraging.

Optimal usage patterns

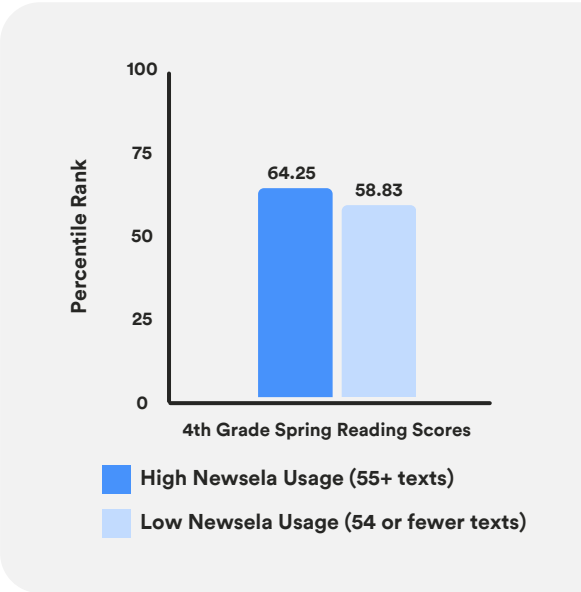
Across the full Newsela treatment sample, students used Newsela ELA for an average of 24 weeks, reading 49 texts and completing 39 multiple-choice ELA quizzes. The table below shows how Newsela usage varied between third and fourth graders. Fourth graders used the platform significantly more weeks[26] and read significantly more texts.[27] The difference in quiz-taking between grades was not statistically significant.

	Third graders	Fourth graders
Weeks of usage	24	27*
Texts read	48	55*
ELA quizzes completed	39	22

*Note. Table presents median weeks of usage, articles viewed, and quizzes completed by grade. * = significant difference at the p < .05 level.*

Among fourth graders, higher Newsela ELA engagement was associated with stronger reading performance outcomes. Specifically, students who read 55 or more texts and completed 22 or more quizzes demonstrated stronger reading outcomes than students who read fewer texts[28] and completed fewer quizzes.[29] Put differently, **reading approximately two texts and completing one quiz per week was associated with stronger reading outcomes**. Specifically, **students with higher Newsela ELA engagement earned over five percentiles more on their reading assessments**.

Reading outcomes for third graders did not vary as a function of their Newsela ELA usage.



Conclusion

The results of this study show Newsela ELA's value in upper elementary classrooms. Newsela ELA appears to have increased the quality of texts that students accessed in ELA and transdisciplinary instructional blocks, without adding additional instructional time. Newsela ELA teachers reported exposing their students to more nonfiction texts and multiple-choice practice opportunities. They also relied less on Google to source materials. Likely as a result of this increase in text/instructional material quality, Newsela ELA users at the fourth-grade level demonstrated significantly stronger reading outcomes and exceeded the state's reading performance average, with the greatest impact for heavier Newsela ELA users.

While these results are undoubtedly encouraging, it will be worthwhile to replicate this study with a larger and more diverse sample and under more rigorous conditions (i.e., random assignment). The sample of third graders in this study was likely too small for us to reach definitive, statistically significant conclusions about Newsela's impact on these younger learners. It is also possible that because the third grader engaged with Newsela significantly less than their fourth-grade counterparts, their platform dosage was insufficient to yield statistically significant results. Nonetheless, the third-grade findings documented in this report are directionally similar to what was observed among fourth graders and are, therefore, still encouraging.

As American educators face the daunting task of meeting the needs of the nearly two-thirds of students graduating elementary ill-prepared to "read to learn,"[30] there is mounting evidence that integrated curricular approaches that support literacy learning through rich, interdisciplinary or transdisciplinary instruction can lead to meaningful growth.[31] Newsela ELA can help make this kind of instruction feasible for teachers by making it easier for them to find high-quality texts and for their students to engage in valuable skills practice.

Resources

1. https://www.nationsreportcard.gov/highlights/reading/2022/
2. Wexler, N. (2020). *The Knowledge Gap: The hidden cause of America's broken education system--and how to fix it.* Penguin.
3. Fiester, L. (2013). *Early warning confirmed: A research update on third-grade reading*. Baltimore, MD: Annie E. Casey Foundation.
4. Drake, S. M., & Burns, R. C. (2004). *Meeting standards through integrated curriculum*. ASCD; Vars, G. F. (1991). Integrated curriculum in historical perspective. Educational leadership, 49(2), 14-15.
5. Helmane, I., & Briška, I. (2017). What is developing integrated or interdisciplinary or multidisciplinary or transdisciplinary education in school?. *Signum Temporis*, 9(1), 7-15.
6. Drake, S. M., & Burns, R. C. (2004). *Meeting standards through integrated curriculum*. ASCD.
7. ibid; Hirsch, E. D. (2006). Building knowledge: The case for bringing content into the language arts block and for a knowledge-rich curriculum core for all children. *American Educator*, 30(1), 8–51.
8. ibid
9. See for example Grissmer, David, Thomas White, Richard Buddin, Mark Berends, Daniel Willingham, Jamie DeCoster, Chelsea Duran, Chris Hulleman, William Murrah, and Tanya Evans. (2023). A Kindergarten Lottery Evaluation of Core Knowledge Charter Schools: Should Building General Knowledge Have a Central Role in Educational and Social Science Research and Policy?. (EdWorkingPaper: 23-755). Retrieved from Annenberg Institute at Brown University: https://doi.org/10.26300/nsbq-hb21
10. Denton, D., & Sink, C. (2015). Preserving the social studies as core curricula in an era of common core reform. Journal of Social Studies Education Research, 6(2), 1-17
11. Opfer, V. Darleen, Julia H. Kaufman, and Lindsey E. Thompson, *Implementation of K–12 State Standards for Mathematics and English Language Arts and Literacy: Findings from the American Teacher Panel*, RAND Corporation, RR-1529-1-HCT, 2016. As of August 4, 2023: https://www.rand.org/pubs/research_reports/RR1529-1.html
12. ibid
13. https://mdreducation.com/wp-content/uploads/2020/12/StateofK12Market2016_ClassroomTrends.pdf
14. Opfer, V. Darleen, Julia H. Kaufman, and Lindsey E. Thompson, *Implementation of K–12 State Standards for Mathematics and English Language Arts and Literacy: Findings from the American Teacher Panel*, RAND Corporation, RR-1529-1-HCT, 2016. As of August 4, 2023: https://www.rand.org/pubs/research_reports/RR1529-1.html
15. Data from an additional three third grade students (2 comparison; 1 treatment) were removed as outliers because their pretest, posttest, or gain scores were more than +/-3 standard deviations from the sample mean. An additional student (fourth grade comparison) was removed because they were the only English Language Learner in the sample. Results were similar in alternate models where these students were included.
16. NWEA. (2019). MAP® Growth™ *technical report*. https://www.nwea.org/uploads/2021/11/MAP-Growth-Technical-Report-2019_NWEA.pdf
17. Results of a Wilcoxon rank sum test with continuity correction using a normal approximation reveal a significant Newsela treatment effect, $W = 1$, $p = .05$.
18. Numbers don't sum up to 100% because we allowed teachers to self report and did not require their responses to sum up to 100%.
19. https://ncte.org/statement/role-of-nonfiction-literature-k-12/

20. Results of a Wilcoxon rank sum test with continuity correction using a normal approximation reveal a significant Newsela treatment effect, W = 0, p = .046.
21. Results of a Wilcoxon rank sum test with continuity correction using a normal approximation reveal a significant Newsela treatment effect, W = .5, p = .04.
22. We first ran a linear mixed model fit by maximum likelihood where we controlled for students' Fall MAP percentiles, IEP status, gender, and lunch status, specifying teacher-level random effect. This yielded a statistically significant treatment effect, t(115) = 2.13, p = .035. However, there was no variance for teacher, suggesting that this model might be overfitting our relatively small dataset with only 5 teachers. Accordingly, we ran a more parsimonious linear regression with the same set of control variables. This also yielded a statistically significant effect, t(109) = 2.07, p = .04.
23. Education Policy Innovation Collaborative (EPIC). (2023). *Michigan's 2022-23 benchmark assessments*. https://epicedpolicy.org/wp-content/uploads/2023/11/BenchmarkReport_Nov2023.pdf
24. Lipsey, M.W., Puzio, K., Yun, C., Hebert, M.A., Steinka-Fry, K., Cole, M.W., Roberts, M., Anthony, K.S., Busick, M.D. (2012). Translating the Statistical Representation of the Effects of Education Interventions into More Readily Interpretable Forms. (NCSER 2013-3000). Washington, DC: National Center for Special Education Research, Institute of Education Sciences, U.S. Department of Education. This report is available on the IES website at http://ies.ed.gov/ncser/.
25. Study-specific effect size calculated via formula set forth in Morris, S. B. (2007). Estimating effect sizes from the pret-est-posttest-control group designs. Organizational Research Methods. https://doi.org/10.1177/1094428106
26. $t(65.55) = -2.05$, $p = .04$
27. $t(54.13) = -2.50$, $p = .02$
28. Controlling for Fall MAP percentile and teacher, the top half of Newsela users (students who read 55+ texts) earned significantly higher Spring MAP percentile ranks, $t(43) = 2.56$, p = .014.
29. Controlling for Fall MAP percentile and teacher, the top half of Newsela users (students who completed 22+ quizzes) earned significantly higher Spring MAP percentile ranks, $t(43) = 2.36$, p = .023.
30. Fiester, L. (2013). *Early warning confirmed: A research update on third-grade reading*. Baltimore, MD: Annie E. Casey Foundation.
31. Drake, S. M., & Burns, R. C. (2004). *Meeting standards through integrated curriculum*. ASCD; Vars, G. F. (1991). Integrated curriculum in historical perspective. *Educational leadership*, 49(2), 14-15.