



Formative provides valuable Reading/Writing SAT practice for high school students

Evidence from a district serving primarily low-SES and Hispanic students



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Executive summary

- This study tests the impact of Formative on SAT Reading/Writing scores in 757 **11th graders** who used Formative approximately **twice a week**.
- Students who completed **more questions** on Formative showed **higher SAT scores**, with the average student gaining about **20 points**.
- Students who received **feedback messages from teachers** also showed higher SAT scores than their peers who did not.
- These results suggest that Formative can be an **effective tool for high school teachers** to support their students' performance on the Reading/Writing portion of the SAT.
- This study meets the ESSA standards for **Tier III (Promising)** evidence.



Introduction

In 2019, only 37% of 12th-grade students achieved proficiency in reading according to population data collected by the US Department of Education, a statistic that has held generally steady since at least 2005.¹ Students who struggle to read are less likely to graduate high school and go to college, leading to a lower earning potential in adulthood.² By high school, many accumulating factors have contributed to a student's reading ability. As a result, high school struggling readers tend to represent a variety of different skill profiles; some still have trouble with phonics fundamentals, while others exhibit a core deficit in aspects of comprehension, like inferencing or finding the main idea. At the same time, high school students are expected to read increasingly dense and complex texts full of specialized vocabulary.³ To be able to access this grade-level content, struggling students may need additional support in one or multiple literacy-related skills, including word recognition, vocabulary, background knowledge, and inference-making.

Reading achievement is even lower in Hispanic students, with only a quarter of students reaching proficiency. About half of these students are English learners (ELs) and need additional support to reach grade-level reading. Compared to white peers, however, Hispanic students as a population tend to attend districts that have less money to spend per student, making it harder to receive any necessary support or intervention.⁴ At the same time, the group of struggling readers is diverse, made up of many differing profiles of reading achievement.⁵ Thus, teachers of Hispanic and EL students have to stay informed on their students' literacy skill strengths and weaknesses.

To more frequently check in on their students' understanding of key literacy concepts, many teachers utilize **formative assessments**. Decades of scholarship demonstrate the power of formative assessment in improving student learning outcomes.^{6,7} For teachers, collecting formative assessment data supports them in tailoring their instruction to meet student needs,⁸ and document student progress towards standards mastery.⁹ Formative assessments also give teachers the information they need to provide students with high-quality feedback to clear misconceptions and set them on a better instructional path.^{10,11} Students also benefit directly from the formative assessment when they themselves have insight into their own performance and can set and monitor progress towards learning goals independently.¹²

Formative by Newsela (hereafter referred to as “Formative”) was built to make the formative assessment process easier and more data-driven for both teachers and students. Formative allows teachers to build lessons and assessments, receive real-time student performance data, and deliver immediate feedback to students via various modalities (written notes, voice memos, etc.). Teachers can collaborate together to build activities on Formative and interpret Formative data. Additionally, Formative offers 20+ different question and activity types for teachers to probe students’ understanding, including more common formats like multiple choice, short answer, and true/false, as well as multimedia options like audio or video response.

The current study investigates the **impact of using Formative** on students’ ELA achievement, specifically looking at the **Reading/Writing portion of the SAT**. This study meets the **Every Student Succeeds Act (ESSA) standards for Tier III (Promising)** research. ESSA is America’s primary education law, and it provides a framework for evaluating the effectiveness of educational programs. Tier III research evaluations are well-designed and well-implemented correlational studies that statistically control for selection bias.

Method

Sample

Formative partnered with J. Sterling Morton High School District 201 for this research study. This district, located in the suburbs of Chicago, serves approximately 8,000 students in grades 9 through 12.¹³ The median income for families in this area is \$67k¹⁴ (below average for Illinois as a whole, but above average for their county).¹⁵

A total of 757 11th-grade students were included in this study. The majority of students in the sample were identified as Hispanic. Most students qualified for free or reduced lunch. About 40% of the sample were English learners (ELs) during the study period.

Characteristic	9th grade
Total students	757
% Hispanic	92%
% Female	54%
% Current English learners	40%
% Free or Reduced Lunch	70%

Table 1. Sample demographics

Achievement Measure

11th-grade students were tested using the SAT in the spring of 2024. The SAT is a standardized assessment aimed to measure students’ college readiness. The SAT is split into two sections: Math and Reading/Writing. The **Reading/Writing** section is composed of multiple-choice questions focused on short texts (25–150 words) or pairs of texts. These questions cover four domains: craft and structure, information and ideas, standard English conventions, and expression of ideas.¹⁶

PSAT scores from spring 2023 were also collected as a baseline measure. The PSAT is commonly known as a “practice” SAT; it covers the same topics but is administered earlier in a student’s high school career.

Results

Overall use of Formative

The average student in this sample used Formative about **twice a week** throughout the school year, completing an average of about 30 questions across two separate assessments per week.

High schoolers primarily completed multiple choice questions

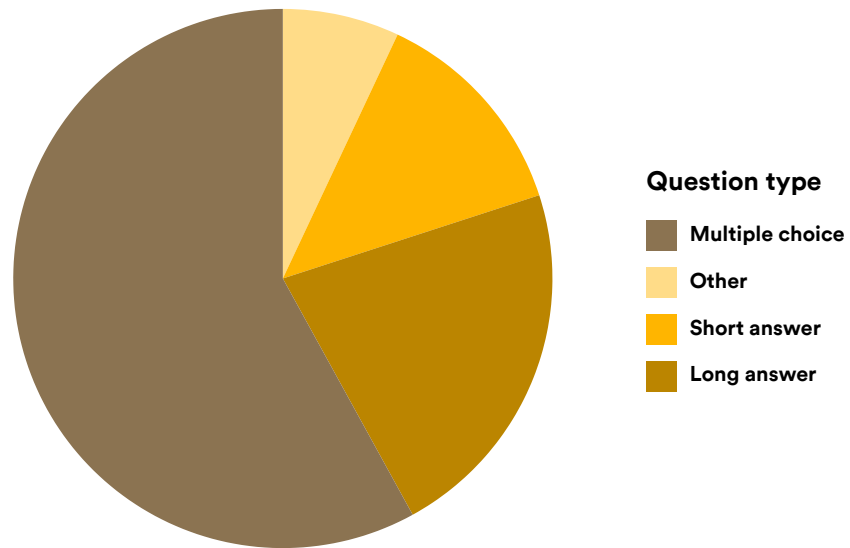


Figure 1. Average proportion of questions completed by question type

The most common question type for students in this sample was **multiple choice**. For the average student, more than half (58%) of the nearly 1000 questions they answered over the school year were multiple choice. The next most common question types were short and long text response questions, although neither comprised more than 15% of the average student’s responses.

Completing more questions on Formative is related to higher Reading/Writing SAT scores

Students who completed more questions on Formative scored higher on the SAT than students who completed fewer questions.¹⁷ This effect was significant even after controlling for many other factors, including PSAT Reading/Writing score, EL status, school, gender, race, and free/reduced lunch status.

For each additional question completed on Formative, students' Reading/Writing SAT scores increased by 0.02 points. With an average of 954 questions completed per student, the average **impact of Formative** was equivalent to **a gain of about 20 additional points on the SAT, a 50% improvement over expected growth** from 10th-grade PSAT to 11th-grade SAT.¹⁸

Research shows that being quizzed on learned material in a low-stakes way is often more effective than reviewing or re-reading the material.¹⁹ When practice questions match the format of higher-stakes assessments, this learning effect is even stronger.²⁰ Thus, students in this study may have benefited from regularly testing their knowledge, especially given that the SAT Reading/Writing section is entirely multiple-choice.

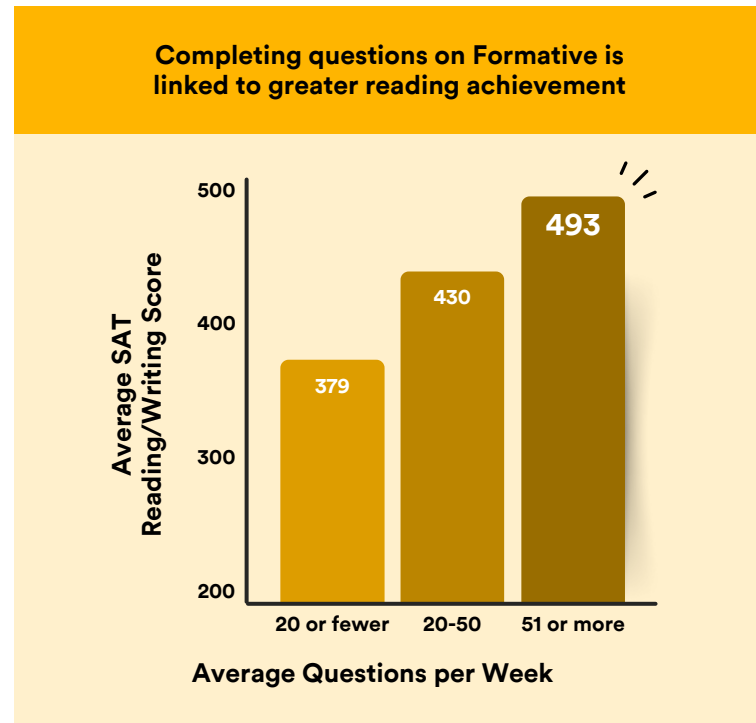


Figure 2. Average SAT reading/writing score summarized by average weekly questions



Providing feedback in Formative goes along with higher ELA outcomes

The Formative platform enables teachers to provide targeted feedback to their students for each question answered. In general, high-information, timely feedback is linked to better learning outcomes.²¹

In the current study, a trend emerged. The average **student who received feedback on Formative** from their teachers **showed twice as much growth** from PSAT to SAT as compared to the average student who did not receive feedback.²² Students in this study may have benefited from the explicit guidance provided by such feedback.

This study meets ESSA criteria for Tier III (Promising) evidence because it shows a statistically significant correlation between usage and outcomes after controlling for variables likely to affect selection bias, like race and socioeconomic status. The most important takeaway from this study, though, is the positive impact of Formative on preparing these students for successful reading and writing in later high school and beyond.

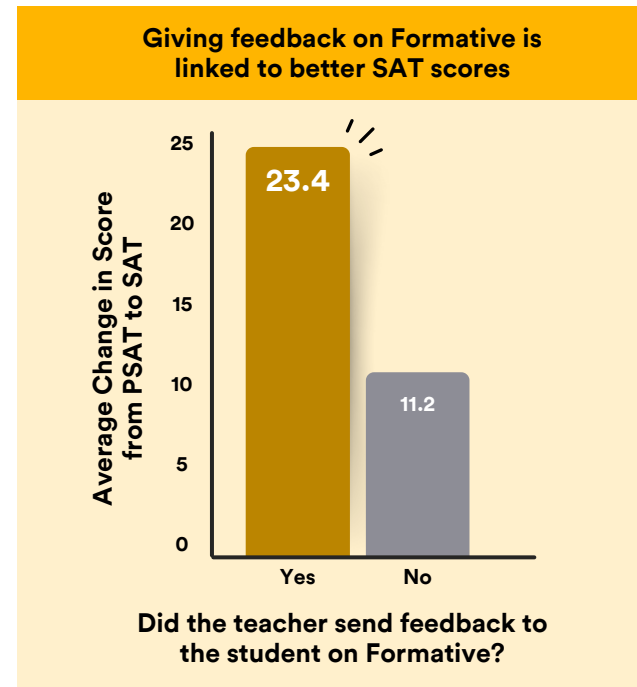


Figure 3. Average change from PSAT to SAT based on whether teachers provided feedback on Formative

Resources

1. [NAEP Report Card Reading](#)
2. Fiester, L. (2013). Early warning confirmed: A research update on third grade reading. The Annie E. Casey Foundation.
3. Slavin, R. E., Cheung, A., Groff, C., & Lake, C. (2008). Effective reading programs for middle and high schools: A best-evidence synthesis. *Reading Research Quarterly*, 43(3), 290-322.
4. Kohler, A. D., & Lazarín, M. (2007). Hispanic education in the United States.
5. Daniel, J., & Barth, A. (2023). Exploring reading profiles of rural school students. *Annals of Dyslexia*, 73(2), 235-259.
6. Black, P., & Wiliam, D. (1998a). Assessment and classroom learning. *Assessment in Education: Principles, Policy, & Practice*, 5(1), 7-74.
7. Kingston, N., & Nash, B. (2012). How many formative assessment angels can dance on the head of a meta-analytic pin. *Educational Measurement: Issues and Practice*, 31(4), 18-19.
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9. Pellegrino, J. W. (2014). Assessment as a positive influence on 21st century teaching and learning: A systems approach to progress. *Psicologia Educativa*, 20(2), 65-77.
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11. Hattie, U., & Timperley, H. (2007). The power of feedback, *Review of Educational Research*, 77(1), 81-112.
12. Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). How people learn: *Brain, mind, experience, and school*. Washington, DC: National Academies Press.
13. From [NCES District Lookup](#)
14. ACS-Ed District Demographic [Dashboard](#) 2018-22
15. 2018-2022 [ACS](#)
16. For more information, see [this](#) page about content domains from the College Board
17. The effect of completing questions was statistically significant ($b = 0.017$, $t(1455) = 5.4$, $p < 0.001$).
18. The average student in this sample had a 10th grade PSAT reading score of 390. College Board [research](#) suggests that a student with that score would be expected to grow 40 points to a 430 on their 11th grade SAT.
19. Pastötter, B., & Bäuml, K. H. T. (2014). Retrieval practice enhances new learning: The forward effect of testing. *Frontiers in psychology*, 5, 83305.
20. Yang, C., Luo, L., Vadillo, M. A., Yu, R., & Shanks, D. R. (2021). Testing (quizzing) boosts classroom learning: A systematic and meta-analytic review. *Psychological bulletin*, 147(4), 399.
21. Wisniewski, B., Zierer, K., & Hattie, J. (2020). The power of feedback revisited: A meta-analysis of educational feedback research. *Frontiers in psychology*, 10, 487662.
22. The effect of receiving feedback was marginally significant ($b = 8.9$, $t(1477) = 1.7$, $p = 0.08$) after controlling for PSAT performance, all demographic factors, and total number of questions answered.