MindPrint Learning

MindPrint Learning scaled to 15 schools in one district with 3,330 students in grades 4–8 during the 2024–2025 school year. Previously, MindPrint Learning had been implemented in affluent suburban districts. Through the Accelerating Adoption Network, the goal was to scale and evaluate the program in a large urban district with a diverse student population.[2] The study evaluated the use of MindPrint Learning in classrooms as it scaled in that district, conditions that supported teachers' and students' use of the tool, and the impact of MindPrint Learning on students' learning acceleration.[3]

Key takeaways

- Overall, 89% of teachers reported that all students in their classroom could benefit from the program, and 80% thought the tool was useful to improve learning.
- Based on teacher survey responses, 57% of elementary school teachers reported that they had reviewed the MindPrint Learning profiles of at least 20% of their students, but the majority of middle school teachers (85%) reported they completed none of the 13 BOOST course lessons with their students.
- On average, math growth among students with access to MindPrint Learning was 0.13 standard deviations higher than the comparison group ($p<0.10$) on the end of year state standardized exams, and reading growth of students with access to MindPrint Learning was about the same as the comparison group.[1]

How MindPrint Learning expected to achieve its goals

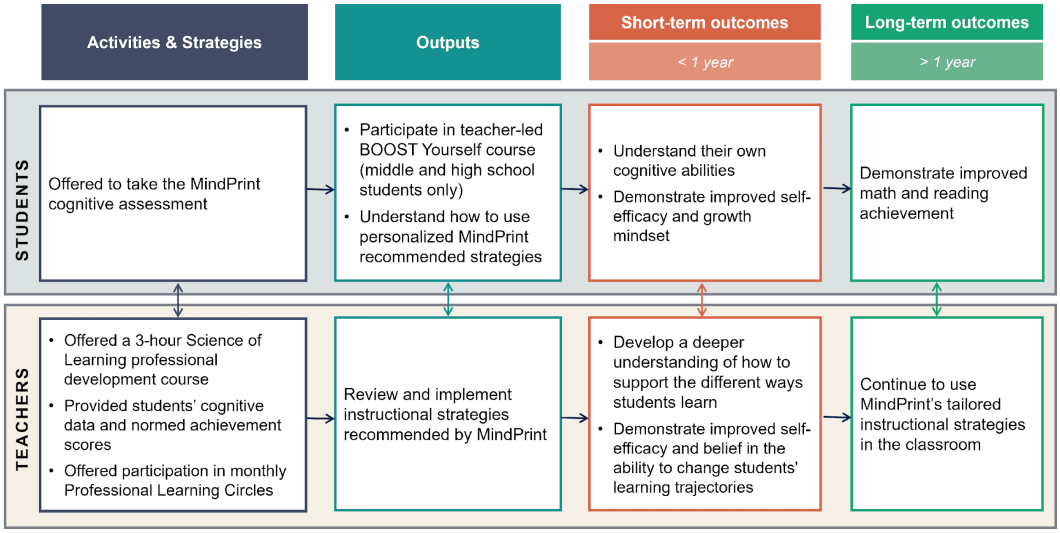
As seen in its theory of change (Exhibit 1), implementing and scaling MindPrint Learning begins with students' completion of a cognitive assessment in all grade levels. MindPrint integrates this assessment data with students' normed achievement scores to recommend evidence-based instructional strategies that teachers can apply in their classrooms. Throughout the school year, teachers engage in monthly professional learning, and students in middle and high school also engage in teacher-led BOOST Yourself (BOOST) courses to better understand and use their personalized strategies. By improving both students' and teachers' understanding of cognitive strategies and sense of self-efficacy, MindPrint aims to accelerate learning in math and reading.

[1] Neither estimate is statistically significant at the $p < 0.05$ threshold.

[2] Within the district's student population, 90% qualified for Free or Reduced-Price Lunch; 64% identified as Black and 28% as Hispanic; and 25% were classified as English Language Learners.

[3] For additional information on MindPrint Learning and its aims, see Innovative Approaches to Learning Acceleration Within the Core of K-12 Instruction: Initial Observations About Scaling and Implementation.

Exhibit 1. MindPrint Learning's theory of change



Study design and methods

This study used a matched comparison design to estimate the impact of MindPrint Learning on students' learning acceleration in math and reading, as measured by state standardized assessments. It did so by comparing the assessment scores of students in classrooms that implemented MindPrint Learning throughout the school year with assessment scores of similar students in similar schools that did not implement it.

The study also conducted a teacher survey to understand teachers' perceptions of MindPrint Learning and implementation in their classrooms. MindPrint Learning provided implementation data, and staff were interviewed at the start and end of the school year to share their thoughts on barriers to and facilitators of implementation.

Sample used for the study

1 district

15 MindPrint & 9 comparison schools

2,267 MindPrint & 1,063 comparison students (grades 4–8)

75 teacher survey respondents (56 elementary, 19 middle school)

Research questions

1. What was the average dosage of MindPrint Learning that students received?
2. Were core components of MindPrint Learning implemented as intended? What factors affected implementation quality?
3. How did student learning improve among students who engaged with MindPrint Learning?
4. Will MindPrint continue to scale in the foreseeable future? What are some of the factors that support scaling?

Key findings

1. **Overall, participation in the MindPrint program and use of its data and strategies was lower than intended.** After administering cognitive assessments to students, MindPrint is designed for elementary school teachers to view at least a subset of student learning profiles to determine the instructional approach and teaching strategies aligned with assessment results. According to self-reported data on the teacher survey, 57% of elementary school teachers reported reviewing the MindPrint Learning profiles of at least 20% of their students.

   In addition to reviewing student learning profiles, MindPrint is designed to have middle school teachers facilitate the BOOST course with their students to deepen their understanding of their learning styles and develop a personalized set of strategies to manage challenges related to academic coursework, focus, and time management. Most middle school teachers (85%) reported they did not complete any of the 13 BOOST course lessons with their students.[OBJ][4]

2. **MindPrint staff noted two main challenges that likely affected implementation during the 2024–2025 school year: Schools were implementing other interventions and teacher training was difficult to schedule.**

   MindPrint's team shared that implementation was challenging in schools that were implementing other interventions. Schools typically have a variety of interventions to choose from, and school leaders have varying preferences toward the available interventions and tools. This was especially challenging in middle and high schools. For example, some of the middle and all of the high schools selected for implementing MindPrint Learning dropped out, citing they were rolling out another new program in their schools and could not prioritize MindPrint Learning this academic year.

   Another challenge was scheduling MindPrint Learning's training such that it would be convenient for most of the teachers to attend. The program relies on providing training to teachers during the first year of implementation as the goal is for teachers to implement the learning from these sessions into their daily instruction. In general, teachers attended the training workshops at a lower rate in the latter half of the school year than in the first half. Testing schedules and preparation for testing in winter and spring reduced the number of weeks the district and schools made available to MindPrint Learning to schedule training. This, coupled with unexpected weather cancellations in the winter, further narrowed the scheduling window and did not leave much flexibility to accommodate teachers' preferred dates for training. As a result of this experience, MindPrint has developed a more scalable training program that allows teachers to opt-in to training sessions based on their personal availability rather than requiring teachers to attend on a specific date and time.

3. **MindPrint staff also noted several conditions that supported implementation during the 2024–2025 school year.** T

   - ***Administrator support at the school level*** (for example, principals or coaches). More specifically, this meant meeting with principals in the summer to review their data, pin down a strategy to pursue, and begin rollout at the start of the school year.
   - ***Champions within the school.*** Teachers were more likely to attend MindPrint training and understand how MindPrint could help instruction in the classrooms when other educators clearly championed its purpose and benefits.

[4] In all, 75 of 192 teachers completed the survey, for a 39% response rate.

4. **Overall, teachers reported positive views about MindPrint Learning and agreed it could help improve student learning, but a majority of teachers noted that understanding the program required considerable effort.**

   Overall, 89% of teachers who completed the survey reported that all students in their classroom could benefit from the program, and 80% indicated the tool was useful to improve learning. However, 63% reported that understanding and applying MindPrint required considerable effort, and only 37% reported they had sufficient time to implement it in their class.

   Teachers' perceptions of MindPrint and conditions for implementation varied across those who self-reported higher rates of implementation and who self-reported that MindPrint changed their instructional approach. Teachers who reported high levels of implementation (compared with teachers who reported low levels of implementation) were:

   - More likely to say that they did not find it difficult to navigate MindPrint Learning's program (87% compared to 39%)[5]
   - Less likely to say students found it difficult to use MindPrint Learning (32% compared to 74%)
   - More likely to report that they were able to discuss use of MindPrint Learning with other teachers who were also using MindPrint (87% compared to 34%)

   Less than half (44%) of teachers reported that MindPrint changed their instructional approach. However, teachers who did report that the tool changed their instructional approach were:

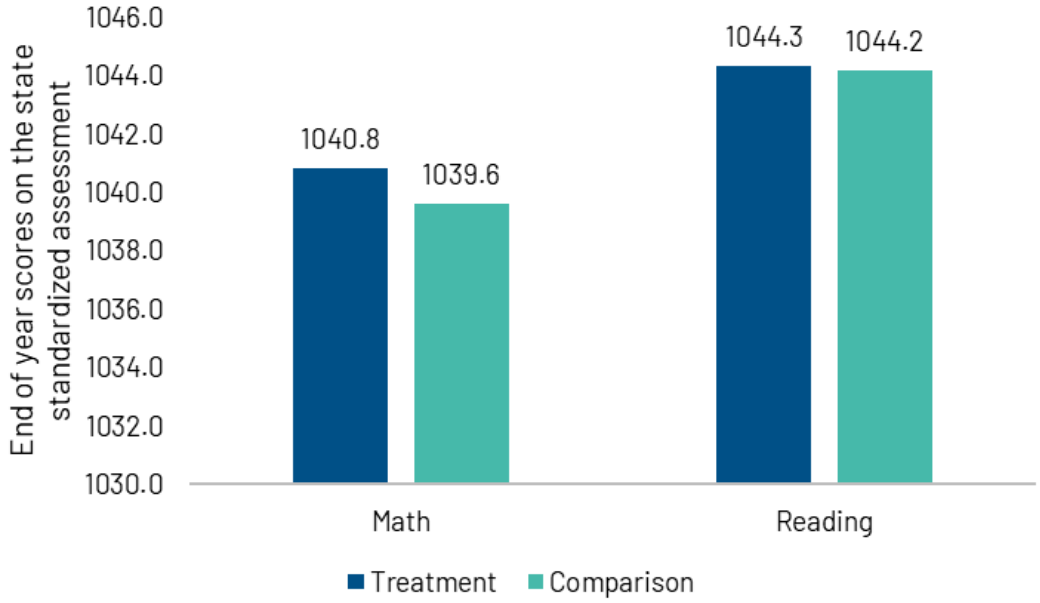
   - More likely to say they had sufficient time to implement MindPrint in their classroom (63% compared to 16%)
   - More likely to say all students in their class could benefit from the program (100% compared to 79%)
   - More likely to say they and their students did not have difficulty understanding and using MindPrint Learning (teachers: 84% compared to 44%; students 65% compared to 29%)

5. **On average, students in schools with access to MindPrint Learning scored higher in math and about the same in reading as similar students in comparison schools, after matching students and schools and accounting for baseline scores and student characteristics** (Exhibit 2). This difference translates into an effect size of 0.13 standard deviations in math (p=0.07, which is marginally significant) and 0.02 standard deviations in reading (p=0.60, which is not statistically significantly different from 0).[6] The study uses state standardized scores, a broad summative assessment which can be harder to impact than benchmark assessments. Findings are promising for math, but additional research is needed because usage of MindPrint was lower than recommended, and the findings could also be related to differences in instruction across treatment and comparison schools.

[5] All the reported differences between groups of teacher survey respondents are statistically significant ($p < 0.01$).

[6] For educational interventions, Kraft et al. (2020) defines effect sizes of 0.2 SD or greater as large, effect sizes between 0.05 and 0.2 SD as medium, and effect sizes smaller than 0.05 SD as small.

Exhibit 2. Average math and reading scores (raw scale scores) on end-of-year state standardized assessment, by study group



6. **MindPrint plans to continue scaling in several ways.** MindPrint will continue to implement in the current school district, which has purchased MindPrint for districtwide implementation, and they are creating more regional connections. In addition, the school district is embedding MindPrint into its data dashboards to make it easier for teachers to access their MindPrint data and use it along with their math and reading assessment data. MindPrint staff noted that any future scaling efforts would benefit from continued alignment with professional development opportunities for teachers.

   Furthermore, based on the barriers to implementation observed in the 2024–2025 school year, MindPrint's team believes the following conditions may improve implementation, particularly teachers' attendance at future MindPrint training sessions:

   - Districts allowing teachers to count MindPrint training sessions toward their professional development credit hours and creating opportunities for teachers to discuss use of MindPrint and learn from one another's experience (for example, through a professional learning community)
   - Flexibility from district and school leadership in scheduling training so teachers can more easily attend the sessions