

Solving Critical Education Challenges

SYSTEMIC STRATEGIES FOR IMPROVING STUDENTS' MATH OUTCOMES Better evidence for better decision-making

Improving student math outcomes begins with education systems that work better for everyone. At AIR, we lead with **expertise**, follow the **evidence**, and never stop drawing new connections **to build a better world**. We partner with **states, districts, and schools** to support their most critical needs with a focus on helping students learn and supporting the **use of evidence-based instruction and programs in math instruction**.

We know how to improve students' math skills and outcomes. The challenge is creating a system that embraces and trains staff to use evidence-based strategies. We understand state education systems

and the complexity that lies at the intersections of federal, state, and local systems. Through collaborative partnerships, we focus on designing solutions that build on the strengths of your education system. With AIR, you can be sure that your decisions about math policy, systems, and programs are informed by high-quality research and evidence and that plans for program implementation are backed by evidence-based practices.

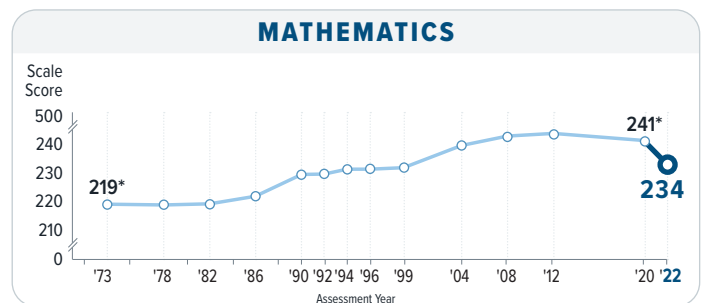
Improving math instruction and student math proficiency requires innovation and expertise. Success in math has been linked to increases in high-school graduation, increased options for college and career, and higher-paying jobs. However, recent proficiency scores show a drop in student math performance. It is important that students' math experience provides them with opportunities to develop fluency and understand the underlying concepts, use reasoning to solve and evaluate solutions to math problems, and explain their math thinking—skills for success. Providing these opportunities requires innovative, evidence-based approaches to math teaching and learning.

AIR's math education team has the experience and expertise needed to develop and implement innovative math programs and approaches. Our team includes former math teachers, coaches, and district and state leaders with expertise in math teaching and learning, program development and continuous improvement, and evaluation methods.

Our work drives toward practical solutions that improve lives for families and communities.

AIR's cadre of national experts have experience in states, districts, and schools. With AIR, you have access to proven resources, processes, and protocols to drive improvement.

National Assessment of Educational Progress 2022



Score change between 2020 and 2022



First-ever score drop
in mathematics

Opportunities to Partner

At AIR, we understand that each education system is unique. We bring deep expertise in math education combined with our understanding of the complexities and nuances of state and local education systems to ensure you have a strategy that fits your needs and meets your goals. We support the following:



Strategic Planning | We support states and districts to develop a coherent vision of math education that aligns math standards, curricular materials, professional learning opportunities, supplemental programs, and assessment to improve math teaching and learning. We build strategies that focus on your particular needs.



Math Standards and Pathways | We have extensive experience and expertise supporting states and districts to develop math standards and course pathways that prepare students with a math foundation that ensures they are ready and can choose from a plethora of career and postsecondary opportunities.



Innovative Professional Learning and Collaboration | We design and facilitate professional learning opportunities for teachers and leaders on math content and pedagogy. These include technology-enhanced activities and networked improvement communities where teachers practice and use data to improve math instruction.



Evidence-Based Programs | We support districts and states in identifying and using evidence-based programs in math classrooms. These include high-quality instructional materials, supplemental educational technology and other supplemental programs, and high-intensity tutoring. Our support focuses on ensuring coherence among programs and using materials with integrity.



Assessment, Continuous Improvement, and Evaluation | Assessment and evaluation are crucial for improving math programs, teacher implementation, and student learning. We support partners to collect and analyze data to determine program effectiveness and inform continuous improvement efforts, with an eye toward resource and financial allocations that encourage positive math outcomes.

Better evidence for better decision-making.

Why are students' math proficiency scores stagnant?

Shifting practices to use new instructional approaches and programs is challenging. States, regions, and districts need support to identify, scale, and sustain evidence based strategies and innovations that work.

Monitoring and evaluation are crucial for improving education systems as they provide valuable data on the effectiveness of programs and initiatives, allowing educators to make informed decisions and adjustments.

With AIR as a partner, states can create systems for schools to identify areas for improvement, ensure optimal resource and financial allocations, develop plans for continuous improvement, and ultimately improve math learning outcomes.



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