How ASSISTments Is Driving Math Achievement

When two middle school math teachers identified a need for more effective student feedback and data driven insights to inform their classroom instruction, they set out to build it. They developed ASSISTments, a digital platform for grades 3-12 that provides students with immediate feedback on math problems and gives teachers real-time insight into student learning. Using ASSISTments, teachers can assign students math problems from open education resource textbooks, existing problem banks, or problems they create themselves. As students work, ASSISTments continually checks their understanding and offers them another chance when they struggle—helping educators adjust instruction in real time to help students succeed.

ASSISTments has continuously leveraged Federal funding to evaluate and strengthen its effectiveness, scale use across various settings (rural, urban, and suburban), and continuously improve over time. Most recently, Federal funding is supporting research on the effectiveness of integrating AI-powered tutoring and real-time prompts – enhancing student learning and making the tool even more impactful and also inform other developers use of AI-integration. In order to develop ASSISTments, each engine of Federal R&D was needed. *Let's break it down….*

Engines of Federal R&D:

- **Accountability**: International surveys show that the U.S. is behind peer nations in math achievement and Federal data show that there are wide gaps in math achievement amongst students nationally.
- **Research:** ASSISTments was initially funded by an IES R&D grant and has recently received an IES research award to integrate AI into the tool.
- **Evaluation**: Using IES research awards, ASSISTments has been evaluated in multiple States and across contexts for whether it is an effective tool for math learning.
- **Innovation**: ASSISTments received a Mid-Phase Education Innovation and Research (EIR) grant which allowed it to scale to high-need middle school students in predominantly rural areas.
- **Data Tools & Systems**: ASSISTments produces data to drive instruction. ASSISTments auto-scores and delivers instant feedback to students.
- **Communication**: ASSISTments has received the highest evidence rating in the What Works Clearinghouse (WWC), a Federally supported database that provide educators with a central and trusted source of scientific evidence on what works in education.

Each of the engines of Federal research are a critical piece of this story and led to significant outcomes for students. *Let's look at the results…*

Driving Impact:

- **Students**: ASSISTments has served more than one million students and data consistently shows that students who use ASSISTments see improved math test scores and that ASSISTments closes achievement gaps for students with different achievement levels.
- **Parents, teachers, school leaders, community**: ASSISTments is used by over 30,000 teachers nationwide who get real time data about how their students are doing and can adjust their lessons accordingly. Also, ASSISTments produces reports for parents that provide insight into their child's math progress.
- **State Policy and Action**: Maryland choose ASSISTments as a part of their strategic effort to strengthen math education in the State through evidence-based partnerships. Knowing that ASSISTments had strong evidence of impact, the Maryland Department of Education (MDE) choose ASSISTments as 1 of 2 programs supported by the Maryland Fund to Scale for Proven Programs which will make funding available for schools across the State to deploy ASSISTments.