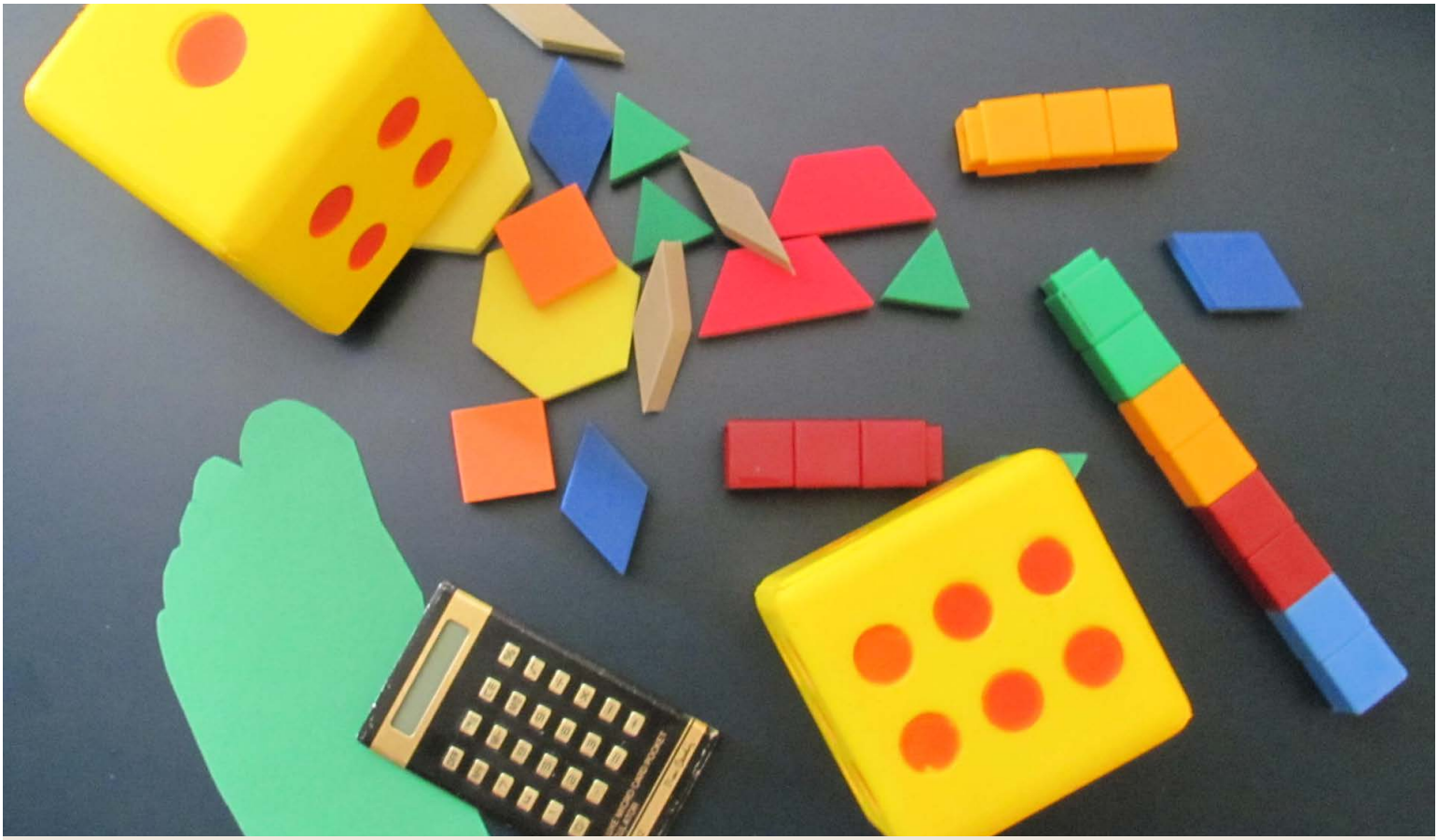


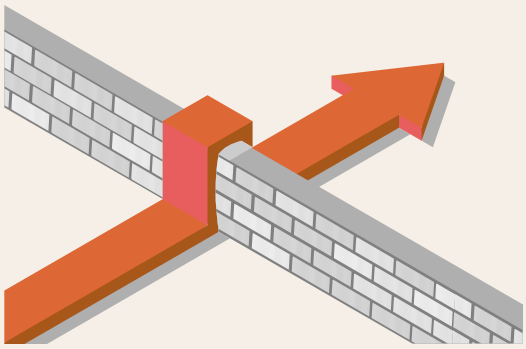
MATH FOR ALL'S IMPACT ON TEACHERS AND STUDENTS

Results from an Efficacy Study* Conducted in Chicago Public Schools

Math for All is a professional development (PD) program that brings general and special education teachers together to enhance their skills in planning and adapting mathematics lessons to ensure that all students achieve high-quality learning outcomes in mathematics.

*The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A140488 to Education Development Center. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

MATH FOR ALL HELPS TEACHERS



- Deepen their understanding of how to assess students' strengths and needs
- Identify possible barriers to students' access and engagement with mathematics lessons
- Implement a variety of instructional strategies and teaching practices that draw upon students' strengths to better meet their needs

MATH FOR ALL EVALUATION

- 32 Chicago elementary schools participated in the study. Half of the schools were randomly assigned to receive Math for All PD, and the other formed a "business as usual" control group.
- Participants were general and special education teachers for grades 4 and 5.
- The PD was provided during the 2015–16 school year, with additional planning support during 2016–17. The control group teachers received the PD during 2017–18.

Study brief available online at
http://go.edc.org/mfastudy

IMPACT ON TEACHERS

Math for All teachers reported:

- More frequent use of lesson planning and reflection on teaching practices
- More frequent use of differentiated instruction strategies
- Greater preparedness to teach diverse students, including those with disabilities
- Greater comfort in teaching diverse students

Math for All teachers were rated by trained classroom observers as higher in:

- ✓ Emotional Support
- ✓ Instructional Support
- ✓ Classroom Organization
- ✓ Student Engagement

WHAT TEACHERS ARE SAYING ABOUT MATH FOR ALL

Math for All really opened a new door for me. I knew that certain students needed certain modifications, adaptations, and strategies, but with Math for All, there were these organizers that broke it down into subcategories like, "What do I expect of the task?" "Is it a learning issue and if it is, how would I have different strategies in place so that it can minimize distraction and maximize the student's attention?"

- 4th-grade general education teacher

When we did the higher order thinking skills, I did not really expect some of my students to be able to use them. But when we got into the lesson and we used some of the accommodations that they suggested, I found that, actually, they could do it.

- 5th-grade special education teacher

When we meet now, we decide on a lesson and then from the get-go, we decide how we're going to adapt it, not only for my students, but for their students as well—which, in the past, we really didn't. I just made my own accommodations and they did their thing.

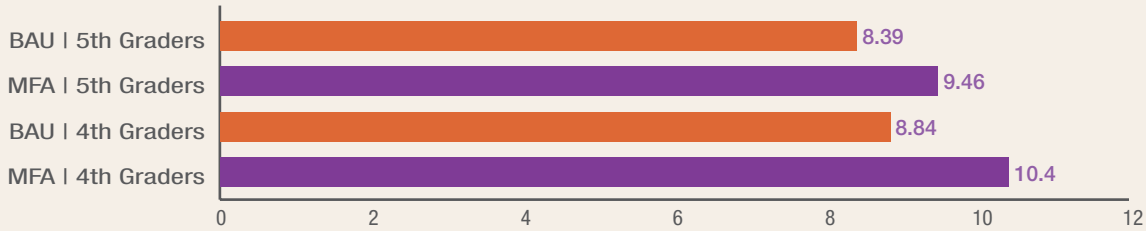
- 5th-grade special education teacher

I'm teaching third- and fourth-grade math. Math for All showed me that a lot of times something that I feel is a fairly simple thing that I'm teaching is really very complex for kids, and to really look at all of the different things that it takes to build that one concept. I think it just gave me a better appreciation for what we're doing and how we do it, and gave me some ideas on how to do it better.

- 3rd/4th-grade math teacher

IMPACT ON STUDENTS

Average Math RIT Growth Scores for 4th and 5th Graders at MFA and BAU Schools
School Year 2015–2016



Students whose teachers participated in the Math for All (MFA) PD performed higher on the NWEA MAP assessment than did students in the business-as-usual (BAU) group.

The difference in growth translates to about two additional months of instruction. This pattern of growth was observed among students with and without disabilities.

> Ricky* is a higher order thinker when it comes to problem solving. Even when he can figure out an efficient method to solve a problem he has no fear in exploring other ways to solve it, even if they aren't efficient. Where he needs improvement is in the language to be able to explain his methods. He actually made one of the highest NWEA scores at the end of the year, and I was pleased about that. Hopefully, some of that is connected to being given the environment where mathematic discourse is encouraged, as well as students being given the opportunity to explore a problem conceptually through the use of manipulatives.
>
> - 4th-grade special education teacher

> Mark* has made great gains in math this year. The previous conceptions I had of his mathematical abilities were wrong. He has done very well with many of the Problems of the Month, especially spatial reasoning. He is patient, persevering, and capable of more than I believed!
>
> - 5th grade special education teacher

> Currently, Gary* has met his NWEA growth for both Math and Reading. His minutes with a resource teacher for math have been reduced and I'm hoping, with the trend of his growth, he will no longer need math inclusion. Gary comes in very eager to learn every math concept that has been introduced in class. He has memorized all his multiplication facts and knows his fractions rules. He's learning how to work on word problems by annotating and applies close-reading math techniques. He loves to engage with his peers and share his opinions. He is no longer shy, and loves working as a team in collaboration to solve a problem or present a problem. It's amazing how one small adaptation in lesson planning, like thinking of a student's neurodevelopment, can change the way they think, feel, and approach math.
>
> - 4th-grade general education teacher

* Pseudonyms to protect students' privacy.

TO LEARN MORE ABOUT MATH FOR ALL, PLEASE VISIT
http://mathforall.cct.edc.org/