Early math proficiency is one of the strongest predictors of later achievement for young children—not only in math, but across domains.¹

Bank Street College of Education, an authority on child development and instructional practice, has been preparing valued teachers and leaders for over a century and is a recognized pioneer in early childhood math education.

SEEING IMPACT: BUILDING BLOCKS PROFESSIONAL LEARNING AND HIGH 5S
In 2014, Bank Street began a partnership with the New York City Department of Education focused on early childhood math. Over two years, Bank Street coaches provided professional learning for pre-K teachers focused on math instruction and then led afterschool “math clubs,” engaging kindergarten students in developmentally meaningful math activities. Combined, these two interventions resulted in closing more than a quarter of the achievement gap between low-income children and their higher-income peers at the end of kindergarten. Participating children also had more positive attitudes towards math.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 years of enhanced math (Building Blocks in Pre-K + High 5s Math Club in Kindergarten)</td>
<td>4.2 months of additional math learning</td>
</tr>
<tr>
<td>1 year of enhanced math (High 5s Math Club in Kindergarten)</td>
<td>2.5 months of additional math learning</td>
</tr>
</tbody>
</table>

These interventions used the Building Blocks curriculum, a research-based curriculum grounded in child development that prioritizes play-based and hands-on activities, small group instruction, and formative assessment.² During the first year, Bank Street coaches provided professional learning sessions and in-classroom coaching for teachers designed to strengthen math instruction in pre-K classrooms.³ When those preschoolers went on to kindergarten, they met throughout the year in math clubs led by Bank Street teachers using the High 5s program.⁴ Grounded in a similar pedagogical approach, these clubs met outside of regular class time three times a week for 30 minutes each to solidify the students’ math learning after pre-K.

After seeing the powerful results of this work, the New York City Department of Education extended Building Blocks coaching and professional learning to thousands of pre-K classrooms citywide. Since 2015, the program has reached over 46,000 four year olds. Coaches in classrooms participating in the New York City Pre-K Building Blocks project report almost three times as much use of math language among children from the beginning to the end of the academic year. Preliminary research also suggests that Building Blocks sites implement more minutes of math, implement more teacher-led math activities, and cover a larger range of math content when compared to non-Building Blocks sites.
THE WORK AHEAD
At Bank Street, we believe that increased educator exposure to high-quality early math coaching will improve learning outcomes. Through the work of the Bank Street Education Center, we have engaged in similar math initiatives focused on the early years with other districts and supported the implementation of the Building Blocks curriculum across a range of settings, including in Head Start and private center-based programs. We also know that aligning instruction from year to year—particularly bridging the pre-K to kindergarten divide—helps to sustain and enhance the benefits of early math enrichment. We are currently supporting two urban districts to develop coherent systems as students transition from pre-K through third grade and offering strategic planning and guidance to other districts working to better align approaches to math instruction across these first years of school.

ABOUT THE BANK STREET EDUCATION CENTER
The Bank Street Education Center partners with schools, school systems, higher education organizations, and communities to advance practice and policy in the field of education at scale.

For more information about how to build this multi-year foundational early years math work in your school system, email Doug Knecht at dknecht@bankstreet.edu.

“We’ve shown that we can narrow the achievement gap if we implement play-based, hands-on math curriculum that is sustained from pre-K through early elementary school.”

-Shael Polakow-Suransky, Bank Street College President


2 Building Blocks mathematics curriculum was developed by Doug Clements and Julie Sarama, 2007.


4 The High 5s program was developed by staff members at the University of Michigan with input from Doug Clements and Julie Sarama, the developers of the Building Blocks curriculum.