BALANCING THE TUTORING EQUATION
Lessons from a Student-Centered After-School Math Tutoring Pilot

Author: Jeehye Shim Deogracias, PhD
Senior Director of Research & Evaluation
TABLE OF CONTENTS

1 About the Author & Research Brief Team  
2 Executive Summary  
4 Context  
5 What We Set Out to Do  
6 What We Did  
8 What We Found  
14 Considerations for the Field  
16 Conclusion  
17 Endnotes  
19 About Breakthrough Collaborative

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About the Author:
Jeehye Shim Deogracias, PhD, serves as the Senior Director of Research & Evaluation with Breakthrough Collaborative. In her role, she measures program efficacy and success, and partners cross-departmentally and with Breakthrough affiliates to ensure data quality. Prior to Breakthrough, Dr. Deogracias was the Senior Research Director with Hanover Research, an Evaluation and Assessment Analyst with Alexandria City Public Schools, VA, and an Elementary Band Teacher with Fairfax County Public Schools, VA. She received a Bachelor of Music in flute performance with teaching certification at the University of Michigan, a Master of Public Policy at Georgetown University, and a Doctor of Philosophy in education policy at the University of Maryland.

Members of the Research Brief Team:
Alex Serna, Chief Program Officer
Ambler Mauger Ochstein, National Director of Institutional Partnerships
Daniel Bernal, Gates Pilot Program Manager
Jeehye Deogracias, Senior Director of Research and Evaluation
Jeremy Gough, Chief Development Officer
Tieler Giles, Director of Marketing and Communications
Vince Marigna, Chief Executive Officer

Research Brief Reviewers:
Aimee Heckman, Director of Curriculum and Instruction, Breakthrough Greater Boston
Jennifer Karydas, Curriculum and Instruction Specialist, Breakthrough Central Texas
EXECUTIVE SUMMARY

Breakthrough Collaborative’s time-tested out-of-school time program academically and holistically supports students, beginning in middle school, over a minimum of six consecutive years. Breakthrough’s service delivery model involves recruiting and training college students as Teaching Fellows to lead instruction under the supervision of professional local educators. Having established – over a 40-year period – a culturally-relevant, standards-aligned summer learning program across 24 sites nationally, the organization expanded in recent years to include school-year programming to support academic and social-emotional learning (SEL). In an effort to drive innovation and codify best practices centrally, Breakthrough Collaborative sought funding from the Bill & Melinda Gates Foundation to undertake a culturally responsive math tutoring pilot, which is detailed in this report.

During the 2021-2022 school year, Breakthrough (BT) Collaborative’s Central Texas and Greater Boston affiliates piloted a new math tutoring after-school program. BT Central Texas students (n=28) received up to 42 hours of math tutoring (84 hours of total programming) over 21 weeks, and BT Greater Boston students (n=28) received 18 hours of math tutoring (75 hours of total programming) over 16 weeks. The total number of math instructional hours is equivalent to an additional 4% and 2% of a regular school year for BT Central Texas and BT Greater Boston students, respectively. Students were tutored by upper-class high school or college students called Teaching Fellows (TFs), who largely mirrored Breakthrough’s student population with regards to race/ethnicity and financial need.

Using a mixed-methods research design, we found the following:

➤ Pilot students and TFs had strong relationships with one another, students were engaged throughout tutoring sessions, and students felt that math tutoring was useful to them. Although students’ feelings of enjoyment for math were relatively low, enjoyment increased by the end of the program.

➤ Pilot students’ math scores increased by the end of the program, on average. Students in BT Greater Boston surpassed their expected levels of growth, along with having strong attendance rates. This finding validates the research that suggests strong after-school attendance is associated with strong math outcomes.

➤ Similar to Breakthrough’s summer program, more TFs expressed interest in working in education by the end of the after-school pilot.
Pilot students who attended Breakthrough’s summer program both before and after the tutoring program had even stronger student outcomes in the summer after tutoring, providing **evidence to support Breakthrough’s model** of offering students consecutive summer opportunities coupled with strong school year programs in between.

**Considerations for the field include:**

- The need for **partnerships between local education agencies (LEAs) and community-based organizations (CBOs) like Breakthrough** to best understand how to tackle after-school attendance challenges
- The need for programs to be **flexible to student and family needs**
- The need to consider the **benefits of holding tutoring after school**
- The benefits of offering **continuous services** across both school year and summer

Although the amount of math instruction provided was on the lower end of recommended amounts, this intentional programmatic decision allowed for a far more enriching and enjoyable program, making the after-school pilot a very “Breakthrough” program. Because students need to be served in a variety of ways in this post-pandemic era, **Breakthrough is one of many solutions in a larger ecosystem of expanded student supports that urgently need to be deployed to meet every student where they are.**
Lost learning time due to the COVID-19 pandemic left educators and policymakers scrambling for a solution. Recent data from the National Assessment of Educational Progress (NAEP) show steep declines in math and reading compared to recent years, with larger declines in math for Black and Hispanic students when compared to white students.¹ Ideas like high-dosage tutoring emerged as a high-leverage solution to make up for that lost time and to accelerate learning for students. While tutoring is by no means a new idea, high-dosage tutoring has been gaining traction as an effective intervention.² High-dosage tutoring is defined as one-on-one or small groups of students per tutor for 30-60 minutes at least three times a week over at least 10 weeks.³ A recent meta-analysis of 96 peer and scholarly articles using randomized controlled trials found the overall impact of tutoring to be “substantial.”⁴

In an effort to help school districts meet and overcome the impact of the pandemic, the American Rescue Plan (ARP) included an additional $122 billion for state and local education agencies to address these needs (known as ARP Elementary and Secondary School Emergency Relief (ESSER) or ESSER III), of which at least 20% of the funding must be used to “address the academic impact of lost instructional time, to support students’ social, emotional, mental health, and academic needs.”⁵ An analysis based on 5,004 school districts and charter organizations found that 41% of these LEAs used these funds on after-school programs, and a quarter used these funds on tutoring.⁶

Amongst this energy around tutoring, Breakthrough Collaborative had the opportunity to pilot an after-school program model with a focus on middle school math, through funding from the Bill & Melinda Gates Foundation. Although the cornerstone of Breakthrough is our summer program, testing and codifying a school-year program model was an area previously unexplored.

The purpose of this research brief is to describe the pilot program that was implemented at two of our 24 affiliate locations, Breakthrough Central Texas and Breakthrough Greater Boston, during the 2021-2022 school year. We present the findings from the research conducted in partnership with Mathematica and Search Institute, and offer considerations for the field related to after-school tutoring.
WHAT WE SET OUT TO DO

The pilot program is grounded by a Theory of Change shown in Figure 1. The theory is that the Breakthrough program – with its near-peer tutors, relationship-building, and fun – coupled with a strong curriculum, will lead to positive outcomes on relationships, usefulness of tutoring, student engagement, enjoyment of math, attendance, and math knowledge.

**FIGURE 1. BREAKTHROUGH PILOT PROGRAM THEORY OF CHANGE**

<table>
<thead>
<tr>
<th>NEAR-PEER TUTORS + STRONG CURRICULUM + BREAKTHROUGH CULTURE (CONNECTION, EMPOWERMENT AND FUN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHORT TERM</td>
</tr>
<tr>
<td>• positive student-tutor relationships</td>
</tr>
<tr>
<td>• belief that tutoring is useful</td>
</tr>
<tr>
<td>INTERMEDIATE TERM</td>
</tr>
<tr>
<td>• students attend the program</td>
</tr>
<tr>
<td>• students are engaged</td>
</tr>
<tr>
<td>LONG TERM</td>
</tr>
<tr>
<td>• students enjoy math</td>
</tr>
<tr>
<td>• student math knowledge</td>
</tr>
</tbody>
</table>

Note: Adapted from a Theory of Change developed by Mathematica.

We invited 8th grade BT Central Texas and BT Greater Boston students to the pilot program during the 2021-2022 school year. Most students had already been involved with Breakthrough for a couple of years by the time they entered 8th grade. We set out to have small tutor-to-student ratios of 1:2 to 1:4 with 66 hours of programming – of which at least 44 hours would be math instruction – over 22 weeks during the school year. The pilot required math curriculum to be rated “green” according to EdReports, and we selected Ready Common Core Math and Ready Texas Math.

Outside of math instruction, the after-school pilot included relationship-building time, such as small group advisory time and full group assemblies called All School Meeting. Both affiliates also planned special events during the program, such as a tour of their anticipated high school, a field trip to Thompson Island, and a presentation on the relationship between academic stress and mental health in college students.

Both affiliates heavily recruited returning Teaching Fellows as tutors who shared students’ racial and cultural backgrounds. Each affiliate also held pre-service training and received ongoing support from experienced professional teachers called Instructional Coaches. While Breakthrough affiliates share a core model with the support of the National Office, regional variations are encouraged in order to best meet their communities’ unique needs. Regional variations also offer affiliates in the Collaborative the opportunity to learn from one another and continuously improve. Similarly, when planning and implementing this pilot program, affiliates had the autonomy to determine how they were meeting the program requirements based on their local context.

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WHAT WE DID

BT Central Texas’ after-school program was held at three sites, with students meeting twice a week for two hours each. The program was held in the same school as their classes, so no additional transportation to the program was needed. BT Greater Boston held their program at one site, so students were bused to one location from around the district. BT Greater Boston began their program as twice a week for three hours each; however, before students left for the winter break, BT Greater Boston program staff received feedback from students and parents that more time dedicated to homework completion was needed, and that students were craving fewer academic lessons. When BT Greater Boston returned to the program after winter break, a few changes were made: the program was scaled down to being once a week, more time was dedicated to homework completion, and a SEL curriculum was added called Ready, Set, Action.

Both affiliates experienced COVID-19 related delays and pauses to programming, resulting in varying numbers of weeks that the program was offered. In sum, 28 BT Central Texas students received up to 42 hours of math instruction (84 hours of total programming) over 21 weeks, and 28 BT Greater Boston students received 18 hours of math instruction (75 hours of total programming) over 16 weeks. The total number of math instructional hours is equivalent to an additional 4% and 2% of a regular school year, respectively. The vast majority of pilot students identified as a person of color, were eligible for free/reduced price lunch, and will also be the first in their families to attend college (Figure 2).

<table>
<thead>
<tr>
<th>FIGURE 2. BREAKTHROUGH PILOT STUDENTS’ DEMOGRAPHICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BT Central Texas n=28</td>
</tr>
<tr>
<td>Person of Color</td>
</tr>
<tr>
<td>100%</td>
</tr>
<tr>
<td>Gender Identity</td>
</tr>
<tr>
<td>Female: 61%</td>
</tr>
<tr>
<td>Male: 39%</td>
</tr>
<tr>
<td>Free/Reduced Price Lunch Eligible</td>
</tr>
<tr>
<td>93%</td>
</tr>
<tr>
<td>Will Be the First Generation to Attend College</td>
</tr>
<tr>
<td>100%</td>
</tr>
</tbody>
</table>
The program made efforts to recruit TFs that previously taught a Breakthrough summer; however, juggling college students’ schedules with a full-year commitment to tutoring made recruitment a challenge in an already challenging climate of labor shortages during the pandemic.\textsuperscript{10} As such, BT Greater Boston enlisted the help of upper-class high school students to be tutors. Labor shortages also meant that BT Central Texas hired some TFs without a speciality in math, although all other criteria to be a strong TF were met. In sum, BT Central Texas had six TFs and Greater Boston had eight TFs. The majority of TFs identified as a person of color, female, and were eligible for free/reduced price lunch or a Pell Grant. About a quarter of TFs are or will be the first generation in their families to attend college (Figure 3).

\textbf{FIGURE 3. BREAKTHROUGH PILOT TEACHING FELLOWS’ DEMOGRAPHICS}

<table>
<thead>
<tr>
<th></th>
<th>BT Central Texas n=6</th>
<th>BT Greater Boston n=8</th>
<th>Total n=14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person of Color</td>
<td>n=5</td>
<td>n=5</td>
<td>77%</td>
</tr>
<tr>
<td>Gender Identity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>n=3</td>
<td>Female: n=7</td>
<td>Female: 77%</td>
</tr>
<tr>
<td>Male</td>
<td>n=2</td>
<td>Male: n=1</td>
<td>Male: 23%</td>
</tr>
<tr>
<td>Free/Reduced Price Lunch</td>
<td>n=3</td>
<td>n=5</td>
<td>62%</td>
</tr>
<tr>
<td>Eligible or Pell Grant Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will Be/Are the First Generation to Attend College</td>
<td>n=1</td>
<td>n=2</td>
<td>23%</td>
</tr>
</tbody>
</table>

Notes: n sizes are reported for samples smaller than 10. Demographic percentages exclude one BT Central Texas TF with missing data.
WHAT WE FOUND

We examined our student outcomes with a mixed-methods approach. We administered student pre, mid, and post surveys, TF pre, mid, and post surveys, and student and TF mid and post program focus groups. Instructional Coaches observed TF tutoring sessions at least once a month, and captured their observations in a student engagement rubric developed by Breakthrough Collaborative. Math scores are based on nationally-normed formative assessments administered by school districts during the fall and spring testing windows.

Student-Teaching Fellow Relationships

Breakthrough programs view relationships between students and TFs as a core element to our programming. Research shows that adolescents in strong youth-mentor relationships are “significantly associated with positive social, academic, and health-related behaviors.” Pianta et al. say “Positive relationships with adults are perhaps the single most important ingredient in promoting positive student development.”

“I think honesty and emotions are key to the student experience because I don’t think students would be as vulnerable to their full time teacher as they are to us as their tutors if they don’t understand something. I’m not afraid to share bits and pieces of myself, because I think the most effective teachers are the ones who students can really relate to, and a lot of that comes from just being honest and being seen.”

– Breakthrough Pilot Teaching Fellow

Overall, Breakthrough pilot students reported strong relationships with their Teaching Fellows. Relationships were strong at the midpoint of the program, and these feelings were sustained through the end of the program (Figure 4).

FIGURE 4. STUDENT-TF RELATIONSHIP SURVEY RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Mid-Program</th>
<th>Post-Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-TF Relationship (construct)</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Student believes TF is glad they are in their class</td>
<td>3.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Student believes TF cares about their life outside of school</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Student believes TF treats them with respect</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Student Sense of Belonging (construct)</td>
<td>4.0</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Notes: n=22. Sample is limited to those that took surveys in both time points. Constructs include more than one survey question. Survey answer choices range from 1 to 5, 1 being strongly disagree to 5 being strongly agree.
Student Engagement, Usefulness of Tutoring, Math Enjoyment

One definition of student engagement is “a condition of emotional, social, and intellectual readiness to learn characterized by curiosity, participation, and the drive to learn more.”\textsuperscript{13} Classrooms that are engaging “promote a sense of belonging by personalizing instruction, showing an interest in students’ lives and creating a supportive, caring social environment.”\textsuperscript{14} Multiple factors are thought to influence student engagement, including relationship building and making content useful by connecting it with the real world.\textsuperscript{15} Ensuring that students find joy in learning is all the more important now, as students experienced emotional hardships and disconnection during the pandemic.\textsuperscript{16}

Based on classroom observations, 80\% of Breakthrough pilot students were actively participating throughout the tutoring sessions, on average. Students also agreed that their math tutoring sessions were useful to them, with small increases in usefulness by the end of the program (Figure 5). Although pilot students’ enjoyment of math was relatively low, we found that enjoyment increased by the end of the program (Figure 6).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure5.png}
\caption{Usefulness of Tutoring Survey Results}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.png}
\caption{Student Enjoyment of Math Survey Results}
\end{figure}

Notes: \textit{n}=21. Sample is limited to those that took surveys in both time points. Survey answer choices range from 1 to 5, 1 being strongly disagree to 5 being strongly agree.

“\textit{They make us move around, and they make us play games that have math in them, so it makes it more entertaining.}”

– Breakthrough Pilot Student
Student Math Knowledge and Attendance
High-dosage math tutoring is associated with strong academic gains, but only if students regularly attend. Indeed, one major challenge for tutoring programs, particularly after-school programs, is student attendance. Previous iterations of federally-funded tutoring programs cite attendance rates as low as 34%. There is even evidence of low attendance for in-school tutoring programs, one example coming from Providence, Rhode Island, with average daily attendance of 49% last school year. However, of those who attended at least 80 hours of math tutoring, 87% of students passed their math class.

Breakthrough pilot students at both affiliate locations saw increases in math knowledge scores by the end of the program. In fact, BT Greater Boston students’ gains surpassed their expected growth by the end of the year (Figure 7). Like many after-school programs, we experienced attendance challenges particularly at BT Central Texas (34%) although the average attendance rate at BT Greater Boston was strong (79%) (Figure 8). These results validate the research that finds a strong positive association between math outcomes and attendance (Figure 9).

FIGURE 7. ACTUAL AND EXPECTED GROWTH ON MATH ASSESSMENT SCALE SCORES

BT Central Texas

<table>
<thead>
<tr>
<th>Fall Score</th>
<th>Spring Score</th>
<th>Expected Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.8</td>
<td>507.3</td>
<td>515.4</td>
</tr>
</tbody>
</table>

BT Greater Boston

<table>
<thead>
<tr>
<th>Fall Score</th>
<th>Spring Score</th>
<th>Expected Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1089.7</td>
<td>1114.8</td>
<td>1106.4</td>
</tr>
</tbody>
</table>

Notes: n=12. Sample is limited to those with Math iReady scores from both fall and spring time points. iReady range is 0-800. Scores in the figure are scale score averages.
FIGURE 8. ATTENDANCE

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“What makes me come is the niceness of my favorite Teaching Fellow. Her energy makes me want to come here 24/7. Some of the assignments I didn’t understand, but once I came to Breakthrough I understood it better.”

– Breakthrough Pilot Student
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FIGURE 9. CHANGE IN GRADE LEVEL EQUIVALENCY (GLE) AND ATTENDANCE RATES

```
“Notes: n=32. Sample is limited to those with math assessment scores from both fall and spring time points. GLE is from Math iReady (BT Central Texas) and Math Renaissance STAR (BT Greater Boston) assessments. Change in GLE is the change from fall to spring time points.
```

Note: n=28 for BT Central Texas; n=28 for BT Greater Boston.
**Teaching Fellow Career Paths**

During the summer fellowship, TFs learn to be lead classroom teachers through professionally designed training and ongoing support from Instructional Coaches and professional staff. One outcome we see year over year is that more TFs are interested in working in the education field by the end of their Breakthrough summer. As such, we were interested to see if this phenomenon is also true during the math after-school pilot.

“*If you’re looking to teach or work in a school, this program really helps you figure out what you want to do in life.*”

– Breakthrough Pilot Teaching Fellow

Similar to the summer experience, we see an increase in the number of Teaching Fellows interested in working in education by the end of the pilot: pre-program, three TFs reported that they were likely to have a career in education (50%) whereas post-program, all six TFs reported their desire to work in the education field (100%) (Figure 10).

**FIGURE 10. TF LIKELIHOOD OF WORKING IN THE FIELD OF EDUCATION**

<table>
<thead>
<tr>
<th>Pre-Program</th>
<th>Post-Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="TF figures" /></td>
<td><img src="image" alt="TF figures" /></td>
</tr>
</tbody>
</table>

Notes: n=6. Sample is limited to those that took surveys in both time points.

**Longer-Term Student Effects**

Breakthrough pilot students experienced strong relationships and a strong sense of belonging by the end of the program, but we were also interested to see if these feelings persisted into the next summer, and if their feelings were any different than non-pilot students.

Breakthrough pilot students who attended the summer program both before and after the tutoring program have even stronger feelings of belonging and relationships compared to their non-pilot peers (Figures 11, 12, and 13).

In addition, these data validate the research that finds students who attend consecutive summer programs like Breakthrough have stronger outcomes than those who attend just one summer session (as seen in overall increases in belonging and adults they can talk to).²²

Taken together, these data provide evidence to support the Breakthrough model of offering consecutive summer opportunities coupled with strong school-year programs in between.
**FIGURE 11. SENSE OF BELONGING SURVEY RESPONSE: SUMMERS 2021 & 2022**

“I feel like I belong at Breakthrough.”

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Non-Pilot Students</th>
<th>Pilot Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 (rising 8th) – Pre-Pilot</td>
<td>80%</td>
<td>77%</td>
<td>62%</td>
</tr>
<tr>
<td>2022 (rising 9th) – Post-Pilot</td>
<td>94% (+52%)</td>
<td>79%</td>
<td>76% (-5%)</td>
</tr>
</tbody>
</table>

Note: Responses are limited to students in BT Central Texas and BT Greater Boston only. All: n=79 in 2021 and n=92 in 2022. Non-pilot students: n=66 in 2021 and n=76 in 2022. Pilot students: n=13 in 2021 and n=16 in 2022.

**FIGURE 12. ADULT I CAN TALK TO ABOUT MY SUCCESSES SURVEY RESPONSE: SUMMERS 2021 & 2022**

“I have an adult at Breakthrough I can talk to about my successes.”

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Non-Pilot Students</th>
<th>Pilot Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 (rising 8th) – Pre-Pilot</td>
<td>85%</td>
<td>75%</td>
<td>73%</td>
</tr>
<tr>
<td>2022 (rising 9th) – Post-Pilot</td>
<td>94% (+11%)</td>
<td>80%</td>
<td>77% (+5%)</td>
</tr>
</tbody>
</table>

Note: Responses are limited to students in BT Central Texas and BT Greater Boston only. All: n=80 in 2021 and n=94 in 2022. Non-pilot students: n=67 in 2021 and n=78 in 2022. Pilot students: n=13 in 2021 and n=16 in 2022.

**FIGURE 13. ADULT I CAN TALK TO ABOUT MY PROBLEMS SURVEY RESPONSE: SUMMERS 2021 & 2022**

“I have an adult at Breakthrough I can talk to about my problems.”

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Non-Pilot Students</th>
<th>Pilot Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 (rising 8th) – Pre-Pilot</td>
<td>62%</td>
<td>54%</td>
<td>53%</td>
</tr>
<tr>
<td>2022 (rising 9th) – Post-Pilot</td>
<td>64% (+21%)</td>
<td>54%</td>
<td>53%</td>
</tr>
</tbody>
</table>

Note: Responses are limited to students in BT Central Texas and BT Greater Boston only. All: n=81 in 2021 and n=94 in 2022. Non-pilot students: n=68 in 2021 and n=78 in 2022. Pilot students: n=13 in 2021 and n=16 in 2022.
CONSIDERATIONS FOR THE FIELD

Participating in the Math Tutoring Pilot allowed Breakthrough Collaborative to explore a subset of after-school models, and through this exploration, we share a number of reflections for the field to consider.

Understand the Factors Influencing Attendance
Like many tutoring programs, the pilot program as a whole experienced challenges in student attendance. COVID-19-related complications further affected attendance, particularly for BT Central Texas. While both affiliates had families who kept students home from school due to the Omicron surge in late 2021 and early 2022, BT Greater Boston had strong attendance throughout the pilot program.

Preliminary investigations into why attendance varied between the two affiliates yielded additional information about attendance, beyond pandemic-related factors. Pilot students reported that other school commitments, such as sports, as well as family obligations like watching siblings or holding jobs, were reasons for not attending. We also found that food, parental encouragement, and their friends’ attending motivated pilot students without such commitments to attend after school.

What is unclear from our data is whether attendance after school is actually a reflection of school attendance, which warrants a different set of solutions. We encourage LEAs to work with community-based partners like Breakthrough to dig into the data together to find creative ways to tackle the after-school attendance problem.

Adapt Programming to Students’ and Families’ Needs
Aspects of the pilot program rightfully evolved over time to best meet our students’ needs. One affiliate opted to introduce more homework time and more SEL lessons in the spring based on student and family feedback. Both of our affiliates incorporated snacks and meals into the program in response to students feeling hungry after school, but also found that meal times were wonderful opportunities for students and TFs to build community. While all affiliates at their core are Breakthrough programs, having the autonomy and flexibility to meet local needs is one value we hold as a Collaborative.
Hold Tutoring After School to Build Community and Increase Access to Teaching Experiences

Had the after-school program been during the school day, certain elements would not have been possible. In our experience, Breakthrough students benefit from the chance to not only be in small groups, but also value the energy and spirit of the whole Breakthrough community coming together in opportunities like All School Meeting. Both small and large groupings allow students to make connections and build relationships with their peers and TFs, and these relationships are keys to students’ feelings of belonging in the program.

In addition, holding the program after school allowed upper class high school students to be TFs, as they would not be available to tutor if the pilot was held during the school day. By holding the tutoring program after school, the paid TF position was made accessible to a broader pool of young people at an important juncture in their career exploration, which allowed Breakthrough to expand its role in building and diversifying the early teacher pipeline.

Offer Continuous Services Across Both School Year and Summer

This report finds evidence to suggest that students who attend consecutive summer programs with a regular after-school program in between have stronger outcomes than those who attend the summer programs alone. This finding validates why communities, schools, and districts should be offering dependable after-school programs alongside strong summer programs – programs like Breakthrough – for all students during this post-pandemic time.
CONCLUSION

The Education Trust in Texas recommends LEAs partner with community-based organizations who already have long-standing relationships with students and their families to provide personalized support in this post-pandemic era. Breakthrough is one such program. Not only does Breakthrough support the essential needs of students and their families, this study provides evidence that the program can also move the needle on math achievement. Although the amount of math instruction offered was on the lower end of recommended amounts, this strategic decision allowed for a far more enriching and fun program, which, in turn, cultivated strong relationships and feelings of belonging. Supporting the whole child made the after-school pilot program a very “Breakthrough” program.

Dr. Munro Richardson of Read Charlotte recently described the need for a variety of options when it comes to tutoring: “I like to think about this as sort of educational medicine. We wouldn’t just give any child any medicine – we want to give the right medicine to the right child at the right dosage at the right time. We need to do the same thing when it comes to tutoring, which I think of as educational medicine.” It is our charge to ensure that students and families can access the right program for their needs when they need it. Equipped with our lessons learned from this pilot program, Breakthrough is one of a multitude of expanded student supports that urgently need to be deployed to meet each and every student where they are.
ENDNOTES


8 For more information on advisory and All School Meeting, please see: Deogracias JS, Glynn J. Breaking Through the Distance: How Relationships Foster Online Learning. Breakthrough Collaborative. 2020. https://www.breakthroughcollaborative.org/white-paper/.

9 The actual number of students who participated in the tutoring program was larger – 37 students from BT Central Texas and 32 students from BT Greater Boston participated in the program, but only 28 students from each affiliate consented to participate in the study.


21 Based on calculations from Mathematica’s forthcoming final report on this study. Expected growth here is based on pre-pandemic years and against a national sample of students rather than a sample of students that mirror Breakthrough student demographics. As such, the expected growth measures used here are likely higher than the actual growth estimates for pilot students’ peers from the 2021-2022 school year, as evidenced by a decline in math scores on the 2022 NAEP exam.


ABOUT BREAKTHROUGH COLLABORATIVE

Breakthrough Collaborative, a collective of 24 affiliate sites across the U.S., works with traditionally underrepresented students to achieve post-secondary success, and empowers aspiring leaders to become the next generation of educators and advocates. Beginning in middle school and continuing for at least six years, Breakthrough students participate in free summer and after-school programming, weekend enrichment programs, college counseling, and financial planning. Breakthrough’s programs are focused on students as humans first, comprising a mix of SEL, academics, relationships, community building, and fun. Breakthrough Teaching Fellows are near-peer college students who teach and mentor students during their paid summer fellowship. As the largest pre-professional teacher training program in the nation, our Teaching Fellowship is a high-support opportunity to try out teaching and build real-world skills, and is designed to be an experience that is accessible, inclusive, and affirming for undergraduate students from all backgrounds and majors.

PO Box 71420 Oakland CA 94612
415-442-0600
www.breakthroughcollaborative.org