INSPIRING STUDENTS, DEVELOPING TEACHERS:
HOW A CORPS OF COLLEGE STUDENTS CLOSES OPPORTUNITY GAPS & DIVERSIFIES THE TEACHER PIPELINE

TRAINING FUTURE EDUCATORS TO CONNECT, IN CLASSROOMS, ONLINE AND BEYOND THE PANDEMIC
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ABOUT THIS REPORT

For 40 years, the Breakthrough Collaborative has educated students from under-resourced communities through summer and out-of-school learning experiences in cities across the nation. This report, the second in a series, shares the Teaching Fellow Training Framework used to prepare young adults to teach Breakthrough’s middle and high school students. The report also reveals how Breakthrough successfully translated the training model to a completely virtual environment during the summer of 2020.

Drawing from decades of experience training college-age students (called “teaching fellows”) to teach rigorous summer courses, we describe the research that grounds the training model, share examples of the training content, and present evidence for how the Breakthrough program benefits teaching fellows. Based on survey, interview, and focus group data, we found that the Breakthrough teaching fellow training model is as effective in a virtual setting as when it is offered in-person. As such, we share both online and in-person examples of our framework implemented on the ground.

For additional information on the Breakthrough student experience, please reference the first report in this series. Published in October 2020, Breaking Through the Distance: How Relationships Foster Online Learning offers six strategies for effective online student engagement, drawn from the successful translation of our traditional in-person student program to the virtual setting during summer 2020.
EXECUTIVE SUMMARY

For 40 years, Breakthrough Collaborative has expanded educational opportunities for middle and high school students in underserved communities across the nation. Recognizing that quality education is the most reliable pathway to upward mobility, albeit one stratified by race and income, Breakthrough offers academically challenging summer programs, out-of-classroom tutoring and enrichment, and individualized college guidance in 24 affiliate locations nationwide. Following high school graduation, Breakthrough students are about 50 percent more likely to directly enroll in a four-year college or university than other high school graduates nationwide, regardless of socio-economic background. Once they enroll, they graduate at the same rate as their more affluent peers.

At the same time as it educates students, Breakthrough develops the next generation of educators and mentors. Breakthrough affiliates enlist undergraduates, recruited nationally from more than 250 colleges and universities, to lead their summer instructional programs. These “teaching fellows” are trained, guided, and mentored by experienced K-12 teachers. Teaching fellows major in a variety of fields and share a passion for teaching and mentoring students. Over the past decade, Breakthrough has trained 8,700 teaching fellows, making it the largest pre-professional teaching fellowship program in the nation.

In this paper, we share our Teaching Fellow Training Framework, a time-tested, research-based model that has emerged from four decades of training young adults to teach students from underserved communities. The model trains teaching fellows in four key areas: (1) becoming warm demanders by caring deeply about students and holding them to high expectations; (2) developing effective pedagogical skills; (3) valuing diversity, equity, and inclusion; and (4) cultivating a growth mindset through feedback and support.

In summer 2020, the Breakthrough model was tested in new ways when the COVID-19 pandemic forced affiliates to adapt their training and student programming to be fully online. Based on survey, interview, and focus group data, we found that the Breakthrough teaching fellow training model was as effective in a virtual setting as when offered in-person. Summer 2020 teaching fellows improved their instructional skills and left the program with stronger desires to become educators or child advocates. Overall, outcomes were similar or stronger during the virtual summer than in recent in-person summers, providing evidence that the Breakthrough training model works in multiple modalities.

Breakthrough’s teaching fellow experience helps prepare the next generation of young people from diverse backgrounds to become the teachers and leaders of tomorrow. In schools across the nation, students in economically disadvantaged communities are often taught by less qualified, inexperienced teachers than those in wealthier communities. Most students of color also do not have the benefit of learning from teachers who share their racial and cultural backgrounds, despite research demonstrating its importance. In addition, learning loss due to the COVID-19 pandemic disproportionately affects students from under-served communities, causing educational experts to call for greater individualized instruction and support for students that may be beyond the capacity of full-time teachers.

Breakthrough’s model offers one scalable approach to developing a “college tutoring corps” of motivated, prepared instructors that can help stem learning loss.
ADDRESSING NATIONAL EDUCATIONAL NEEDS

Earning a college degree is the most reliable avenue to economic prosperity available to students in today’s world, yet postsecondary completion is stratified by race and income. Black and Latinx students are less likely to earn postsecondary degrees than white students — and students from low-income communities are less likely to earn degrees than those from higher income communities — in part because they are more likely to attend under-resourced schools. Further, students of color are less likely to be taught by a teacher who shares their racial and ethnic background: more than half of K-12 public school students are of color (52 percent), but only 21 percent of public school teachers are of color. Research demonstrates the value of a culturally-diverse teacher workforce, and teacher pipelines have recently been successful in increasing diversity in teacher populations. Yet teachers of color have higher turnover rates than white teachers, and expanding numbers of students of color continue to outpace the number of teachers of color in schools, driving the need for more teachers from diverse backgrounds.

Breakthrough Collaborative provides a valuable solution to a pressing national problem. In addition to strengthening postsecondary opportunities for youth from historically underserved communities, Breakthrough also helps expand and diversify the teacher pipeline. This mutually beneficial relationship creates a generation of inspired students and a pipeline of educators who pursue careers in the classroom and beyond after finishing their undergraduate degrees.

The COVID-19 pandemic has also caused widespread learning loss that disproportionately affects students from under-served communities. Many educational experts have called for greater individualized instruction and support for students that may be beyond the capacity of what full-time teachers in the current system can offer. Breakthrough’s model offers one scalable approach to developing a “college tutoring corps” of motivated, prepared instructors that can help stem learning loss.
ABOUT BREAKTHROUGH COLLABORATIVE

Breakthrough Collaborative is a national collaborative of 24 affiliates that expands educational opportunities for students from underserved communities in 6th through 12th grades (Figure 1). Each affiliate creates programming for students in its local community. The program collectively engages thousands of students across the country every year, of whom 96 percent identify as a person of color, and 77 percent receive free or reduced-price lunch subsidies. **Breakthrough affiliates offer academically challenging summer programs, after-school tutoring, weekend enrichment programs, test preparation, college and financial counseling, and individualized college guidance.** Students enter the program in middle school and participate until high school graduation — typically a six year commitment. By starting early and supporting students through their pivotal developmental years, Breakthrough helps prepare students for college and beyond. **With more than four decades of success in closing the opportunity gap for students from under-resourced communities, Breakthrough is a national leader in educational equity.**

FIGURE 1. BREAKTHROUGH COLLABORATIVE AFFILIATES AND PARTICIPANTS

Over the past decade, Breakthrough has served more than 18,000 K-12 students across the country. Upon leaving high school, they are about 50 percent more likely to directly enroll in a four-year college or university than high school graduates nationwide, regardless of socio-economic background. Three out of four (75 percent) Breakthrough students are the first in their families to go to college. Once they enroll, they graduate at the same rate as their high-income peers.

**Along with maximizing the potential of students, Breakthrough helps train the next generation of aspiring educators and youth advocates.** College-age undergraduates, known as teaching fellows, lead the instructional program during the summer and provide support throughout the school year. They are guided and mentored by instructional coaches who are certified and experienced K-12 teachers from local schools with a specialty in a core subject area.
Teaching fellows are recruited from over 250 colleges and universities to teach in the summer program focused on the middle to high school transition. The national office takes the lead on recruitment, and individual affiliates select teaching fellows from the national pool, allowing sites to draw from a more geographically and demographically diverse pool of candidates than if they recruited locally. Breakthrough recruiters go beyond traditional education majors to seek out candidates with a demonstrated passion for working with students, particularly with a deep interest in social justice. Breakthrough also encourages former teaching fellows and students to return as teaching fellows or instructional coaches.

Overall, Breakthrough teaching fellows mirror the students served: in 2020, 76 percent identified as people of color, 49 percent demonstrated financial need, and 47 percent were the first members of their families to attend college. Three-quarters of teaching fellow alumni pursue careers in education as classroom teachers or other education-related leadership roles; all alumni leave Breakthrough with professional and leadership skills that benefit them in any career they choose. Among those who become teachers, 89 percent work in urban settings and 60 percent work in high-needs schools. Over the past decade, Breakthrough has trained 8,700 teaching fellows, making it the largest pre-professional teacher training program in the nation.

“At the heart of Breakthrough, it’s younger kids getting into learning and older kids getting into teaching. That combination of young kids who are discovering their academic potential and older kids discovering that they can make a difference in the world - it’s magic.”

ANGELA DUCKWORTH, Author of “Grit”, Founder and CEO of Character Lab, Founder of Summerbridge Cambridge which became Breakthrough Greater Boston, and former Breakthrough Teaching Fellow
### FIGURE 2. BREAKTHROUGH PARTICIPANTS AND INTENDED OUTCOMES

#### BREAKTHROUGH STUDENTS
- (Grades 6 - 12)
- Thousands of students served every year across 24 affiliates
- Identify as a person of color: 96%
- Receive free or reduced price lunch subsidies: 77%
- Are the first in their families to attend college: 75%

#### TEACHING FELLOWS
- (Undergraduate College Students)
- Hundreds of teaching fellows trained every year from 250+ colleges and universities nationwide
- Identity as a person of color: 76%
- Demonstrate financial need: 49%
- Are the first in their families to attend college: 47%

#### INSTRUCTIONAL COACHES
- (Certified K-12 Teachers)
- Hundreds of instructional coaches support teaching fellows every year
- Identify as a person of color: 61%
- TEACHING CERTIFICATION TYPE:
  - Traditional: 53%
  - Alternative: 45%
  - Other: 2%
- First Time Instructional Coach: 46%
- Returning Instructional Coach: 54%
- 8 YEARS OF AVERAGE TEACHING EXPERIENCE

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<tr>
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<tr>
<td>ADVISORIES:</td>
</tr>
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<tr>
<td>5-7 students</td>
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<td>TRAINING SUPPORT:</td>
</tr>
<tr>
<td>1 instructional coach</td>
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<tr>
<td>4-6 teaching fellows</td>
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### INTENDED GOALS (SHORT TO LONG TERM)

#### BREAKTHROUGH STUDENTS
- Middle school students become high school ready
  - Aspire to attend college
  - Become college eligible and college ready
  - Graduate with a 4-year degree
  - Sustain relationship with Breakthrough as a fellow, instructional coach, or other role

#### TEACHING FELLOWS
- Fellows increase intent to teach, hold confidence in teaching skills, and understand the demands of teaching
  - Enter certification programs
  - Become teachers
  - Increase the number of teachers from traditionally underrepresented backgrounds
  - Increase teacher retention
  - Hold leadership positions as Breakthrough instructional coaches and other roles

#### INSTRUCTIONAL COACHES
- Instructional coaches increase intent to pursue careers that advocate for or work on behalf of students
  - Increase understanding of teaching demands
  - Persist in the teaching profession
  - Occupy leadership positions in education
  - Engage with Breakthrough and its Pipeline Partners

Data sources: 2020 Student, Teaching Fellow, and Instructional Coach Participation Data; 2020 Instructional Coach Summer Survey, Breakthrough Collaborative Logic Model
“There’s a freedom that is felt by most students and teaching fellows to be able to be themselves and to be individual. I really believe that the single most important secret ingredient in the Breakthrough model is that dynamic between young adults pursuing lives of service or teaching, and students who are looking for reasons to be reminded that it’s cool to be smart, looking for people that look like them that reinforce that kind of notion.”

**JULIE WITTEM**, Executive Director, Breakthrough Cincinnati

“The classes in Breakthrough [focus on] what you’re learning in the next year. They teach you how to become better in that curriculum, how to connect to the class, and teach you how to do it in a way that you’ll like and understand better. The Breakthrough teachers are college students. They are very nice and they can connect and relate to you a lot.”

**KIMBERLY**, Student, Breakthrough Greater Boston
The Breakthrough teaching fellow experience is designed for undergraduates of all majors interested in a variety of careers, teaching or otherwise. All teaching fellows hold a deep interest in social justice and working with students. During the nine-week paid summer residency, teaching fellows receive over 100 hours of teaching and leadership training, and 75 hours of lead classroom experience.

Pre-Summer Preparation:
• Prepare for the program through pre-readings.

Teaching Fellow Orientation: Weeks 1-2
• Attend rigorous multi-week orientation that trains teaching fellows in the Breakthrough model of instruction and approach to learning.
• Learn and begin lesson preparation, adapting and personalizing lessons for maximum student engagement.

Summer Program: Weeks 3-8
• Teach classes in core subject areas (i.e., math, English language arts, science, social studies), electives, and advisory.
• Develop and adapt lessons, grade student work, communicate with families, mentor students, and participate in committees—reflective of the multiple roles that professional teachers hold in their jobs today.
• Receive mentoring, coaching, and professional development from instructional coaches and Breakthrough staff.
• Receive formal and informal observations and feedback.

Wrap-Up and Reflection: Week 9
• Reflect on successes and areas of growth, and debrief with program staff on their teaching experience.
• Review student outcome data and add feedback to students’ files.
The Breakthrough Collaborative Teaching Fellow Training Framework

Breakthrough’s teaching fellow training framework is a time-tested, research-based model that emerged from decades of training young adults to teach youth from underserved communities (Figure 3). The framework trains teaching fellows in four key areas, which fellows then apply while teaching and leading instruction.

- **Training Element 1: Becoming Warm Demanders**, i.e., teachers who “expect a great deal of their students, convince them of their own brilliance, and help them to reach their potential in a disciplined and structured environment.”

- **Training Element 2: Developing Effective Pedagogical Skills**, including setting structures, engaging students, and taking ownership of lessons.

- **Training Element 3: Valuing Diversity, Equity, and Inclusion**, by recognizing the importance of culturally relevant classrooms, appreciating multiple perspectives, recognizing hidden biases, and creating space for students from all backgrounds to feel seen and heard.

- **Training Element 4: Cultivating a Growth Mindset through Feedback and Support**. Teaching fellows are regularly assessed, as well as supported through community and self-care, equipping them with the skills they need to become increasingly independent and effective educators.

Breakthrough Collaborative’s training method is based on the Center for Creative Leadership’s 70-20-10 learning model, which prioritizes learning through hands-on opportunities. The training modules, along with the academic curriculum that is aligned with the Common Core State Standards and Next Generation Science Standards, are designed by the national office and shared with affiliates through annual trainings, conferences, and a central resource library. Locally, each affiliate customizes its programming to best fit its community, while maintaining the core standards of the Breakthrough model. Data are collected annually from affiliate participants and materials are revised as needed. The result is a research-based, educational approach that has been field-tested in two dozen diverse locations.
Teaching fellows care deeply and hold high expectations, becoming warm demanders as they instruct students. The concept of a warm demander was developed by Judith Kleinfeld while studying differences between effective and ineffective teachers of Alaskan students in the 1970s. She found that teachers who exhibited both warmth and active demandingness — known today as warm demanders — were “highly successful” with indigenous rural students and with black and white students living in urban communities. Warm demanders work to develop caring, positive, and individualized relationships with students, which earn teachers the right to “push for excellence and stretch the student beyond [their] comfort zone.” Warm demander teachers design lessons that connect students to real world experiences, and incorporate “instructional activities with the cultural norms and traditions of their students in mind.”

The Breakthrough model of developing warm demander teachers involves training teaching fellows to:
A. Develop highly caring relationships with students and their families,
B. Hold high expectations for students, and
C. Support and encourage risk-taking.

### 1A. DEVELOP HIGHLY CARING RELATIONSHIPS

Relationship-building is the core of Breakthrough’s learning model. Research is clear that students from underserved communities are more successful when inspired by teachers with similar backgrounds. Because Breakthrough students trust their teaching fellows, they open up to learning and personal interactions. This was true even in 2020’s fully virtual environment, when fellows built strong relationships with students despite interacting through a computer screen. By the end of the summer, Breakthrough students were more likely to report having an adult at Breakthrough that they could talk to about their problems or successes than they did at their base schools during the past academic year (Figure 4).

### FIGURE 4. STUDENT CONNECTEDNESS WITH ADULTS, 2020

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Data source: 2020 Pre- and Post-Summer Surveys of Breakthrough Students.
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“Compared to normal school, Breakthrough is more of a family. Since the classes are a lot smaller, each teacher can focus on each individual student which I really like.”

KYLE
Student
Breakthrough
Greater Boston
Strong teaching fellow-student relationships are nurtured in small group gatherings called “advisories.” Teaching fellows meet daily with an assigned small group of students to check-in, coach on social-emotional skills, and build connections through activities and games. In 2020, advisories allowed teaching fellows to build connections with their students that translated into more effective participation in the virtual classroom.

**ADVISORY GROUP ACTIVITIES: AFFILIATE EXAMPLES**

Advisory groups meet with their assigned teaching fellow multiple times a week. Teaching fellows gain leadership skills as they engage students in scripted exercises and activities.

**Breakthrough Houston**
Advisory groups discuss the “word of the day” and engage in an activity related to that word. For example, if the word is “zest,” teaching fellows talk students through ways to show “zest” in their life. If it is “gratitude,” students might give each other shout-outs and then make a plan to show gratitude to their families at home.

**Breakthrough San Francisco**
Teaching fellows lead students through daily check-ins sharing “yucks/yums” or “roses/thorns” to prompt students to reflect on both positive and challenging experiences of their daily lives. In 2020, fellows held one-on-one check-ins with students, where conversations focused on understanding how students were feeling about life, reviewed academic work, learned more about their families, and reviewed technology access and distance learning successes.

**Breakthrough Birmingham**
Advisory group discussions focus on weekly topics such as growth mindset, bullying, optimism, stress management, and resilience. Teaching fellows are encouraged to role play, discuss, and model the concepts with their students.

**Breakthrough Manchester**
Advisory time is used to gauge how students are doing and get to know them through activities and minigames. In 2020, students showed off their pets, held discussions on Black Lives Matter vigils, shared family traditions, and created skits for All School Meeting (school-wide assemblies).
Having fun together also helps fellows build relationships with students. Breakthrough makes learning joyful by incorporating games, challenges, chants, and cheers during lessons and spirit activities. Teaching fellows’ energy is critical for cultivating the Breakthrough spirit. Students love seeing their fellows dress up on spirit days and enthusiastically participate in cheers and games during school-wide assemblies. This was especially true in 2020, considering the isolation and lack of engagement students felt during virtual schooling in the spring. Having fun together strengthens the bonds that are created during the program, allowing fellows and students to form authentic, trusting relationships.

Teaching fellows also make connections with students’ families throughout the summer, as research demonstrates the positive impact of family involvement on student outcomes. During summer 2020, fellows sent texts and emails, and called families when students were falling behind on homework, but also when students excelled in class. Contacting families opened the door for communication, allowing parents to be partners in their students’ education.

1B. HOLD HIGH STUDENT EXPECTATIONS
During the pre-summer orientation training, teaching fellows learn about the importance of setting high expectations for students. Researchers find that high expectations correlate with higher student achievement, supporting the need to combat the “soft bigotry of low expectations.” Teaching fellows are trained to recognize and work to dismantle any implicit biases or stereotypes that may shape their expectations of Breakthrough students. Holding high student expectations not only shatters deficit thinking, but communicates care.

Breakthrough’s summer curriculum inherently assumes a high level of academic rigor, as students are assigned the next grade-level curriculum rather than a review or remediation of the grade they just completed. This is notable particularly for students of color, students from low-income families, and English learners as they spend a majority of their schooling missing out on “grade-appropriate assignments, strong instruction, deep engagement, and teachers with high expectations.”

Breakthrough also promotes high expectations through daily affirmations, in-unison recitations focused on Breakthrough’s values.

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"The word that comes to mind that describes our teaching fellows this year and beyond — and from past summers — the word is ‘igniters.’ They’re the ones that really spark the excitement in our students. They are the creators of the content that students work on throughout the summer, they really embody that passion, sense of joy, spirit and culture that is everything Breakthrough.”

**ELANA ELMORE**, Program Director, Breakthrough Cincinnati

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**BREAKTHROUGH AFFIRMATION**

“We are Breakthrough Atlanta. We are the young people who make a difference, striving towards academic success and personal mastery. We participate fully in a six-year, year-round, academically intense, study-skills based enrichment program. We come with open minds, willing hearts, caring souls, and high expectations. We are people of humility, wisdom, nurturing, and forgiveness. We are Breakthrough Atlanta!”

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1C. SUPPORT AND ENCOURAGE RISK-TAKING

Breakthrough teaching fellows are trained to create safe learning environments, or “safe spaces,” where students can be their authentic selves and are unafraid to take risks. Safe learning environments are critical for students of color in particular, considering that U.S. classrooms often reflect a white, Eurocentric curriculum and culture. Teaching fellows model a growth-mindset approach for their students, teaching students that intelligence is malleable.

Teaching fellows are encouraged to praise the strategies that students use and celebrate mistakes as important stepping stones to their growth. Praising students for the learning process “fosters motivation, increased effort, willingness to take on new challenges, greater self-confidence, and a higher level of success.” Breakthrough Silicon Valley weaves growth mindset into their programming outside of class through the Growth Learner of the Week Award. Each teaching fellow nominates one student who sought growth through mistakes and contributed positively to the classroom environment by supporting and collaborating with their peers.
TRAINING ELEMENT 2: DEVELOPING EFFECTIVE PEDAGOGICAL SKILLS

Successful teachers are known to be effective in both planning and delivering instruction by implementing clear classroom rules and routines, while also expecting high levels of engagement. Breakthrough offers a very clear method for structuring lesson plans and managing classrooms, then encourages teaching fellows to develop new and/or adapt existing lessons as needed, with guidance and support from their instructional coach.

The Breakthrough model of developing effective pedagogical skills involves training teaching fellows to:
A. Set clear classroom rules, routines, and expectations,
B. Engage 100% of their students 100% of the time, and
C. Own their instruction and teaching experience.

2A. SET CLEAR CLASSROOM RULES, ROUTINES, AND EXPECTATIONS
Breakthrough aims to create a classroom culture where students work hard, feel supported, and understand expectations. During orientation, teaching fellows learn that class routines not only increase the time available for learning, but also help students feel safe as students know what to expect at all times.

Fellows are asked to “sweat the small stuff” by constantly monitoring and correcting minor behavior issues, preventing those small issues from becoming large ones.

Teaching fellows are trained to use task analyses to teach daily routines and lessons, reducing wasted time and maximizing time-on-task for learning. In 2020, Breakthrough teaching fellows developed clear routines for online procedures such as signing in on-time, accessing materials consistently, muting/unmuting microphones, taking turns participating respectfully, and using signals to grab students’ attention (examples below).

ATTENTION SIGNAL EXAMPLES

**Call and Response**
Teaching fellow: “All set?”
Students: “You bet!”

Teaching fellow: “Freeze! Everybody, clap your hands!”
Students: Clap hands 7 times

Teaching fellow: “Everybody in the house…”
Students (whispering): “Is as quiet as a mouse!”

**Other Ideas**
- Timers with fun tones
- Word of the day/week (when students hear it, they know to stop talking and pay attention)
- Match me (teaching fellow makes a motion/gesture and students mimic)
- Count down (verbally or using fingers from 5 to 1)

**How Does Breakthrough Prepare You for the School Year?**

“They teach us the basics of concepts that we’ll learn in our upcoming school year, so that when we do go into that and start learning it, we have a solid base on how to do it and how to figure it out. It’s really helpful.”

VIVIAN
Student
Breakthrough
Greater Boston
Teaching fellows’ lesson plans are broken down into specific steps and taught following the "say-see-do" framework. Teaching fellows first explain a step, and then students watch as their fellow models that step. Students then “do” by practicing the skill on their own. The say-see-do framework maximizes students’ opportunities to process information incrementally, and to build upon their prior knowledge during each lesson. It also maximizes student learning within the time limitations of the six-week summer program.
2B. ENGAGE 100% OF STUDENTS 100% OF THE TIME

Teaching fellows are taught that engaging 100 percent of students is imperative, and that allowing a student to disengage sends a message that the student doesn’t need to learn that day. Breakthrough teaching fellows use a pedagogical strategy called active participation, in which students are asked repeatedly throughout the lesson to demonstrate their understanding of the concepts being taught. Teaching fellows are encouraged to check for understanding every three to five minutes. Students might vocally share their understanding to the class, discuss a topic with their table mates, write their response on a post-it, or issue one of many other responses.

In summer 2020, active participation was re-imagined to reflect the virtual environment (Figure 5). Teaching fellows used interactive whiteboards, online quizzes (e.g., using sites such as Kahoot!), Know-Want-Learned charts and many other strategies to weave active participation into their virtual classes.

FIGURE 5. STRATEGIES TO EVOKE ACTIVE PARTICIPATION IN A VIRTUAL CLASSROOM

To ensure active participation online, have students…
2C. OWN THEIR INSTRUCTION AND EXPERIENCE

From the outset, teaching fellows take responsibility and ownership of their teaching. Julie Witten, Executive Director at Breakthrough Cincinnati, says “[her team] trains and then they get out of the way.” Lesson plans are scripted at the outset, then allow for more autonomy as the summer continues. Teaching fellows who wish to make adjustments to their lesson plans must do so with the guidance of their instructional coach.

In addition to teaching core courses, fellows teach electives and mini-courses on topics of their choosing. Electives expand Breakthrough students’ horizons, create opportunities for students to uncover their own passions, and fuel student motivation in learning, all while allowing fellows to teach something they are passionate about. Teaching fellows develop key objectives based on skills students will learn from the elective, and classes must be planned ahead of time.

WHAT MAKES BREAKTHROUGH DIFFERENT FROM SCHOOL?

“I think a lot of it has to do with the flexibility you get with teachers. They’re very easy to talk to because they are college students, and the curriculum is more student-led than teacher-led — it’s not as rigid as what you’d see in normal school.”

BRYAN, Student
Breakthrough Greater Boston
### List of Select 2020 Electives

<table>
<thead>
<tr>
<th>8th to 9th Grade Transition</th>
<th>Nutrition and Wellness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>Phonetography</td>
</tr>
<tr>
<td>Classic Moments in Sports</td>
<td>Poetry in Lockdown</td>
</tr>
<tr>
<td>Coding</td>
<td>Protest Music</td>
</tr>
<tr>
<td>Creative Writing</td>
<td>Psychology</td>
</tr>
<tr>
<td>Current Events</td>
<td>Save the Planet</td>
</tr>
<tr>
<td>Dance</td>
<td>Self-Care</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>Slam Poetry</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>Social Movements</td>
</tr>
<tr>
<td>Hip Hop</td>
<td>Speech and Debate</td>
</tr>
<tr>
<td>Immigration in the US</td>
<td>Sports Management</td>
</tr>
<tr>
<td>Intro into Electromagnetic Spectrum</td>
<td>STEM</td>
</tr>
<tr>
<td>Kpop 101</td>
<td>Theater</td>
</tr>
<tr>
<td>Meditation and Mindfulness</td>
<td>Summerbook (Yearbook)</td>
</tr>
<tr>
<td>Money Think</td>
<td>Yoga</td>
</tr>
<tr>
<td>Music</td>
<td></td>
</tr>
</tbody>
</table>

In addition, teaching fellows plan events and activities in committees. Each committee is responsible for developing “creative, out-of-the-box ideas and activities to promote the Breakthrough culture and a sense of community among students and faculty.”

Committees this past summer included spirit committees, culture committees, celebration committees and the All School Meeting (ASM) committee. ASM is an assembly where the entire program meets together virtually as a community. ASMs extend critical thinking outside of the classroom, make learning fun, cultivate community values and expectations, and develop individual self-esteem and skills such as public speaking and leadership.
The Breakthrough model trains teaching fellows to value diversity, equity, and inclusion (DEI) through three strategies: recruitment, training, and curricular development. Breakthrough intentionally recruits diverse teaching fellow candidates so that staff demographics mirror those of the students served. All teaching fellows, instructional coaches, and program staff receive annual training on DEI. DEI training typically covers terminology and topics such as segregation, white privilege, microaggressions, intersectionality, and opportunity gaps. In summer 2020, many affiliates included anti-racism resources as part of their training, and provided space for teaching fellows and students to come together to process the social unrest evoked by the murders of George Floyd and many others.

DEI training is not one-and-done, but is woven throughout the rest of the teaching fellow training and student curriculum. Teaching fellows are trained to incorporate real-life context and culturally-relevant content in their classes. Students from this past summer were more engaged in class when lessons included discussions on social justice, Black Lives Matter, and COVID-19.

To help fellows understand their students’ local context, affiliates incorporate information on their local community’s history into their DEI training. For example, Breakthrough Birmingham, with support from a local DEI consultant, required 2020 teaching fellows to read articles and attend a workshop on how Birmingham’s historical redlining and the resegregation in their school districts directly affected the quality of their students’ educational opportunities.

As with all curricula, Breakthrough’s DEI training is continuously reviewed for improvements and relevance, in consultation with subject matter experts. A revised DEI training module for all fellows and instructional coaches will be rolled out in summer 2021.

“I have developed the ability to be authentic with my students, to trust in them to have conversations about race, gender, identity. This has opened so many doors for me in teaching social justice, and finding responsibility within myself to make space for my students’ voices.”

RETURNING TEACHING FELLOW
Breakthrough Silicon Valley
BREAKTHROUGH GREATER BOSTON’S DEI RETREAT

In pre-pandemic times, Breakthrough Greater Boston teaching fellows and staff attend an overnight DEI retreat before classes begin. This past year, Breakthrough Greater Boston’s DEI retreat comprised a full day of its virtual summer training.

THE GOALS INCLUDED THE FOLLOWING:
- To understand and contextualize issues of equity and access during the COVID-19 pandemic.
- To articulate their racial identity development and how it has evolved.
- To define intersectionality and examine how it pertains to their identities and identity development.
- To understand and explain the characteristics of white supremacy culture and learn how to navigate these characteristics in an educational context.
- To develop and refine strategies for creating and participating in affinity spaces and reflection groups.

Teaching fellows were assigned pre-work for each session, which included a variety of articles, videos, and podcasts accompanied by reflection questions, a racial autobiography activity, a reflection on self-identities, and information on white supremacy culture. The DEI retreat, says Paulina Murton, Senior Director of Middle School Programs, “is a powerful way to start the teacher training program and sends a clear message about what we center in education and what is most essential to first learn as a new educator.”
TRAINING ELEMENT 4: 
CULTIVATING A GROWTH MINDSET THROUGH FEEDBACK AND SUPPORT

The Breakthrough motto, “We are all learners,” expresses our value of embracing a growth mindset where we embrace feedback and use challenging situations as opportunities to grow. Teaching fellows mentor and instruct students; fellows are supported by instructional coaches; affiliate leadership at each site provides guidance to fellows and coaches; and all Breakthrough community members benefit from curricula and guidance from the national office (Figure 6).

The Breakthrough model cultivates a growth mindset in teaching fellows by providing:

A. Continuous feedback on instruction, and
B. Strong social-emotional support.

FIGURE 6. A COMMUNITY OF CONTINUOUS LEARNING AND SUPPORT
4A. CONTINUOUS INSTRUCTIONAL FEEDBACK

Teaching is a complex management of “student behavior, intellectual engagement, student interaction, materials, physical space, and time.” Schools often implement mentoring or new teacher induction programs, as research suggests beginning teachers need personal and emotional support, task- or problem-specific support, and critical reflection of student work and their teaching practices.

Breakthrough’s instructional coaches (experienced professional K-12 teachers) are teaching fellows’ primary source of support for pedagogical and personal growth. Instructional coaches hold regular check-ins with their assigned teaching fellows, provide individualized feedback, approve lesson plans, formally assess at least two classes, and informally observe many more over the course of the summer. The move to virtual programming in 2020 allowed for more teaching support and observation than in past summers, as instructional coaches could easily pop into an online class, and more lessons were recorded. In 2020, 41 percent of instructional coaches observed their teaching fellows three or more times a week, and 32 percent observed their teaching fellows twice a week. In fact, Breakthrough Santa Fe’s instructional coaches observed all lessons this past summer, which helped teaching fellows increase their effectiveness more quickly.

To determine growth and identify areas of strength and improvement, instructional coaches use Breakthrough’s Teacher Excellence Rubric (TER) during formal observations. The TER, which was adapted in 2020 for online teaching, assesses teaching fellow competency in lesson preparation and implementation. It also determines how well teaching fellows are able to achieve 100 percent student participation, among other teaching competencies.

Teaching fellows also use self-reflections to process their daily interactions with students and their teaching practices. Affiliate leadership reviews the self-reflections to stay connected with their teaching fellows. During 2020, Breakthrough Birmingham teaching fellows completed daily reflections via a Google form, which allowed staff to review them regularly. The reflections provided staff the added ability to catch and address any minor issues that arose during the day quickly. Whereas in an in-person summer, teaching fellows could share concerns informally in the hallway or during breaks, these daily reflections were an effective way for staff to keep a pulse on their teaching fellows and students during the virtual summer.

Teaching fellow training does not stop when orientation is over. Instructional coaches and affiliate staff lead weekly trainings based on common issues that are observed during class. In summer 2020, Breakthrough Miami also incorporated mini-trainings or lessons into their daily morning staff meetings, which proved an effective way to address a variety of topics in small doses.

ALUMNI PROFILE

NAME: Alyssa L.

BREAKTHROUGH SITE & YEAR: Breakthrough San Francisco Teaching Fellow (2013, 2014)

COLLEGE: Northwestern University

CURRENT ROLE: Classroom Teacher, New Haven Unified School District

BREAKTHROUGH REFLECTION: “If you want to be a teacher, there’s really no better preparation you can get than Breakthrough. What makes Breakthrough so valuable is the fact that they frontload you at orientation with lots of practical information that you can apply in the classroom. Then they check up on you every day. My Instructional Coach was always there to help me reflect — what went right, what went wrong, how I could have better dealt with something.” Add in highly motivated, hard working students, and Breakthrough was the “perfect place to grow.”
“The number one way I was able to support my colleagues was just being there. We had Zoom teacher talk time to discuss everything going on in the world and just kept our virtual doors open by being supportive and open about how the process was for us and making sure everyone knew and felt a part of the community.”

KELLY EDWARDS
Teaching Fellow,
Breakthrough San Francisco

4B. SOCIAL-EMOTIONAL SUPPORT
Risk-taking and growth can only happen when we feel safe and supported. Breakthrough’s holistic view of teaching fellow development supports socio-emotional health through a strong staff community and self-care activities.

Affiliates bolster community building by instituting mandatory social events, and creating optional identity-based affinity groups led by teaching fellows. Tiye Cort, Director of Curriculum and Instruction at Breakthrough Greater Boston, shared that affinity groups in 2020 hosted weekly meetings “meant to increase community connection between teaching fellows across our three campuses, while also encouraging our teachers to continue critical discourse about current events and drawing connections between the world, students, and the curriculum.” Creating safe spaces for teaching fellows allows them to bring their authentic selves to work, which helps deepen relationships with each other and their students.

Many affiliates paired new and returning teaching fellows together last year, which helped new participants acclimate into Breakthrough’s culture and teaching strategies. Returning teaching fellows took the initiative to create their own group chats or virtual meetings to develop their own online community spaces as well. Carol Haro, a teaching fellow from Breakthrough San Juan Capistrano, notes “I used my experience as a 3rd year to help in the creation of a community between teaching fellows by creating spaces where we could support each other outside of Breakthrough hours in Zoom calls or group chats.” Annie Shriver from Breakthrough Greater Boston shared a similar experience: “I worked closely with a teaching fellow I knew from my previous summer to rewrite lesson plans and figure out scaffolds to help our students access the lesson. I shared tricks and techniques I found with other teaching fellows, and sometimes set up Zoom meetings for math teachers across all three campuses to collaborate.”
Teaching fellows are also encouraged and reminded to take care of their own mental health, both for themselves and also so they are emotionally available for their students. During orientation, fellows are provided with lists of “self-care activities,” and self-care breaks are scheduled into their teaching days (Figure 7).

**FIGURE 7. 2020 SELF-CARE SUGGESTIONS FROM ORIENTATION TRAINING MATERIALS**

![Image of a glass with the text: You Can’t Pour From An Empty Glass. Take Care of Yourself First.](photo)

**SELF-CARE ACTIVITIES DURING COVID-19**

- Read a book
- Play outside in the rain
- Meditate or pray
- Exercise
- Take a walk and take pictures of nature
- Facetime with a friend
- Get enough sleep
- Limit screen time
- Take care of errands, bills, or appointments
- Look through old photographs
- Light a candle and breathe deeply
- Give a meaningful compliment to three different people

*PHOTO BY MANU SCHWENDENER*
In 2020, Breakthrough Collaborative affiliates made the following adaptations to their teaching fellow training framework to work in a completely virtual setting:

• Teaching fellows were trained via remote courses instead of in-person.
• Trainings used both synchronous and asynchronous lessons, and utilized the same technology tools (e.g., Google classroom, Zoom) that teaching fellows were expected to use in their own classes.
• Strategies for using online technology and tools were added to the training topics for 2020.
• Training was often administered in micro-segments, to avoid long sessions online.

Affiliates creatively and intentionally built connections and community in the virtual space:

• During orientation, teaching fellows recorded and shared introductory videos of themselves with each other.
• Activities to foster connection and community were woven into staff meetings throughout orientation and the summer program.
• New strategies for students to demonstrate active participation were developed, such as having students indicate responses via the chat box, using emojis, or using interactive white boards.
• Games, chants, and cheers were creatively incorporated into all-school meetings and assemblies, often with some components recorded in advance.
• Teaching fellows created informal Zoom or group chats in which they could interact outside of formal meetings.

The virtual environment facilitated greater levels of feedback to teaching fellows:

• Breakthrough’s Teacher Evaluation Rubric was modified for an online classroom.
• The move to virtual programming allowed for more teaching support and observation than in past summers, as instructional coaches could easily pop into an online class, and more lessons were recorded.
• Teaching fellows filled out daily reflections via a Google form which staff reviewed regularly, allowing issues or questions to be addressed quickly.

To read about the impact of these strategies on learning and student experiences during the virtual summer of 2020, see our report, Breaking Through the Distance: How Relationships Foster Online Learning. Additional information on teaching fellow outcomes can also be found in Appendix I.
OUTCOMES

The Breakthrough program benefits teaching fellows and students in many ways. Teaching fellows increase their pedagogy, leadership, and relationship building skills, relevant to many professions. Students benefit from strong mentoring support, develop lasting relationships, and learn rigorous academic content. Program outcomes were similar or stronger during the virtual summer compared to recent in-person summers, providing evidence that the Breakthrough training model works in multiple modalities.

Teaching fellows and students alike develop a deeper understanding of the power of teaching, inspiring interest in teaching careers. In this way, Breakthrough’s model benefits the nation, helping to meet the growing demand for well-prepared teacher candidates from diverse backgrounds.

INCREASING TEACHING FELLOWS’ INTEREST IN EDUCATIONAL CAREERS

Teaching fellows in 2020 report stronger desires to become educators or child advocates after their Breakthrough experience (Figure 8). These results are comparable or stronger than in recent years (see Appendix I), which is a notable finding as training in 2020 was completed fully online for the first time.

In the most recent survey of teaching fellow alumni, more than half (55 percent) reported serving as a K-12 teacher, and an additional 35 percent worked in the education field (e.g., administrator, paraprofessional, counselor), nonprofit field, or public sector. Of those who were currently teaching, 60 percent taught in high-need schools, 96 percent worked in public schools, and 89 percent worked in an urban setting. Breakthrough supports teaching fellows’ paths to becoming certified teachers through teacher pipeline partnerships, and by providing individual support for teaching fellows navigating the process.

FIGURE 8. TEACHING FELLOW INTEREST IN EDUCATIONAL CAREERS, 2020

Data source: 2020 Teaching Fellow Post-Summer Survey. Reporting the percentage of teaching fellows who said either “strongly agree/agree” or “definitely/very likely.”
Not only does Breakthrough draw many teaching fellows into a career in education, but the program also draws former Breakthrough students into the profession. Over the past five years, the number of former Breakthrough students who returned to become a teaching fellow increased by 64 percent. That, coupled with the increasing number of teaching fellows who return to teach multiple summers, has created teaching fellow cohorts that are increasingly diverse and reflective of Breakthrough students.

**INCREASING TEACHING FELLOWS’ TEACHING ABILITIES**

Breakthrough’s teaching fellow experience increases teaching skills, deepens interest in educational careers, and builds relationships. Instructional coaches report improved pedagogical skills in their teaching fellows, and teaching fellows report feeling well-prepared to implement lessons and form relationships with students (Figures 9 and 10).

**FIGURE 9. INSTRUCTIONAL COACH ASSESSMENTS OF TEACHING FELLOW GROWTH, 2020**

Data source: 2020 Instructional Coach Summer Survey. Reporting the percentage of coaches who indicated that “most” or “all” of teaching fellows exhibited growth.

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“Breakthrough has helped me to see that activism and teaching are not mutually exclusive, but that they can be intricately connected. It is possible to teach students about big social justice issues, and to work with them to come up with solutions for their communities. Indeed, education IS activism, in its own way, if it’s done right. And so Breakthrough has been an inspiration to me, and has given me many ideas about how to use education to make positive change, which I will continue to do going forward.”

ARDEN REYNOLDS
Teaching Fellow, Breakthrough Providence
FIGURE 10. TEACHING FELLOW SELF-ASSESSMENT OF PEDAGOGICAL SKILLS, 2020

OTHER BENEFITS FOR TEACHING FELLOWS
By participating in Breakthrough, teaching fellows gain skills broadly applicable in any professional setting, including how to give feedback, present material, manage schedules, plan projects, collaborate with partners, and lead teams. In fact, 91 percent of teaching fellow alumni report that their Breakthrough experience increased their readiness for professional employment, regardless of field.45 “It’s a very meaningful experience,” says Liora Chessin, Program Director at Breakthrough Birmingham, “both for their present development and also to shape their future careers, whether they’re going into teaching or not.”

A vast majority of 2020 teaching fellows had a “very good” or “excellent” summer experience (89 percent), and 95 percent want to stay involved with Breakthrough in some capacity in the future.46 2020 teaching fellows also gained additional skills navigating online tools and teaching in a virtual classroom. These experiences not only made them better online instructors, but made them better students when they returned to a virtual college classroom in the fall. “When my college moved to a virtual medium, I struggled as a virtual student. I had difficulties keeping myself motivated,” said Ethan Hill, returning teaching fellow at Breakthrough Miami. “Breakthrough pushed me to reckon with this problem, since I knew I would be teaching students who faced it. This summer pushed me to engineer far more engaging lessons than I have ever made. Overall, I learned that physical distance is mostly an illusion when it comes to leading and inspiring other people.”

“From my two summers as a Breakthrough teaching fellow, I have grown my communication and leadership skills immensely. I think a large reason for that is the welcoming and supportive environment Breakthrough creates for their teaching fellows.”

RETURNING TEACHING FELLOW
Breakthrough
Central Texas

Data source: 2020 Teaching Fellow Post-Summer Survey. Reporting the percentage of teaching fellows who said their own skill level was “very good” or “excellent” at the end of the summer.
**IMPLICATIONS**

Breakthrough’s framework of training and supporting teaching fellows has been successfully implemented and adapted in sites all across the country over the past 40 years, demonstrating its versatility in a variety of community settings. Breakthrough Collaborative has inspired and prepared thousands of teachers who are warm demanders that embrace diversity, equity, and inclusion in ways that motivate and energize students.

Our experiences in summer 2020 demonstrate that the Breakthrough training model is effective both in-person and online. Participating teaching fellows report increased interest in educational careers and feeling better prepared for the rigors of teaching. Future research will further examine the impact of Breakthrough on the teacher pipeline, as well as persistence and retention of teaching fellows who enter teaching careers.

The COVID-19 pandemic forced us to reimagine and adjust how Breakthrough as a whole was offered. Our successful pivot to virtual programming now allows us to draw from the best of what we have learned and use virtual or in-person approaches as future circumstances dictate. Affiliates have greater flexibility in training their teaching fellows, and can leverage online tools to facilitate their growth as teachers and mentors.

The true educational impact of the global pandemic remains to be seen, but research to date shows that although most students are academically behind, students of color are further behind their white peers. Breakthrough is a solution to addressing COVID-19 learning loss as it is a scalable way to develop highly effective college-aged tutors that can provide personalized instruction to students. How long the global pandemic will impact our nation remains to be seen, but we know that Breakthrough can meet our students’ and teaching fellows’ needs, now and in the months and years to come.
END NOTES

1 See Appendix II for more information on data sources.


5 A Bachelor’s degree is worth $2.8 million on average over a lifetime, and college graduates are more likely to receive employer-provided retirement plans and employer-subsidized health insurance. They are more likely to exercise and less likely to smoke or live in households receiving public benefits like Medicaid or SNAP. [1] Anthony Carnevale, Stephen Rose and Ban Cheah, “The College Payoff,” Georgetown University Center on Education and the Workforce, 2011. [2] “Education Pays 2019: The Benefits of Higher Education for Individuals and Society,” College Board, 2019.


8 “Is Your State Prioritizing Teacher Diversity & Equity?” The Education Trust.


14 Ibid.

15 Based on the most recent teaching fellow alumni survey from 2017, 24% of teaching fellow alumni majored in education as undergraduates; after graduation, three-quarters ended up working in education (55% as classroom teachers and 21% working in education in different roles).


17 Breakthrough originated as a loose federation of independent affiliates that only began collecting data on a national basis in 2009.


20 Breakthrough also recruits talented high-school students to serve as volunteers and teaching fellows, especially for the school year programming. These students are often former Breakthrough students or come from partner school districts interested in building collaborations with the Breakthrough affiliate programs. This report focuses on the experiences of college-aged teaching fellows.

21 Based on PELL eligibility.

22 Data source: 2017 Teaching Fellow Alumni Survey. “High needs” is a school where more than 50% of the population qualifies for free- or reduced-price lunch.


24 70% of professional learning and development takes place during real life, challenging on-the-job experiences, tasks, and problem solving. 20% of learning and development comes from coaching, feedback, observing, and working with role models. 10% of learning and development comes from formal training. 70-20-10 model description from: Joan Gurvis, Cindy McCauley, and Milynn Swofford, “Putting Experience at the Center of Talent Management,” Center for Creative Leadership, 2016.


26 Ibid.


38 “KWL Chart,” ReadWriteThink. From Breakthrough San Francisco.

39 Data source: 2020 Teaching Fellow Post-Summer Survey.


42 Ibid, p. 5.

43 Data source: 2020 Instructional Coach Summer Survey.

44 Data source: 2017 Teaching Fellow Alumni Survey.

45 Data source: 2017 Teaching Fellow Alumni Survey.

46 Data source: 2020 Teaching Fellow Post-Summer Survey.

### APPENDIX I: ADDITIONAL OUTCOMES

Teaching fellow outcomes from 2017 through 2020 post-summer surveys are presented below.

#### FIGURE 11. TEACHING FELLOW OUTCOMES, 2017 TO 2020

<table>
<thead>
<tr>
<th>Sample size</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=819</td>
<td>n=871</td>
<td>n=881</td>
<td>n=650</td>
</tr>
</tbody>
</table>

% strongly agree/agree or % definitely/very likely

<table>
<thead>
<tr>
<th>Outcome</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Breakthrough Experience</td>
<td>85%</td>
<td>80%</td>
<td>79%</td>
<td>87%</td>
</tr>
<tr>
<td>Better Prepared for a Teaching Career</td>
<td>97%</td>
<td>95%</td>
<td>96%</td>
<td>98%</td>
</tr>
<tr>
<td>Interested in Education Career</td>
<td>82%</td>
<td>83%</td>
<td>80%</td>
<td>89%</td>
</tr>
<tr>
<td>Likelihood of Working with or Advocating on Behalf of Children</td>
<td>79%</td>
<td>80%</td>
<td>82%</td>
<td>81%</td>
</tr>
<tr>
<td>Likelihood of Becoming a Teacher</td>
<td>51%</td>
<td>52%</td>
<td>52%</td>
<td>56%</td>
</tr>
<tr>
<td>Explored Identity and Impact on Teaching</td>
<td>82%</td>
<td>85%</td>
<td>87%</td>
<td>90%</td>
</tr>
</tbody>
</table>
# APPENDIX II: DATA SOURCES & METHODS

This study is the second of two white papers that provides a descriptive analysis of experiences and outcomes as reported by participants through multiple data sources, including surveys, interviews, focus groups, and affiliate program documents and reports. Information from the sources below support and inform the findings presented in the two white papers; however, some sources may not be explicitly referenced within the narrative of this report. In this appendix we outline each data source, the number of respondents, and topics covered by the data collection instruments and protocols.

We recognize that the response rates on the student, teaching fellow alumni, and instructional coach surveys limit the generalizability of our results for those communities. Findings from recent years, however, mirror findings from previous surveys. Additionally, Breakthrough is continuing to improve the data collection process as a collaborative, and plans to administer a more robust alumni survey in the near future.

## SURVEYS

We use surveys from teaching fellows, teaching fellow alumni, students, instructional coaches, and affiliate leaders. Survey data were cleaned and analyzed to provide trends and overall measures of participant perceptions of outcomes. Margins of error for teaching fellow and student surveys range from ±1.1 to 1.4 percent at a 95 percent confidence interval. The margins of error for the teaching fellow alumni survey is ±2.8 percent, and the instructional coach survey is ±7.9 percent at a 95 percent confidence interval.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Population Size</th>
<th>Survey Respondent Size</th>
<th>Response Rates</th>
<th>Topics Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Summer Survey of Students</strong></td>
<td>5,195 Students at 23 affiliates from grades 5-12</td>
<td>3,196 Students from 22 affiliates</td>
<td>62%</td>
<td>Connections to adults, feelings of belonging, technology access, preparation for the fall, goals for the summer</td>
</tr>
<tr>
<td><strong>Post-Summer Survey of Students</strong></td>
<td>5,195 Students at 23 affiliates from grades 5-12</td>
<td>2,489 Students from 23 affiliates</td>
<td>48%</td>
<td>Connections to adults, preparation for the fall, college readiness</td>
</tr>
<tr>
<td><strong>Affiliate Survey</strong></td>
<td>23 Affiliates</td>
<td>22 Affiliates</td>
<td><strong>96%</strong></td>
<td>Home school/district spring and fall schedules, summer schedule, grades served, curriculum, support</td>
</tr>
<tr>
<td><strong>Instructional Coach Survey</strong></td>
<td>138 Instructional coaches</td>
<td>73 Instructional coaches</td>
<td><strong>53%</strong></td>
<td>Coaching preparedness, types of support given to teaching fellows, assessment of teaching fellows, impact of Breakthrough</td>
</tr>
<tr>
<td><strong>Teaching Fellow Alumni Survey</strong></td>
<td>5,147 Teaching fellow alumni</td>
<td>999 Teaching fellow alumni</td>
<td><strong>19%</strong></td>
<td>College completion, current career, teaching preparedness, reflections on Breakthrough experience, social engagement</td>
</tr>
</tbody>
</table>

*While the response rate of the 2017 teaching fellow alumni survey was low, its findings are consistent with those of prior alumni surveys, along with reports from partner teacher pipeline programs, who frequently recruit Breakthrough teaching fellow alumni for their programs.*
INTERVIEWS AND FOCUS GROUPS
Program staff, teaching fellow, instructional coach, and student/family interviews and focus groups were conducted in August and September 2020, along with additional interviews with program staff in December 2020. Transcripts were coded to reveal themes and provide quotations to illustrate key points.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Number of Respondents</th>
<th>Topics Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews with Executive Directors</td>
<td>19 Executive Directors from 19 of 23 affiliates</td>
<td>Decision-making, initial concerns and assumptions, support from national office, program successes and challenges, lessons learned</td>
</tr>
<tr>
<td>(August/September 2020)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews with Program Directors</td>
<td>30 Program Directors from 20 of 23 affiliates</td>
<td>Pre-summer planning, initial concerns and assumptions, program successes and challenges, lessons learned</td>
</tr>
<tr>
<td>(August/September 2020)</td>
<td></td>
<td></td>
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<tr>
<td>Interviews with Executive Directors and/or Program Directors (December 2020)</td>
<td>13 Executive/Program Directors from 8 of 23 affiliates</td>
<td>Teaching fellow recruitment, training, support, and outcomes</td>
</tr>
<tr>
<td>Focus Groups with Teaching Fellows and Instructional Coaches (September 2020)</td>
<td>Session 1: 2 Teaching Fellows Session 2: 2 Teaching Fellows Session 3: 2 Instructional Coaches 5 of 23 affiliates represented</td>
<td>Program successes and challenges, Breakthrough culture, relationships, outcomes</td>
</tr>
</tbody>
</table>

DOCUMENTS
Numerous program documents and other materials (e.g., videos) were reviewed for this report, including both materials developed by the national office for the program at-large, and individual documents from eight affiliate sites.

<table>
<thead>
<tr>
<th>Document Source</th>
<th>Materials Reviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Office</td>
<td>Teaching fellow training materials, curriculum user guide, teaching fellow feedback rubric</td>
</tr>
<tr>
<td>8 Individual Affiliates</td>
<td>Recruitment statistics, teaching fellow roles and responsibilities, training materials, instructional support materials, 2020 Visitor’s Day videos</td>
</tr>
</tbody>
</table>
APPENDIX III: AFFILIATES & NATIONAL STAFF

AFFILIATES

Breakthrough Atlanta
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Breakthrough Santa Fe
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*no program offered during summer 2020

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