New Classrooms
Innovation Partners for Learning

CAMPAIGN FOR MATH AS A DRIVER OF EDUCATIONAL EQUITY

FOCUS AREA:

Enhancing the Flagship to Solve Math Instruction

The New Classrooms Campaign

For decades, students' inability to keep pace with middle and high school math standards has been a systemic national problem. New Classrooms leadership—many of whom are former math teachers, principals, district administrators, and public officials—has witnessed personally the painful ways in which a lock-step focus on age-based standardized instruction for all students has inadvertently served as a social sorting mechanism.

This challenge is especially true for Black, Latino, and low-income students who fall behind early in their educational journey and are rarely afforded a real opportunity to catch up. And because jobs requiring science, technology, engineering, and math (STEM) are amongst the fastest growing and highest-paying sectors in our economy, our national inability to squarely address these educational inequities has readily converted into broader, societal inequities.

Covid-19 has made this problem even worse. Not only has the virus itself disproportionately and directly impacted communities of color, but disparities in access to technological devices and Internet connectivity have resulted in students falling even further—and dangerously—behind. Schools were ill equipped to meet educational disparities before Covid-19, and their capacities have only been further diminished.

New Classrooms has launched *Math as a Driver of Educational Equity*, a five-year capital campaign focused on transforming the way in which students are taught math as a means to attaining educational equity. In response to the pandemic's impact, New Classrooms has shifted its focus to address the near- and long-term crises stemming from learning loss and remote instruction.

A Pressing Need for Transformative Research and Development

Of the roughly 3.5 million students who begin Kindergarten each year, the percentage of Black and Brown students who will graduate meeting the standard of college or a career is 11% and 24% respectively. Despite concerted efforts focused on high standards, teacher quality, school choice, as well as system accountability, our nation's overall performance against national and international benchmarks has barely moved over the last 15 years.

Nor has our collective know-how about how best to address this challenge. Our national repository for educational research, the *What Works Clearinghouse*, includes 140 rigorous academic studies focused on K-12 math performance that have been undertaken over the last eight years. Of those, the total number of studies that identify an adoptable middle grade math program that demonstrates a statistically significant impact is zero.

We believe the profound failure to comprehensively address math instruction for students of color is a product of a standardized educational model that focuses on teaching all same-aged students the same material on the same day, regardless of their unique needs. A sixth grade student who is performing at the fourth grade level simply needs a different educational program than a sixth grader who is performing at the seventh grade level. But because the system treats all students uniformly—needing to learn the same material regardless of their starting point—those students who begin the school year already behind have little genuine opportunity to catch back up. This is a problem made far more acute as a result of the pandemic.

Our schools need the capacity to deliver on true differentiation. And that requires serious research and development into new classroom approaches that can integrate the best of what teacher and technology can each do so that students can access an educational program that's right for them each day.

New Classrooms is at the forefront of this kind of transformative innovation.

An Infrastructure Built to Support Long Term Transformation

New Classrooms' flagship model, *Teach to One 360*, is a holistic, adaptive, multi-modal learning model that enables classrooms to be organized around enabling students to progress on their own academic roadmap toward proficiency, while also building habits for lifelong success.

New Classrooms' model is anchored by a skill map that is aligned to Common Core Standards. This skill map is not a linear framework for learning, but instead organizes skills into units of study that provide students with a coherent learning experience while also tailoring instruction to their particular needs. For some students, this approach can enable filling learning gaps from earlier grades to ensure a sufficient level of conceptual understanding before moving on to more advanced concepts. For others, this approach allows them to get further ahead.

Students start by taking a sophisticated, state-of-the-art assessment that enables teachers and parents to understand precisely which mathematical concepts each student knows and does not know—regardless of their age.

From there, students are able to learn in different ways – from teachers, from peers, and independently—and through a variety of instructional approaches. Each day, algorithms help to generate recommendations on a) what skill or concept each student should learn that day; b) how they should learn that particular skill or concept; c) where, in the classroom, that experience should take place; and d) how it should be staffed. At the end of each day, students take a short-form assessment to help determine their current level of mastery and whether they should continue on the same skill or move onto something new.

By enabling students to learn collaboratively with their peers, engage in challenged-based activities, develop strong relationships with their teachers, and take ownership of their learning, *Teach to One 360* helps develop students as complete learners.

Schools can adopt *Teach to One 360* as a core program, replacing their textbook-based curriculum, or a supplemental program, for students in grades 5-11 (including students with disabilities and English Language Learners). Each school receives ongoing support from instructional coaches and operations specialists to ensure a smooth implementation of the model and to help build a collaborative and data-driven community among participating teachers.

Building for the Future

A result of years of rigorous research and development, *Teach to One 360* has demonstrated its ability to accelerate student learning in a range of school settings. An independent study found that students grew 23% higher than the national average on the NWEA MAP assessment and 53% higher than the national average in schools that were willing and able to focus the program more on individual student learning.

But these gains are often still not enough to make up for the profound learning gaps that students have when they begin middle school.

During the next phase of work—which will require expanded support—our commitment to education is to ensure that a vast majority of students can catch up to grade level and achieve proficiency within three school years. We will achieve this by continuing to engage in research and development that leverages advanced analytics techniques, such as machine learning, and to learn from what our unique data set of tens of millions of academic and nonacademic data points—gathered annually—teach us. We will also continue to refine and adapt our learning model so that it can be reliably implemented in a variety of school contexts, taking into consideration budgets, teaching capabilities, and operating constraints, to contribute to these efforts.

With increase in fundraising as driven by the *Math as a Driver of Educational Equity* Campaign, the research and development that will underlie enhancements to *Teach to One 360* will focus on achieving two concrete goals:

- **Transformative results**: Demonstrate a viable way for the vast majority of students to catch up to grade level within three school years.

- **Adoptability:** Reduce the implementation costs and operational "lift" of *Teach to One 360* so that it can become a more affordable and adoptable offering for schools across the country.

Call to Action

By focusing on much-needed research and development that will help bolster new thinking, New Classrooms is leading the way in improving our nation's approach to teaching math. New Classrooms is not just creating "products" in order to achieve this goal—it is at the forefront of a movement in education that will have a far broader effect on innovation in education that will be especially beneficial for students from historically underserved communities.

While the K-12 sector has been highly resistant to change, the urgency that the pandemic has generated has also created a new sense of openness and possibility for what innovation can bring. Technology is no longer viewed as a threat to employment, learning loss is now widely acknowledged as a problem to be solved, and devices are now far more widespread.

This is the moment when bold ideas will gain traction.

We invite you to join us in the journey by investing in the kind of research and development that can endure for generations by ensuring math itself no longer serves as a barrier to educational equity.

Budget for Enhancing the Flagship to Solve Math Instruction

TTO 360	FY20	FY21	FY22	FY23	FY24	Total
Enterprise Technology	2,210	1,475	4,647	4,205	4,877	**17,414**
Program Advancement	2,167	1,829	1,805	2,867	1,995	**10,662**
Open Educational Resources	–	–	–	–	–	**–**
Interim Technology	833	1,106	1,301	573	-	**3,814**
Legacy System Innovation	556	-	-	-	-	**556**
General & Administrative – Research & Development	1,391	754	1,019	1,097	1,108	**5,369**
Research & Development and Scalable Technology	**7,157**	**5,164**	**8,772**	**8,742**	**7,980**	**37,815**
Support for Early Adopters	**4,124**	**4,345**	**4.481**	**6,131**	**7,556**	**26,638**
Policy, Advocacy and Growth Strategy	**2,924**	**1,325**	**1,783**	**1,863**	**2,500**	**10,394**
Total TTO 360	**14,204**	**10,833**	**15,036**	**16,737**	**18,036**	**74,847**