

CAMPAIGN FOR MATH AS A DRIVER OF EDUCATIONAL EQUITY

FOCUS AREA:

Addressing Learning Loss in Mathematics: A Direct-to-Families Approach

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, direct 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 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.

In 2019, New Classrooms 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. The organization recently modified its strategy in response to Covid-19 so that it could also directly support families looking to provide high quality math instruction for their children.

How New Classrooms Helps Parents Help Their Children

The devastating impact brought upon by Covid-19 to our nation's educational infrastructure is forcing parents to take more ownership over their own child's learning. In some cases, families are looking for ways to supplement what they sense are the inadequacies in what schools have organized to enable remote instruction. In other cases, families are choosing to simply opt out of school altogether and take matters into their own hands.

Whether or not parents succeed in this endeavor will be a product of both their resourcefulness in finding tools, their ability to ensure their child can remain focused on the use of these tools, and the quality of the tools themselves. Discerning quality can be especially challenging for families, who generally do not have the depth of pedagogical understanding to discern what's simply available from what's truly impactful.

The stakes of getting this choice right—or wrong—are especially high in mathematics.

STEM jobs are among the fastest growing sectors in our economy, and nearly all of them minimally require mastery of Algebra 1 during the early middle school grades, so that students can advance to more sophisticated mathematical concepts.

At the same time, math is highly cumulative—the skills students learn in the elementary grades are essential for succeeding in the middle grades, which in turn provide the foundation for mastering Algebra and beyond. When students miss key rungs—especially on the lower end—it will be difficult for them to catch up, as each subsequent grade level brings its own new set of academic requirements and skills. Thus, even if a Covid-19 vaccine is developed and released in early 2021, the need for parents to identify quality ways to address their child’s learning loss will be acute.

New Classrooms’ Plan for Parent-Driven Solutions

Over the last decade, New Classrooms has been deeply focused on understanding how best to provide an academic bridge that connects students from their math-based starting points to completion of the sequence that begins with Algebra I.

In so doing, we have developed a keen understanding of the roughly 300 mathematical skills that students must master from learning basic numeracy onward through high school. In order to achieve these goals, we have curated instructional content—gathered from multiple expert providers—that can be utilized so that students can access the best elements from each. We’ve also developed a sophisticated approach to assessing where students are starting from, so that we can generate customized learning progressions that allow them both to accelerate and track their overall progress.

While these state-of-the-art capabilities have been historically available to schools, *New Classrooms’ plan—given the right level of support—is to enable families to access these capabilities directly for their children.* Families will therefore better ensure that their children can access a high-quality, personalized educational program for mathematics that meets their unique strengths and educational needs.

The new, direct-to-families solution will include:

- A state-of-the-art diagnostic assessment that will generate a unique academic road map for each student that connects where they are starting from to where they need to be.
- Digital content from a variety of high-quality providers, which will allow students to use the same material in different ways—and help to reduce the boredom and depleting effects of working in only one, limited environment.
- Teaching resources for parents that directly align to the skills reflected on each student’s academic road map.
- Exit slips and tracking tools so that parents and students know exactly where they are on their journey at all times.

In addition, New Classrooms will create mechanisms that will allow parents to learn when their children have mastered the requisite skills that correspond to achieving different academic milestones. We hope that, ultimately, these demonstrated certifications will satisfy requirements for the issuance of credits that would be recognized for purposes of graduation requirements and at post-secondary institutions.

The budget for these initiatives is \$12 million total for five years. Please see costs analysis below for more detail.

Call to Action

New Classrooms already has many of the key ingredients necessary to bring the first iteration of this type of solution to families. We bring in-depth knowledge of mathematical skills and learning progressions, a pre-curated set of relevant lessons from multiple providers, diagnostic exit slips and tracking tools, and the technological infrastructure that provides the foundation for widespread scalability.

To bring this solution for parents to scale, we must build upon this foundation by further enhancing our technological capabilities, refining our analytical capabilities so that key lessons learned are quickly incorporated into the program itself, and developing a robust capability to both market directly to families and provide customer support. We must also develop a sensible business model that can enable the sustainability of this solution in ways that are not reliant upon upfront philanthropy, while also ensuring access for the families who need it most. And we must begin to develop a political strategy to ensure that the certifications we issue can pass muster with relevant public authorities.

We look forward to exploring how our work to support families in providing quality math instruction to their children aligns with your philanthropic strategy.

Budget

Direct-to-Families	FY20	FY21	FY22	FY23	FY24	Total
Enterprise Technology	58	670	996	601	305	2,630
Program Advancement	57	831	387	410	125	1,809
Open Educational Resources	-	-	-	-	-	-
Interim Technology	22	503	279	82	-	885
Legacy System Innovation	15	-	-	-	-	15
General & Administrative - R&D	37	343	218	157	69	824
R&D and Scalable Technology	188	2,347	1,880	1,249	499	6,163
Support for Early Adopters	109	1,975	960	876	472	4,392
Policy, Advocacy and Growth Strategy	77	602	382	266	156	1,484
Total Direct-to-Families	374	4,924	3,222	2,391	1,127	12,038