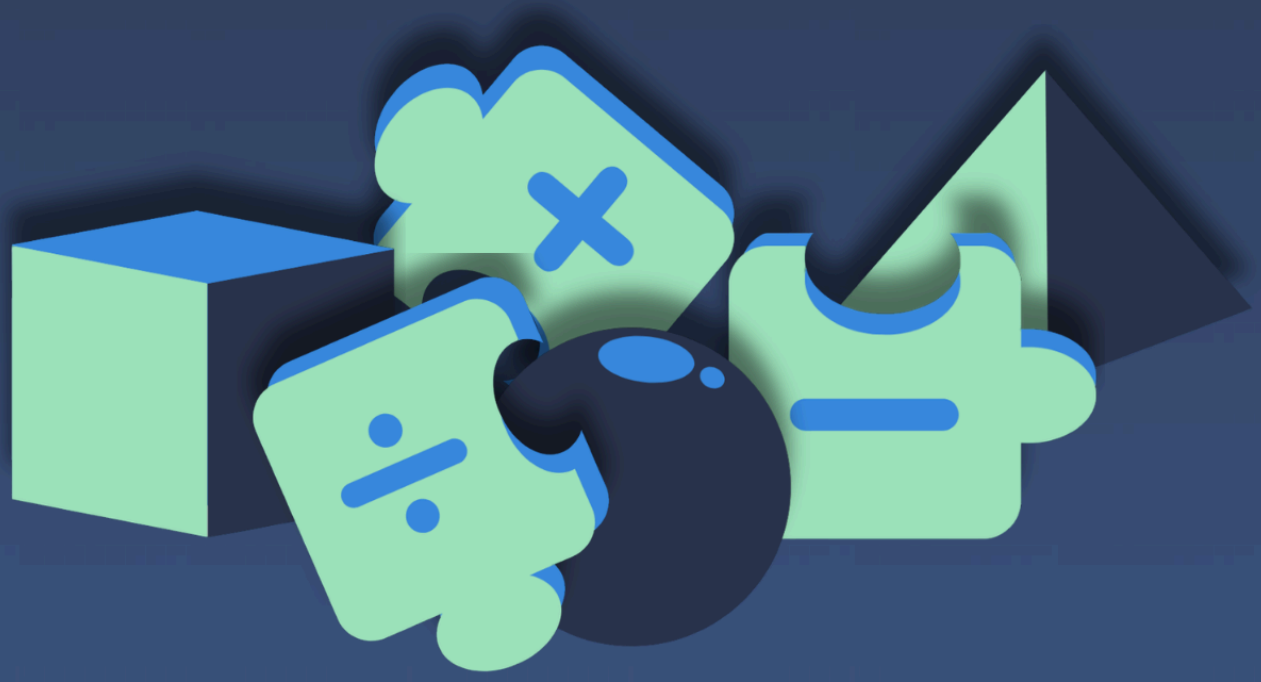
ConnCAN

EVERY KID COUNTS

A Vision to Modernize Math in Connecticut



By Steven Hernández, Esq., Hamish MacPhail, and Fernando Rendon-Lopez

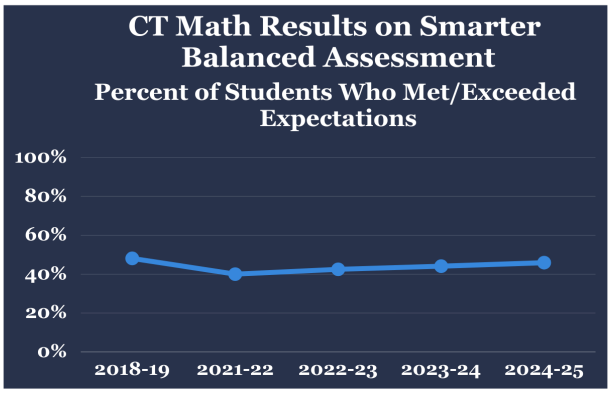
2026

EXECUTIVE SUMMARY

Overview

Math is more important than ever. In our increasingly data-driven society, with a fast-advancing science and technology landscape, students must develop mathematical thinking so that they can engage civically, exercise logical problem-solving, and build fruitful careers.

However, our math outcomes are not where they need to be. Achievement results on a variety of assessments indicate that most Connecticut students are behind. Statewide, less than half of students are meeting or exceeding expectations on the state's standardized assessment for math. Our students deserve high-quality math curricula and instruction that prepare them for the world ahead.



Systemic Challenges in Math

- Limited structural capacity for oversight and support
- Lack of quality and consistently aligned preparation and professional development
- Insufficient training and quality control for math coaches
- Lack of alignment between assessment and intervention
- Need for high-quality curriculum and district math plans
- Deficit mindset that prevents teachers and students from identifying as "math people"
- Over-emphasis on calculus, to the exclusion of other advanced math, leaves some students ill-prepared for the workforce

Policy Opportunities and Solutions

This report maps out a comprehensive policy plan, divided into three phases, to enhance academic rigor, revamp teacher training, and modernize pathways into the postsecondary world.

PHASE 1: STATE CAPACITY, GUIDANCE, AND INVESTMENT

- Centralized math office within the Connecticut State Department of Education
- Oversight of district math plans
- High-quality instructional materials
- Aligned and reliable assessments
- Guidelines for tiered interventions
- Technical support to enhance curricula and instructional practices for grades K-12

PHASE 2: EDUCATOR PREP + PROFESSIONAL DEVELOPMENT

- Numeracy skills and high-quality instruction
- Training for district leadership teams
- Coordinate with Educator Preparation Programs

PHASE 3: MODERN PATHWAYS

- Multiple math pathways in high school
- Updated admissions in higher education
- Training for guidance counselors and advising for students
- Guidance for Educator preparation
- Programs to reduce failure and remediation

TABLE OF CONTENTS

INTRO LETTER: THE WHY OF BUILDING MATHEMATICAL THINKING

Mathematical literacy has always been vital for young minds—both as the building block for logic and scientific advancement, and as a common, universal language. However, given our increasingly data-driven, quickly advancing scientific and technological landscape, the profound significance of mathematical thinking is even greater now than ever before.

Math is the strong foundation of many careers, building competencies in pattern recognition, logical thinking, problem solving, data interpretation, analytics, and more. In fact, a 2024 report from the **Urban Institute** identified that *math scores are predictive indicators of long-term earnings into adulthood.*[1] But math skills are also the backbone of a **strong society and an engaged citizenry**. Students need numeracy and reasoning skills to think critically and react to public discourse; weigh ideas and arguments; evaluate pros and cons, opportunities and risks; and effectively engage with our democracy.

That is why addressing student math achievement has become a growing national priority, with advocates, researchers, and state legislatures across the country advancing policy responses to persistent and worsening math deficits. For instance, the issue has been recently highlighted by the National Center for Education Statistics (2024),[2] the Center on Reinventing Public Education (2025),[3] the National Conference on State Legislatures (2025),[4] and 50CAN (2025)[5]—just to name a few. States across the country have also enacted legislation to meet this moment.[6]

The objective of this report is to map out a plan for Connecticut to join those efforts and address deficits in how students learn math through a **long-term, comprehensive policy framework.** This policy response is predicated upon deep collaboration across state agencies, math experts, families and community, advocacy groups, and the business sector.

Our plan must set our students upon a math trajectory that stays evergreen as STEM advancements and workforce demands evolve. It must be actionable, equity-oriented, and inclusive. It must turn all Connecticut students into "math people." In short, our plan must guarantee that *every kid counts*.

Sincerely,
Steven Hernández, Esq.
Executive Director, ConnCAN

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[1] Werner K., Acs, G., Blagg, K. (2024, Urban Institute). Comparing the Long-Term Impacts of Different Child Well-Being Improvements.
[2] The Nation's Report Card (2024). Explore Results for the 2024 NAEP Mathematics Assessment at Grade 12. (Identifies growing achievement gap between students that scored at the highest percentile and students that scored in the middle and lower percentiles.)
[3] Center on Reinventing Public Education (2025). State of the Student 2025: A Crisis in Math. (Identifies factors contributing to declining student achievement in math, such as a decreasing math teaching workforce.)
[4] National Conference of State Legislatures (2025). Pathways to Mathematics Proficiency: State Policy Options for Personalized, Coherent Math Learning. (Illustrates the urgency of post-secondary outcomes by highlighting that: 8th grade proficiency predicts readiness for Algebra I, a key indicator for a student's post-secondary success.)
[5] Cohen, L. (2025). Mathways: Every Kid is A Math Kid.
[6] See e.g.: Rinaldi, H. (2025). States Pursue Innovative Policies to Improve K-12 Math Achievement; ExcelinEd in Action (2025). State Actions Update: Governors Enact Bold K-12 Policies; Distraction-Free Learning Gains Momentum; National Governors Association (2025). Governors' Top Education Priorities in 2025 State of the State Addresses.

SYSTEMIC MATH CHALLENGES IN CONNECTICUT

Here in Connecticut, we need a comprehensive approach to build student math skills throughout their academic experience, starting with strong numeracy development in early grades, and continuing on to when they ultimately join the workforce. However, systemic deficits create barriers to that vision.

To identify these barriers, and needed solutions, this paper has been informed by engagement with education leaders and math experts across Connecticut—including representatives from:

- The Connecticut State Department of Education (CDSE)
- EASTCONN
- Capitol Region Education Council (CREC)
- EdAdvance
- Cooperative Educational Services (CES)
- Area Cooperative Educational Services (ACES)
- LEARN
- University of Connecticut
- University of Hartford
- Associated Teachers of Mathematics in Connecticut (ATOMIC)
- Connecticut Council of Leaders of Mathematics (CCLM)
- Association of Mathematics Teacher Educators of Connecticut (AMTEC)
- National Council of Supervisors of Mathematics (NCSM)

The following areas have been identified by stakeholders as consistent challenges for mathematics education in Connecticut:

Structural Gaps

- Insufficient dedicated, state-level staff to oversee statewide math initiative
- Limited state-level guidance

Educator Preparation & Content Knowledge Gaps

- Insufficient pedagogical training and math content fluency
- Lack of alignment between national standards for math and teacher preparation coursework
- Disconnect between modern preparation and employer/community expectations
- Lack of cross-curricular alignment across subjects and grades

Workforce Capacity Issues

- Insufficient training for math coaches
- Lack of state certification for math specialists

Time & Resource Allocation Disparities

- Insufficient instructional time dedicated to math, in both primary and secondary grades
- Insufficient professional development dedicated to math

Curriculum Challenges

- Inconsistent use of high-quality instructional materials at the district-level
- Lack of districtwide math plans for districts to support student learning

Gaps in Intervention Systems

- Lack of consistent statewide approach to tiered interventions in math[7]
- Inconsistent use of benchmark assessments and screeners to evaluate student progress

Deficit Mindset on Math Identity

- Pervasive "I'm not a not a math person" mentality leading to lowered expectations among students, teachers, and families
- Disconnect between generations about math pedagogy

The "Calculus Push"

- False promotion of calculus as the only worthy pathway - when many others exist
- Pressure among educators and parents to direct students towards calculus for college and career attainment
- Unnecessary early and middle school tracking systems

[7] Under Connecticut's Right to Read effort, in contrast, literacy-based interventions follow a statewide approach, the Connecticut Literacy Model, to support both Tier 2 and Tier 3 students.

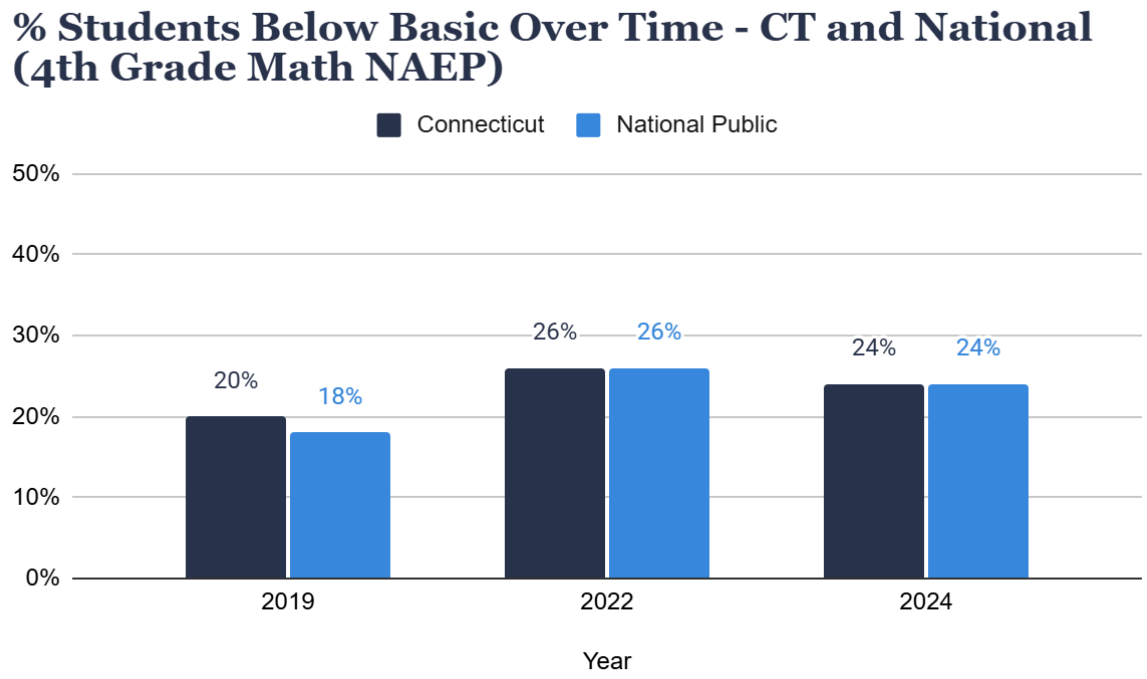
MATH OUTCOMES IN CONNECTICUT

Nationally, only 2 in 5 4th graders are reading on grade level - and Connecticut is no different.

Connecticut's average composite score for fourth grade math was 239, as compared to a nationwide average of 237, a difference that is not statistically significant according to the National Assessment of Educational Progress (NAEP).[8] (See next page for a graphic displaying the performance of all states and jurisdictions on this test.)

The implications of this data for Connecticut students become more meaningful when broken down into achievement levels. Only 42% of students scored at or above proficiency on this exam in 2024; nationally, the figure was 39%.[9] 76 percent of students, both in Connecticut and nationally, scored at or above basic achievement levels, while 24% scored below basic.

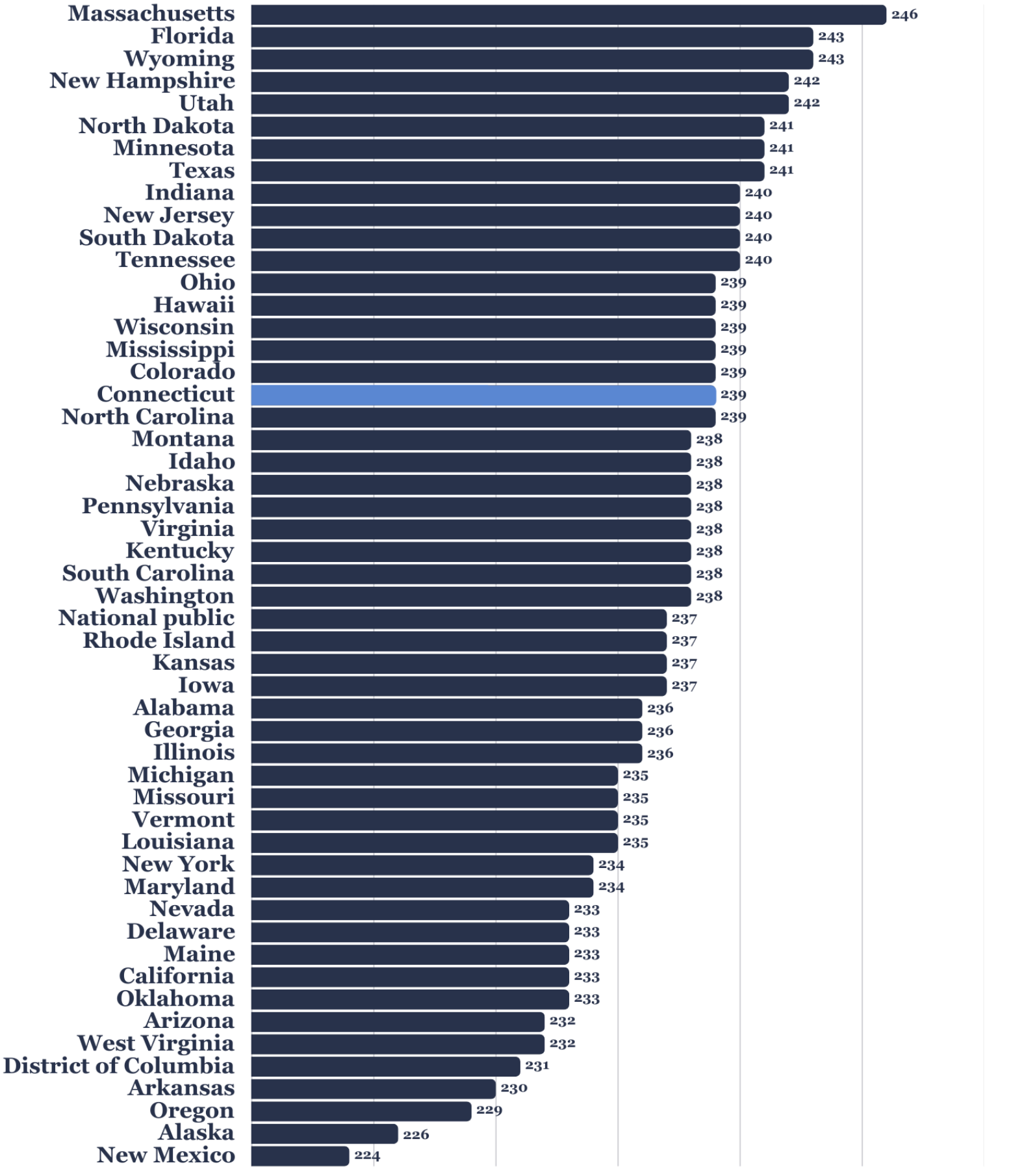
In other words, nearly a quarter of students lack even a partial mastery of the fundamental grade-level understanding in math expected for their grade.



[8] See interactive data explorer for more information. (The Nation's Report Card (2024). Data Tools: State Profiles - Connecticut.)
[9] Ibid.

STATE COMPARISON - 4TH GRADE MATH NAEP IN 2024

Average Score (0 - 500)

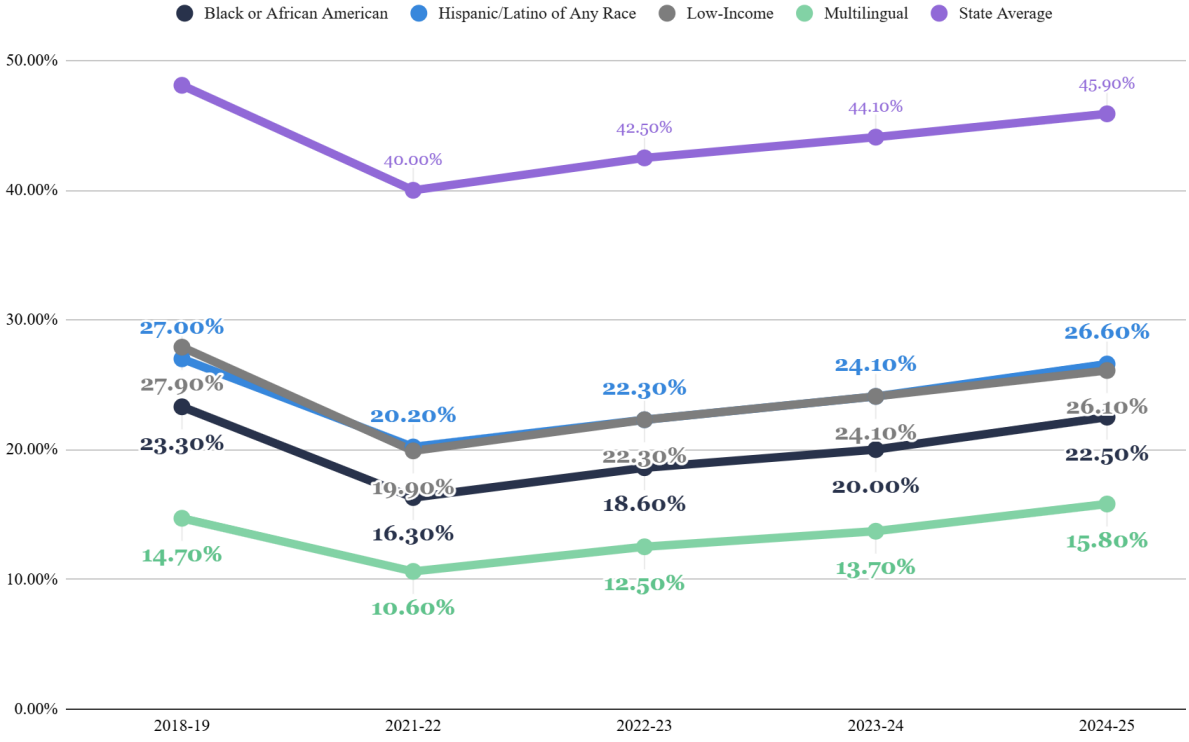


Our statewide assessment tells a similar story of deficits in math.

Black, Hispanic, Low-Income, and Multilingual students continue to show long-term marginalization on state-level assessments of math attainment in Connecticut.

Analysis of subgroup performance reveals startling outcomes for specific student demographics. While the statewide average on Connecticut's Smarter Balanced Assessment (SBAC) showed 45.9% of students meeting or exceeding expectations on the 2024-25 test, the data also reveal that certain student populations have continued to be marginalized over time.

% Students Meeting/Exceeding Expectations on Connecticut Smarter Balanced Assessment (2019-2025)



It's clear that we need to build a comprehensive math system in our state, starting in the primary grades, that better prepares students for success after high school, gives them the tools to engage civically, and allows them to make sense of a fast-paced, rapidly advancing world.

THE HOW OF BUILDING MATHEMATICAL THINKING

Conversations with mathematics experts across the state reveal that math practitioners and thought leaders in our state know what modern math education should look like; the question is how to get there.

In 2023, the Connecticut State Board of Education unanimously endorsed a **Joint Statement on Equity in Mathematics** that had been drafted by Associated Teachers of Mathematics in Connecticut (ATOMIC), Connecticut Council of Leaders of Mathematics (CCLM), and Association of Mathematics Teacher Educators of Connecticut (AMTEC)—with support from the Connecticut State Department of Education.[10] Taken together, these organizations represent a continuum of stakeholders and services that formalize math expertise in our state—including classroom teachers, school and district leaders and coaches, and institutions of higher education.

Their joint position statement outlines Connecticut's commitment to reconceptualizing mathematics instruction, with an emphasis on building positive mathematical identities, modernizing curriculum and pathways, and ensuring systems alignment for math. These salient observations and commitments remain the integral themes that will guide a comprehensive, state-level policy overhaul of mathematics in Connecticut.

To realize the bold ambitions of the position statement, Connecticut needs to contemplate **policy levers that will enhance academic rigor, revamp teacher preparation and professional development in math, and modernize pathways between the PreK-12 and postsecondary systems**. Within each of these policy levers, the joint statement's themes of building math identities for all, modernizing math instruction, and fostering systems-wide alignment, must be our north star.

We recognize that comprehensive systems change lies neither solely in the hands of the state, nor only in the hands of district leadership. Instead, these entities must work in concert to ensure that every Connecticut child builds strong mathematical thinking. "**District math plans**," identified as a component of our policy proposal, will allow the state to support district implementation. These should include, but need not be limited to, the following: identification and implementation of high-quality curriculum materials and aligned assessments for K-12, cross-curricular alignment, tiered intervention models, professional development schedule for math, and student outcome metrics.

Our comprehensive policy effort is divided into three phases, mapped out below, beginning with building the state-level infrastructure and professional expertise to propel meaningful change for students.

[10] AMTEC, ATOMIC, and CCLM (2022). Equity in Mathematics Education: A Joint Position Statement for Connecticut.

COMPREHENSIVE POLICY SOLUTIONS - THREE PHASES

PHASE 1: STATE INVESTMENT, CAPACITY, AND GUIDANCE

- Establish a centralized office within the Connecticut State Department of Education to coordinate a statewide plan for all students to build mathematical thinking, from early childhood experiences to secondary school and beyond.
- Require the State to support LEAs in building districtwide math plans.
- Require the State to identify "high-quality instructional materials," and have the State support each district's adoption as part of its district math plan.
- Require the State to identify aligned and reliable K-2 assessments for data collection and comparison, and have the State support each district's adoption as part of its district math plan.
- Require the State to develop guidelines for more robust and higher quality of tiered support and intervention for individual students.
- Provide technical support for districts to enhance their math curricula and instructional practices for grades K-12.

PHASE 2: EDUCATOR PREPARATION AND PROFESSIONAL DEVELOPMENT

- Provide professional development for current teachers to increase their instructional capacity in grades K-12, and align to high-quality curriculum materials.
- Provide state-sponsored professional development to school and district leadership teams.
- Coordinate with Educator Preparation Programs to build prospective teachers' content mastery in math.

PHASE 3: MODERN PATHWAYS IN MATH

- Offer multiple effective and aligned mathematics pathways in high school to prepare for more preprofessional options.
- Require public postsecondary institutions to formally alter their admissions policies to place equal value on multiple mathematics pathways.
- Advise students on how to navigate the newly established pathways for math.
- Train guidance counselors on the importance of the new pathways and their acceptance by institutions of higher education.
- Create guidance for Educator Preparation Programs to align their coursework to emerging pathways.
- Set up programs to reduce the rate of failure and remedial coursework in gateway math courses.

Acknowledgements: Special thanks to the individuals at the Connecticut State Department of Education, EASTCONN, CREC, CES, ACES, LEARN, UConn, University of Hartford, ATOMIC, CCLM, AMTEC, and NCSM, who helped us to understand the existing math landscape in Connecticut and the necessary changes to improve outcomes for students. Any errors or omissions in this document are entirely those of the authors.

About: ConnCAN is a leading advocacy organization that ensures each child in Connecticut has equitable access to a high-quality public education. ConnCAN envisions a Connecticut where each learner has access to an exceptional public education system that: (1) supports diverse learning environments with personalized paths to academic, civic, and economic success, and lifelong fulfillment; (2) attracts and retains educators that pursue excellence in every learning space, with rigorous student-centered standards to measure success; and (3) empowers families with the tools they need to guide their children toward that success. This vision relies on a family's ability to make informed choices about where their children learn and thrive.

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