### **Fostering Equity in Mathematics**



Performance Matters Forum 2022 Connecticut State Department of Education





# **Equity in Mathematics Education:**

A Joint Position Statement for Connecticut





### The Authors



#### AMTEC

Jillian Cavanna Assistant Professor of Elementary Education - STEM & Innovation University of Hartford



#### ATOMIC

Jeff Corbishley 6-12 Math & Science Supervisor Ridgefield Public Schools



#### CCLM

John Keogh CCLM Past President



Megan Staples Neag School of Education University of Connecticut



Maria Mitchell Emeritus Central Connecticut State University



Christie Madancy Math Coordinator Wallingford Public Schools







# Supporting the Why



### **Poll Question**



### Where do you think we are with Equity in Mathematics Education in CT Right now?







### 2022 Results



#### **Performance Index**



#### Growth

Average Percentage of Growth Target Achieved (Target = 100)

Academic Growth (Grades 4-8)

	English Language Arts (ELA)		Mathematics	
Grade	2018-19	2021-22	2018-19	2021-22
4	64.9	67.5个	71.3	76.4个
5	63.6	67.3个	65.1	71.2个
6	56.7	57.1 <del>↔</del>	59.1	60.8个
7	59.5	56.74	59.6	64.5个
8	55.3	54.0🗸	57.7	53.44

#### **Smarter Balanced Performance**

- Grades 4-5 estimated 2-3 months behind pre-pandemic results
- Grades 6-8 estimated to be a year or more behind in math



## The Role of the State



- Graduation Requirements
  - Minimum of 25 credits
  - Nine (9) credits in science, technology, engineering, and mathematics
- Next Generation Accountability System
  - Academic Achievement and Growth
  - Coursework and Exams for College Career Ready
  - Graduation rates



### **A Broader View**



Grade 4 59% Grade 8 66% Percent of Students Not Meeting Minimum Math Proficiency Nationally Grade 12 76% 56% 86% 80% Percent of Students Scoring Below White Black Hispanic Proficient in Grade 8

- At Grade 8, 82% of National School Lunch Program students score below proficient, compared to 52% of students not in the Lunch Program
- At Grade 4, 83% of students with disabilities score below proficient. At Grade 8, this is 91% of students with disabilities.
- At Grade 4, 84% of English learners score below proficient. This is 95% in Grade 8 and 97% in Grade 12.

Source: The Nation's Report Card



## The Future of Jobs



### Top 10 Skills of 2025

- Analytical thinking and innovation
- Active learning and learning strategies
- Complex problem-solving
- Critical thinking and analysis
- Creativity, originality, and initiative

- Leadership and social influence
- Technology use, monitoring and control
- Technology design and programming
- Resilience, stress tolerance and flexibility
- Reasoning, problem-solving and ideation



### Support Students' Mathematical Identities





- Ensure that all students see themselves as capable math learners
- Create opportunities for student agency in all classroom
- Build from students' personal knowledge, experiences, and attitudes



### Modernize Math Programming





- Modernize content for 21stcentury demands
- Enhance relevance for students
- Diversify offerings including pathways of courses



# Align and Advance Systems







- Align assessment with instructional goals and pedagogy
- Collaborate to establish consistent vision among K-12, postsecondary, and state-level stakeholders
- Review and reform systems that sort students and limit opportunities and lower expectations



## **Essential Conditions**





- Focus on Strengths Eliminate Deficit Perspectives
- Create Structural Alternatives to Tracking
- Prioritize math on Equal Footing with Literacy
- Asses to Improve Student Learning
- Consistently Implement High-Quality
  Curriculum



### **Roundtable Protocol**





- The Pillars
  - Each table for 15 minutes
  - Table leaders will share information about each pillar
  - Opportunity for Q&A related to that pillar
- The Essential Conditions
  - Two groups for 15 minutes
- Finish with a large group debrief











# Thank you









Jennifer Michalek Math Education Consultant Jennifer.Michalek@ct.gov 860-713-6557