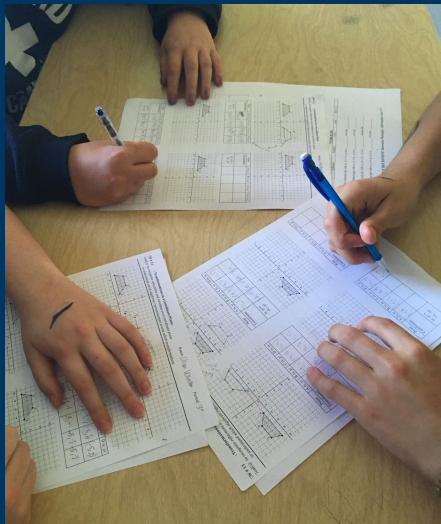


San Francisco Detracking: One District's Story

March 22, 2019

Angela Torres
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SAN FRANCISCO UNIFIED SCHOOL DISTRICT



www.sfusdmath.org
@SFUSDMath



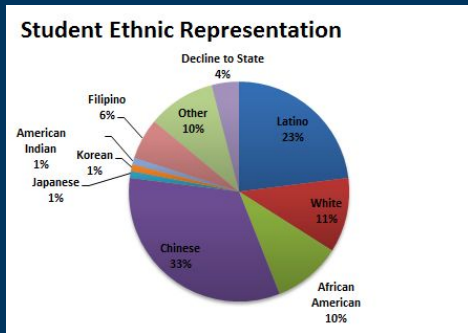
Outcomes

Frame our policy
relative to our vision of
equity

Highlight implementation
approaches that attend to
equity

Share early indicators
of success

Who are the 53,000 SFUSD Students?



SFUSD Core Values

4



SFUSD Math Vision

All students will make sense of rigorous mathematics in ways that are creative, interactive, and relevant in heterogeneous classrooms.



SFUSD Math Vision

All students will make sense of rigorous mathematics in ways that are creative, interactive, and relevant in heterogeneous classrooms.

Our Premises

- All students are mathematically brilliant.
- Math is a web. (not a ladder)

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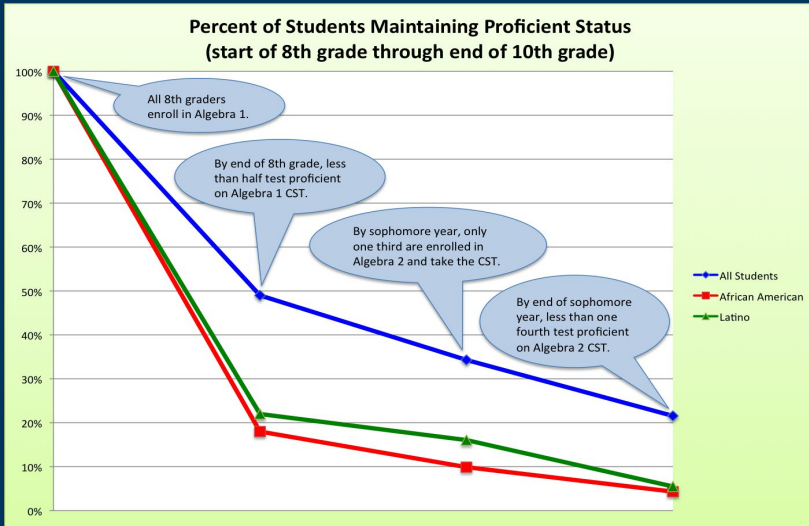
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What might it mean to accept these premises as true?

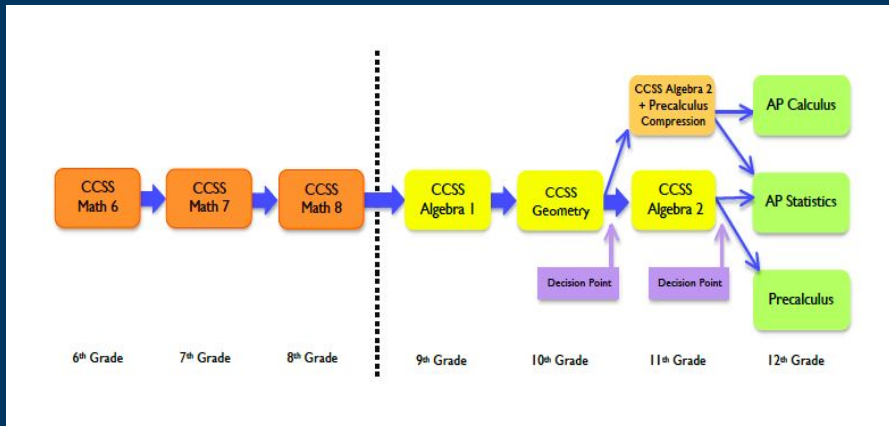
Prior to 2014

- Algebra for All in 8th grade
- Half of middle schools were tracked into Honors and Non-Honors classes
- If students did not meet proficiency standards, they repeated Algebra 1 in 9th grade

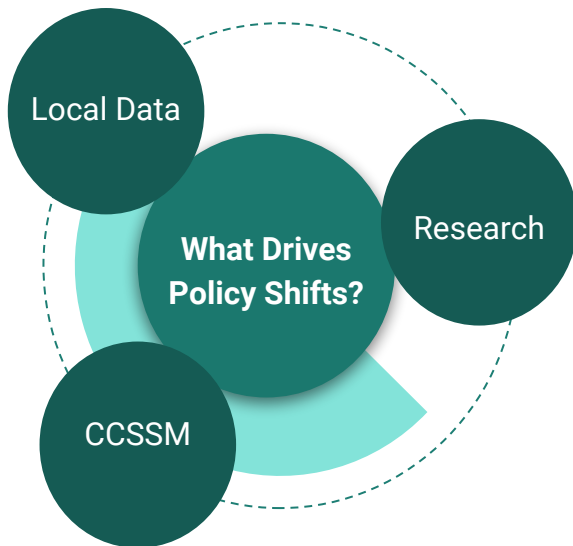
SFUSD Class of 2014



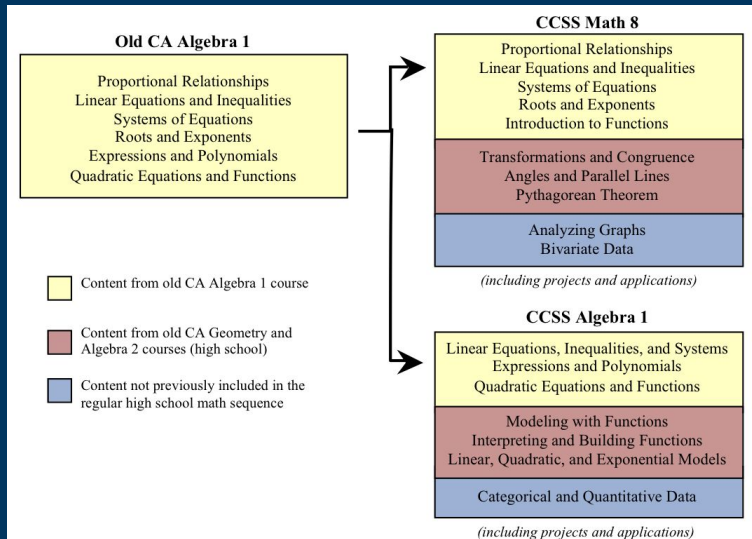
February 2014: Passage of the Math Course Sequence Policy

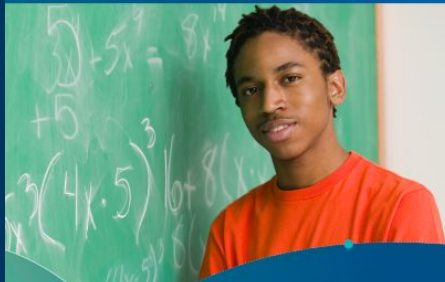


Turning A Proposal Into Policy



Algebra in 8th and 9th Grade





College Bound in Middle School & High School?

*How Math Course
Sequences Matter*

THE CENTER FOR THE FUTURE OF
Teaching & Learning
— WestEd

SAN FRANCISCO UNIFIED SCHOOL DISTRICT



Q: Will taking away tracks in math (e.g. honors track math courses) help all students achieve at higher rates?

Quick Facts about Math & Tracking

A: Studies demonstrate the positive impact of math coursework sequences that put all students through the same courses rather than tracking students based on their perceived ability.

Researchers from Columbia University found the probability of completing math courses and math achievement increased in all groups of middle school students who were enrolled in mixed-ability math courses.¹

Increase in % of students participating in middle school math courses that took beyond Algebra 2 in high school

High achievers	81%	91%
Low achievers	89%	99%
Economic status	32%	67%
Latino students	38%	58%

More high achieving middle school students in these mixed ability courses took the AP calculus exam and scored higher than students in tracked courses.

This study of six middle school math classes in New York found that students' probability of completing advanced math courses beyond Algebra 2 in high school increased across all groups, including high achieving students. Also, the average scores on achievement tests were higher for students in mixed-ability groups than for students who learned in math courses without tracks, i.e. heterogeneously grouped, and higher than high achieving students' scores in tracked math courses.

Stanford University and Kings College in London found all students performed below their potential when in tracked math in high tracks and low tracks.²

Students in London schools had lower perceptions of going from mixed ability math courses during middle school to high tracks. If students were negatively impacted by math courses were negatively impacted by high tracks.

Students in higher tracks in math were disadvantaged by fast paced lessons and pressure to succeed.

2006). Accelerating Mathematical Achievement Using Heterogeneous Grouping. American Educational Research Journal, 43(4), 643-682.



SECONDARY MATH COURSE SEQUENCE OPTIONS

A SOCIAL JUSTICE AGENDA



OAKLAND UNIFIED
SCHOOL DISTRICT

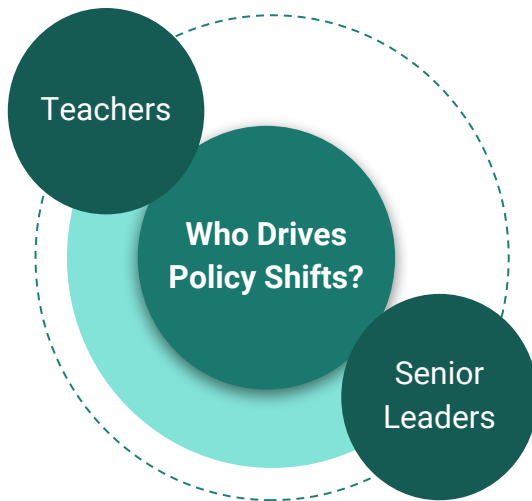
Community Schools, Thriving Students



SFUSD SAN FRANCISCO
PUBLIC SCHOOLS



Turning A Proposal Into Policy



Turning A Proposal Into Policy



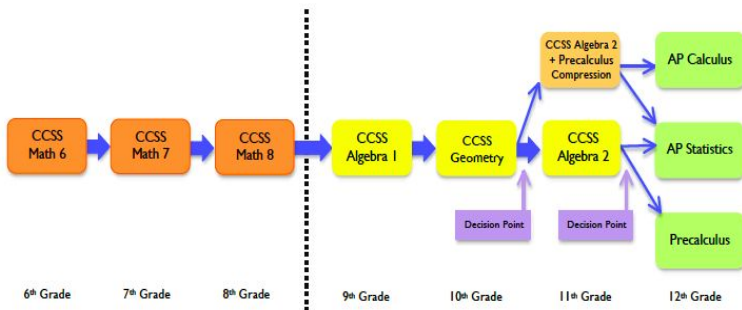
Complex Instruction Collaboration Day

Turning a Proposal Into Policy

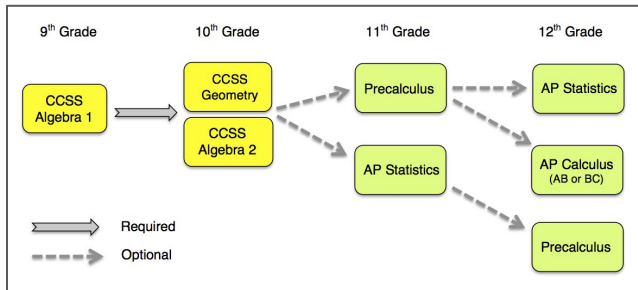
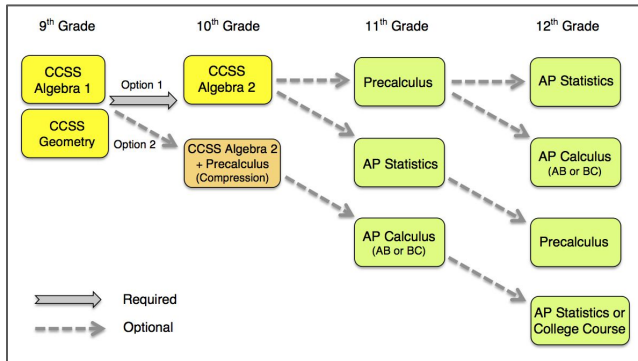


Public panel of senior administrators
and teachers discussing CCSS

February 2014: Passage of the Math Course Sequence Policy



Acceleration options in high school



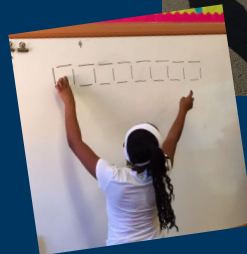
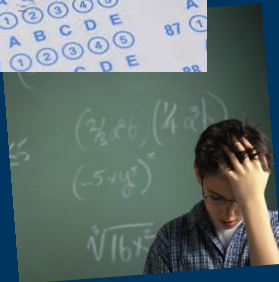
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Think about the placement
practices in your context.
(course sequence,
acceleration paths)



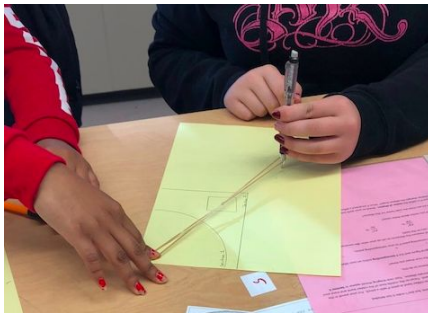
Redefine What It Means To “Do Math”

21



Levers of Change

- Policy
- Curriculum
- Professional Development
- Coaching



SFUSD Math Core Curriculum: Architecture of each unit



Entry Task: *What do you already know?*

Apprentice Task: *What sense are you making of what you are learning?*

Expert Task: *How can you apply what you have learned so far to a new situation?*

Milestone Task: *Did you learn what was expected of you from this unit?*



Math Teaching Toolkit

Focus on 3 Signature Strategies in Curriculum and PD



Math Talks



**Three Read
Protocol**



**Participation
Quiz**

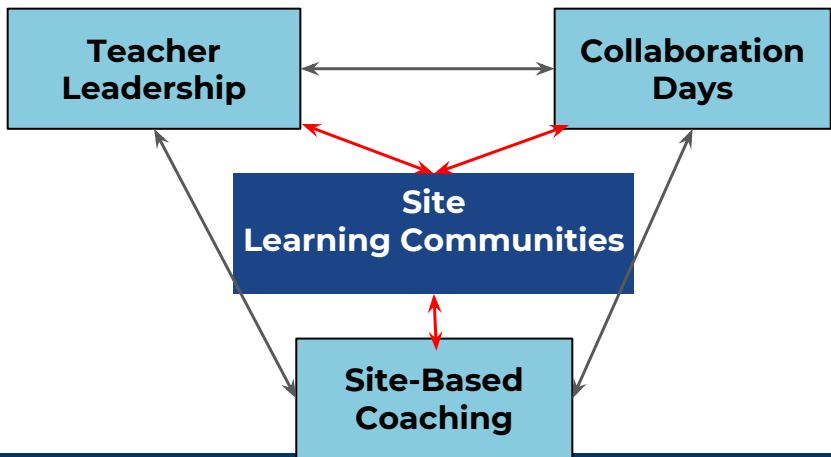


SFUSD Math Vision

All students will make sense of rigorous mathematics in ways that are creative, interactive, and relevant in heterogeneous classrooms.

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Math Professional Development: Building a Vision of What is Possible



Our Principles of Professional Development

- Provide **shared learning experiences** for teachers to experience the **vision**
- Build and sustain **site learning communities**
- View students and teachers with a **strengths-based** lens
- Pay attention to **racial equity**

Themes of Professional Development

- Equitable participation
- Access and Rigor
- Student Strengths
- Deep Lesson Planning
- Building Conceptual and Procedural Knowledge
- Students' Mathematical Voice

“

What supports should you put in place that would promote success for all students in heterogeneous math classes?

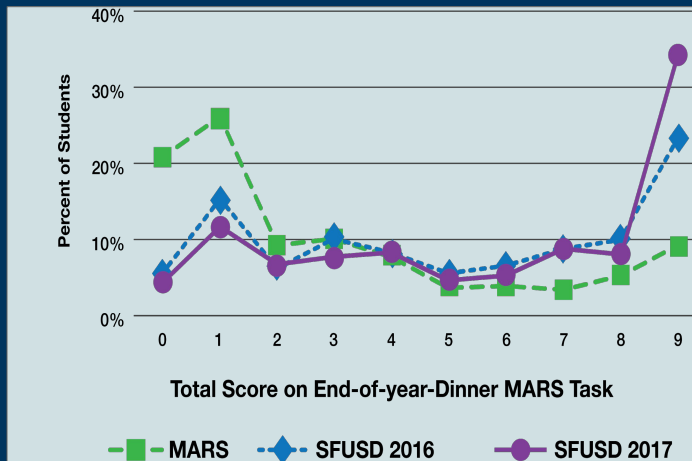


Early Indicators of Success in Math

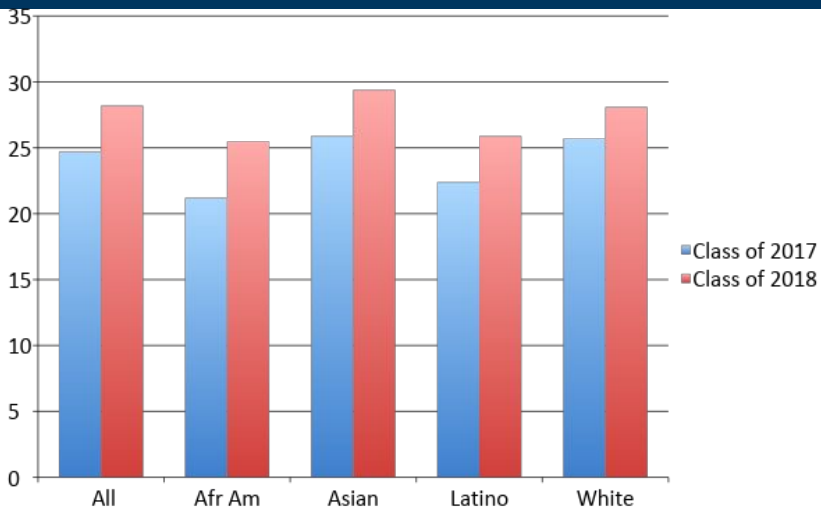


SRI's Final Report: Year 3 SFUSD STEM Learning Initiative Evaluation, *June 2017*

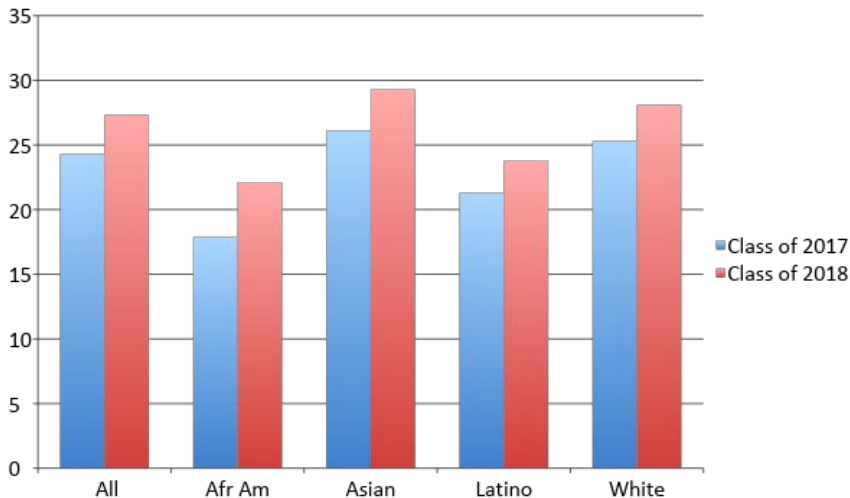
31



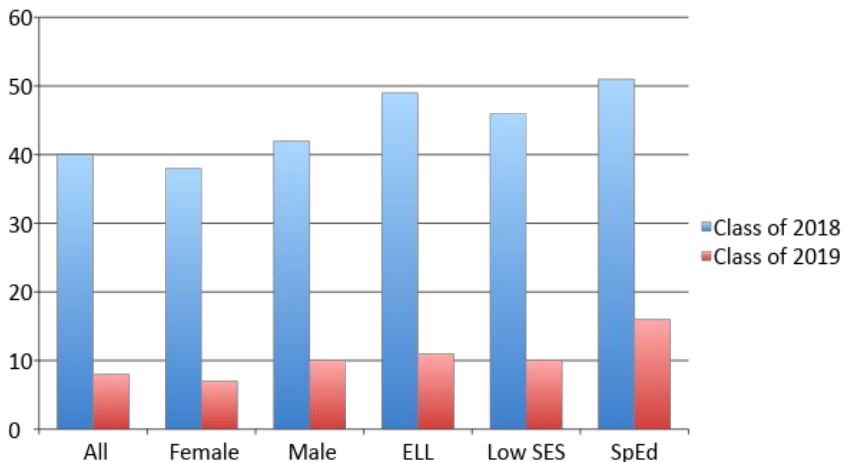
Increase in the amount of Math credits students have earned at the end of 11th grade, Ethnicity



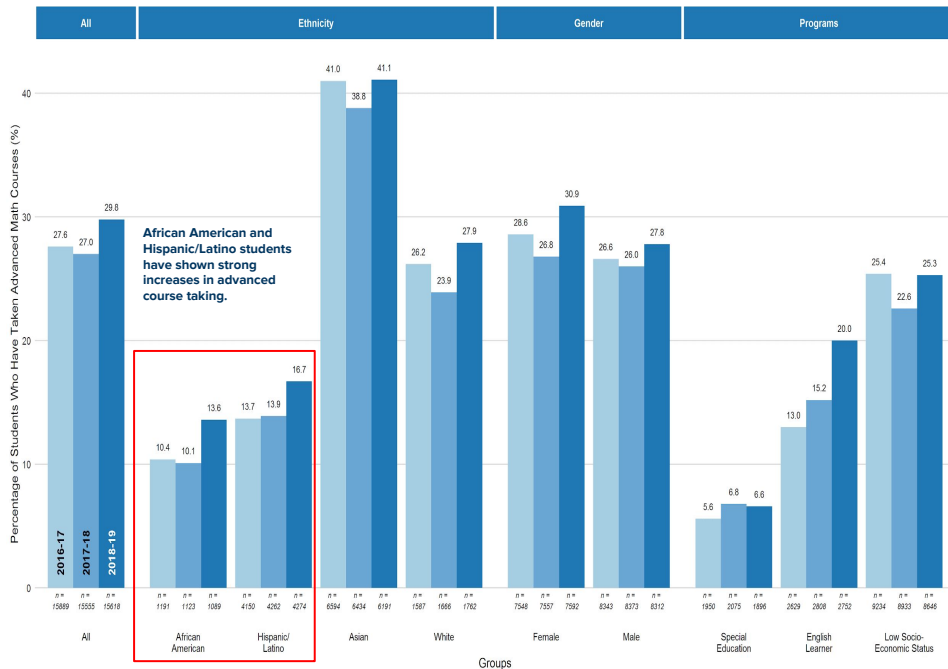
Increase in the amount of Science credits students have earned at the end of 11th grade, Ethnicity



Algebra 1 Repeat Rate, Gender & Program

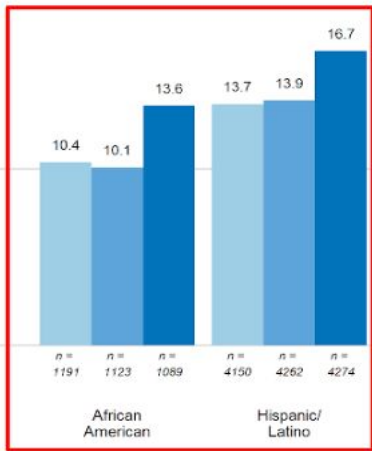


Advanced Math (beyond Algebra 2) Course Taking in High School across Three Cohorts



Source: IPA Course and Demographics Tables, 2016-17 to 2018-19. HS total enrollment for the previous years are as of the end of the year. HS total enrollment for 2018-19 are as of November 2018. All the other enrollments are as of the Census Day each year (09/14/02-07).

African American and Hispanic/Latino students have shown strong increases in advanced course taking.



African American students

- 113 students in 2017-18 (10.1% of total)
- 148 students in 2018-19 (13.6% of total)

Latinx students

- 593 students in 2017-18 (13.9% of total)
- 712 students in 2018-19 (16.7% of total)

English Language Learners

- 428 students in 2017-18 (15.2% of total)
- 551 students in 2018-19 (20.0% of total)



Statement on the Impact of Calculus on UC Admissions UC Board of Admissions and Relations with Schools (BOARS) April 2016

BOARS also strongly urges students not to race to calculus at the cost of full mastery of the earlier math curriculum. BOARS commends the Common Core's goal of deeper understanding of the mathematical concepts taught at each K-12 grade level. A strong grasp of these ideas is crucial for college coursework in many fields, and students should be sure to take enough time to master the material. Choosing an individually appropriate course of study is far more important than rushing into advanced classes without first solidifying conceptual knowledge. Indeed, students whose math classes are at a mismatched level – either too advanced or too basic – often become frustrated and lose interest in the topic.



Stanford Admissions Language

Used to say until 2017–2018



- **Mathematics:** four years (including calculus)

Recommended high school curriculum, language from 2018:

- **Mathematics:** four years, with significant emphasis on fundamental mathematical skills (algebra; trigonometry; plane, solid and analytic geometry).
- **Additional language:** The students who thrive at Stanford are those who are genuinely excited about learning, not necessarily those who take every single AP or IB, Honors or Accelerated class just because it has that designation.

Communication with Stakeholders

- 15 different family and public events during 2017–18
- Featured in major local and national media
<http://www.sfusdmath.org/in-the-news.html>
- <http://www.sfusdmath.org> is listed as exemplary by CDE with 4000 unique visitors any given week
- 22 different presentations in 17–18 at conferences or within community partnerships
- More than 75 different district, state and policy leaders outside of SFUSD have consulted directly



Learnings:

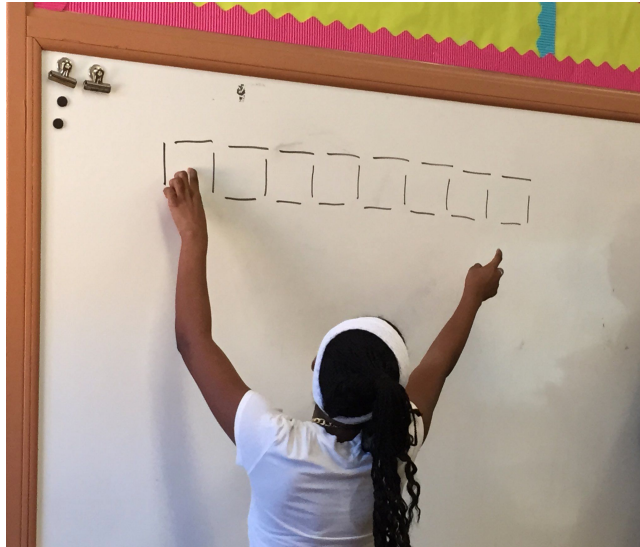
Where should we start?

How should we start?

- Drive from what you believe.
- Use your data as evidence alongside research.
- Build a critical mass amongst teachers.
- Must align and employ all levers of change.
- Unit of change must be school sites/learning communities.



Questions?



Contact us!

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