

We Have Already Built the Wall In and Between Our Schools

MaTHink 2020

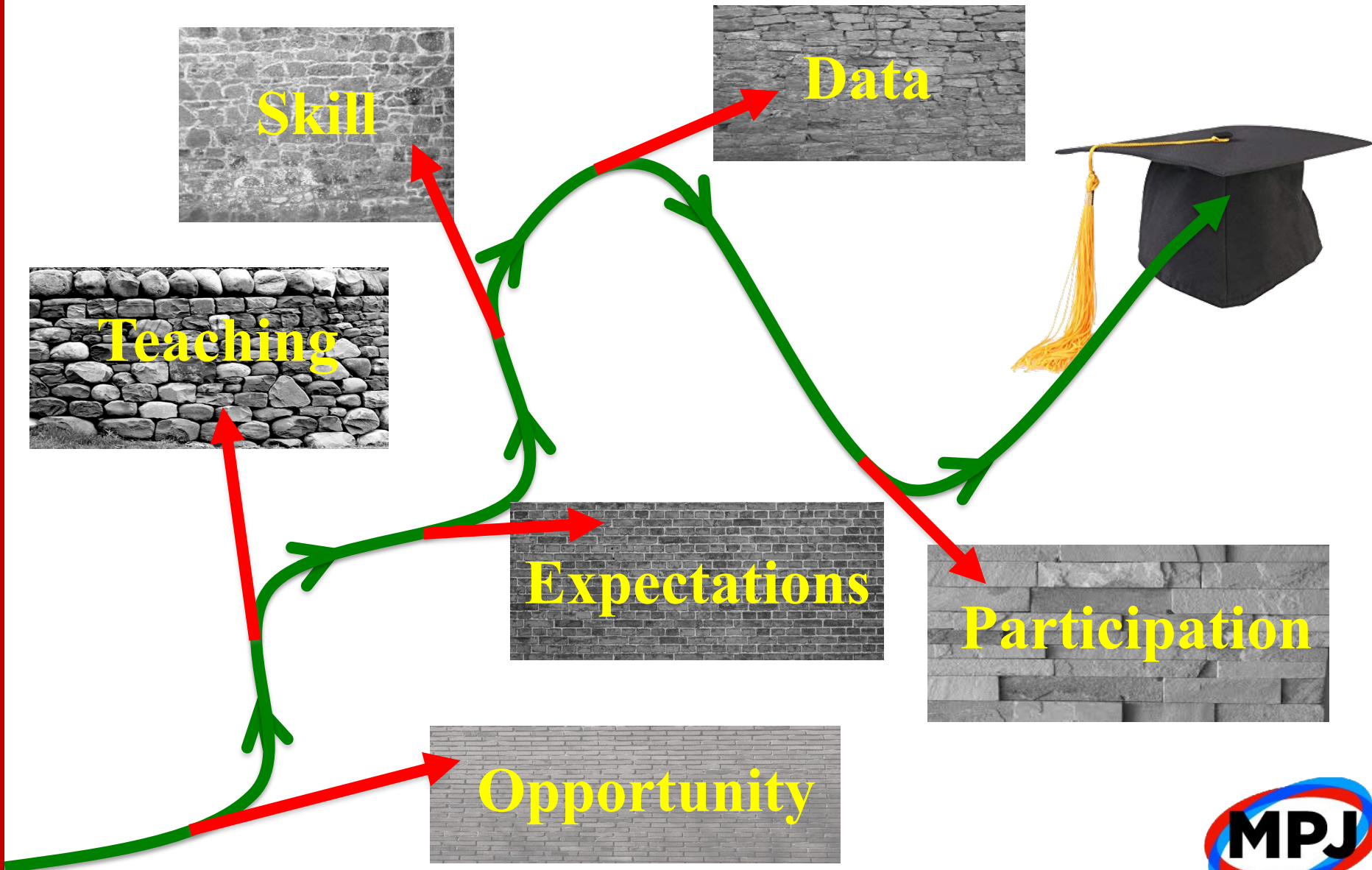


Chris Shore

The Math Projects Journal
Murrieta Valley USD

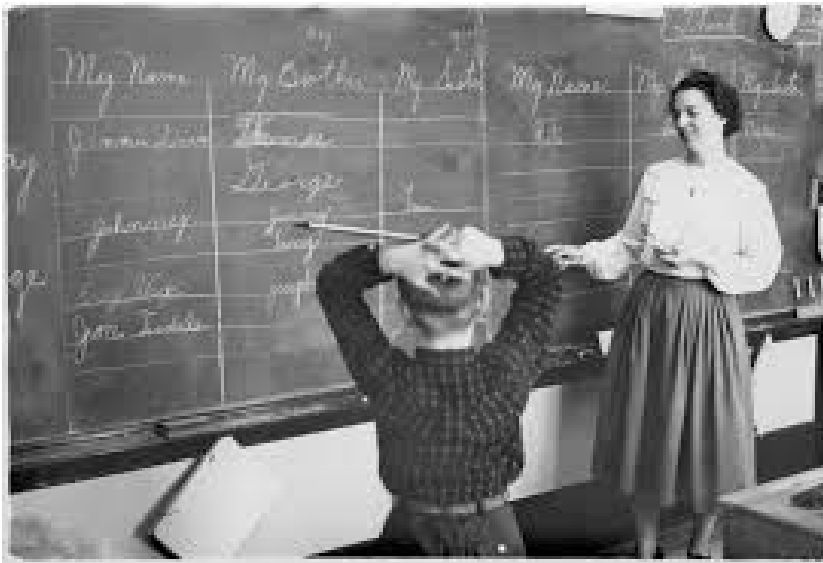
shore@mathprojects.com
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#mathequity
RXmathnetwork

Table of Contents



Chapter Two

The Teaching Gap



Close the True Gap

Phi Delta Kappan

Apr 2003

**21st Century Standards
College and Career Readiness**

**Teaching
Gap**

True Gap

**Focus
Gap**

Majority Groups

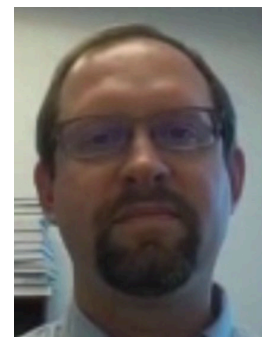
Opportunity

Gap

Minority Groups

How to Close the True Gap

	<u>HS</u>	<u>CA</u>	<u>ALL</u>
Calc AB:	2.3	2.8	2.9
Calc BC:	2.7	3.8	3.8
Statistics:	2.7	2.6	2.7



“Students need to learn how to enact these Practices;
make it happen deliberately rather than accidentally.”
-- Bob Hedrick, College Board

MPAC 1: Reasoning with definitions and theorems

MPAC 2: Connecting concepts

MPAC 3: Implementing algebraic/computational processes

MPAC 4: Connecting multiple representations

MPAC 5: Building notational fluency

MPAC 6: Communicating



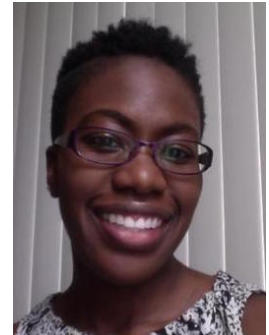
1st Instruction Is an Equity Issue

7 Features of Equitable Classroom Spaces

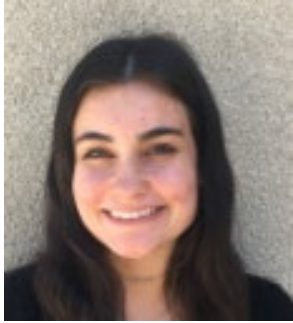
-- Ayanna Perry,

Mathematics Teacher, Vol 112, No. 3 Nov/Dec 2018

1. Use high cognitive demand tasks.
2. Give clear expectations for task engagement.
3. Provide resources
4. Provide opportunities to share work publicly in written and verbal forms.
5. Provide opportunities to justify and explain thinking in written and verbal forms.
6. Answer questions with questions.
7. Model high-level reasoning during lessons.



School Boys



Dr. July Hill-Wilkinson



“I was struck by the level of questioning the boys in that period engaged in verses the boys who were in co-ed classes using the same lesson plan.”

The Teaching Gap

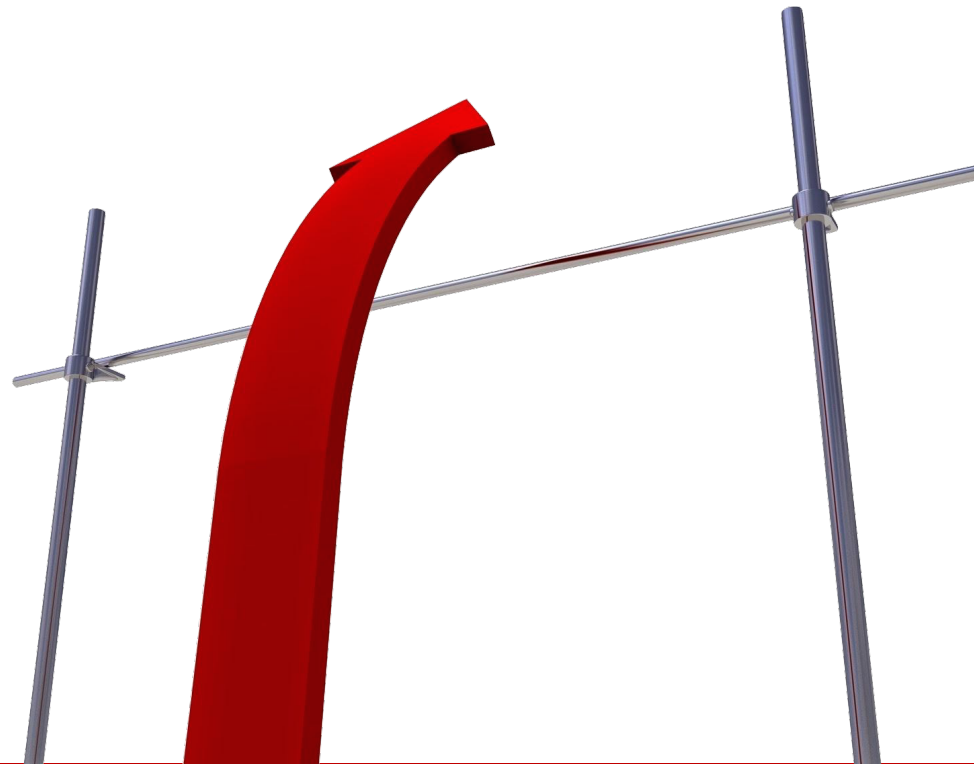
The Achievement Gap = A Teaching Gap



Mathematical Practices

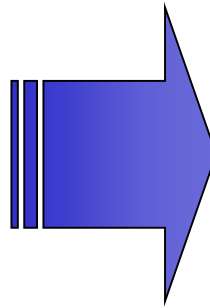
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Chapter Three



Be Aware of *YOUR* Bias

Fixed
Mindset



Growth
Mindset



*They are that smart
&
We are that good!*



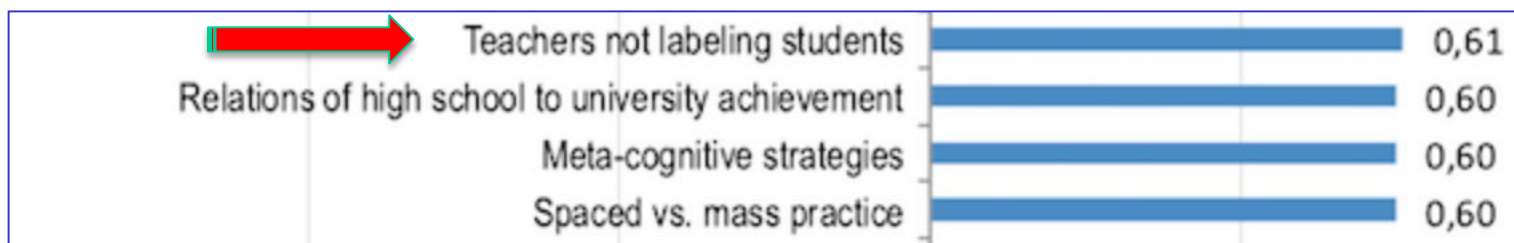
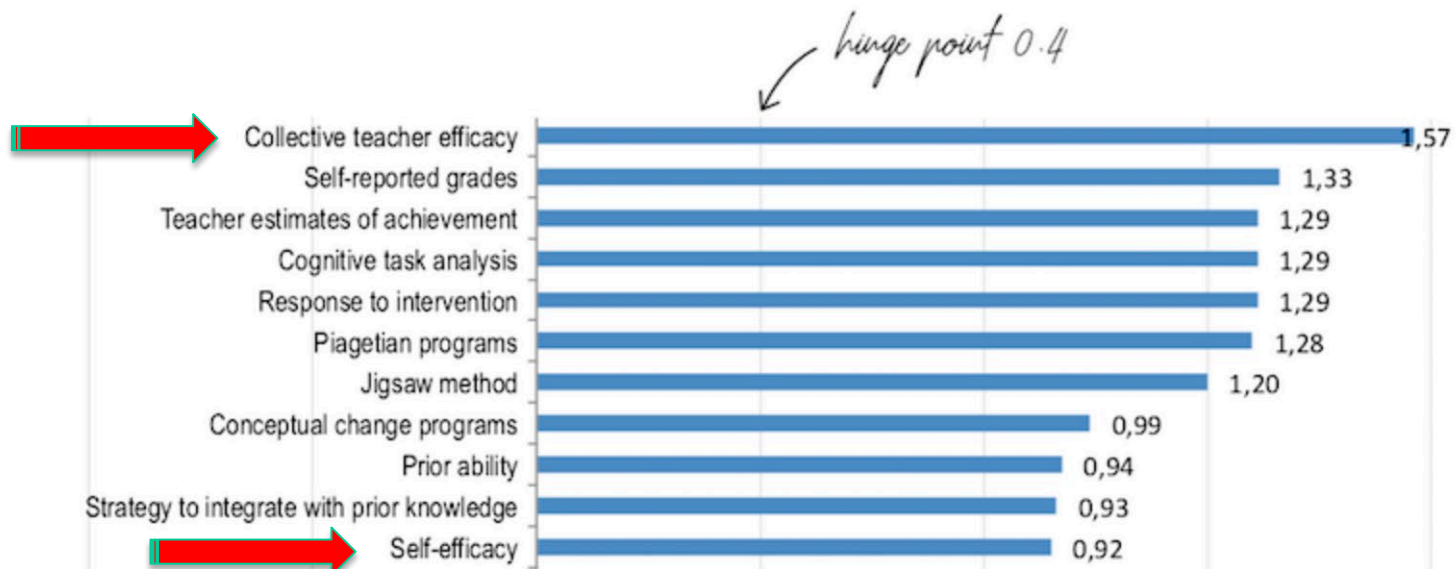
... of the teachers!

Be Aware of *YOUR* Bias

Hattie's 2018 updated list of factors related to student achievement: 252 influences and effect sizes (Cohen's d)

Source: J. Hattie (December 2017) visiblelearningplus.com

Diagram: S. Waack (2018) visible-learning.org



Be Aware of *YOUR* Bias

ScienceNews

MAGAZINE OF THE SOCIETY FOR SCIENCE & THE PUBLIC

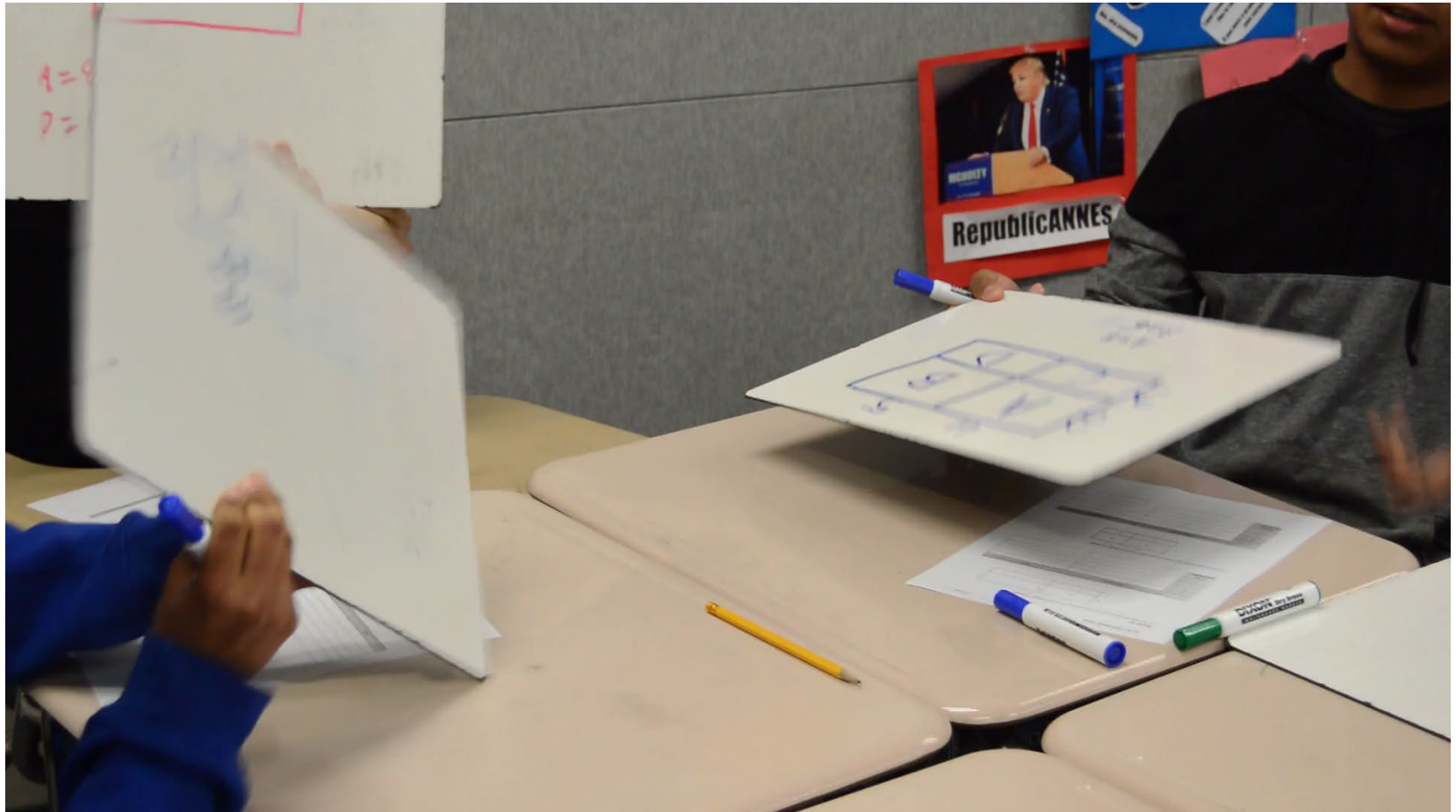
STEM professors' beliefs on intelligence may widen the racial achievement gap

Racial minorities can suffer lower grades if their teachers see intelligence as fixed

BY **BRUCE BOWER** 2:00PM, FEBRUARY 15, 2019



Be Aware of *YOUR* Bias



Be Aware of *YOUR* Bias



Tracey Zager

“You have to acknowledge that we are all human and that you are going to want to talk to the same ten kids, and avoid talking to those other ten.”

Be Aware of *YOUR* Bias



“Teachers treat us ‘C’ students differently than the ‘A’ students... They just ignore us.”

95% of Teachers claim they treat students fairly.

57% of Students think so.



Be Aware of *YOUR* Bias



Ethan Weker
on his Wait Time for Latino vs Chinese Students

Be Aware of *YOUR* Bias

Matriculation from MS Grades to HS Grades for C. Shore

		HS Grade			
		A	B	C	F
MS Grade	A	12%	6%		
	B	6%	15%	2%	
	C	1%	6%	15%	
	D		2%	10%	4%
	F			4%	4%
	No Transcript	1%		5%	4%

97

100% of F's had D-F in MS or No Transcript
 40% of No Transcripts Failed, compared to
 9% of those who had an 8th Grade Transcript

= 30%

= 52%

= 8%

= 10%

Be Aware of *YOUR* Bias

Matriculation from MS Grades to HS Grades for C. Shore

	<u>Above</u>	<u>Same</u>	<u>Below</u>	<u>NT</u>
ALL	30%	52%	8%	10%
Girls	34%	45%	11%	8%
Boys	26%	57%	7%	11%
Asian	40%	47%	13%	0%
Black, Brown, Native	34%	45%	11%	11%
White	29%	56%	4%	9%

“What is Mr. Shore’s Bias?”

Be Aware of *Their* Bias

GRE Exam

☐ White

☒ White

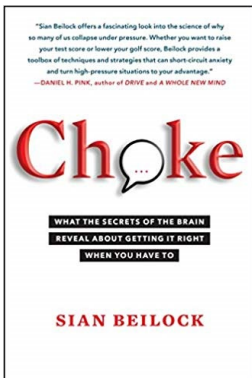
☒ White

☒ Black

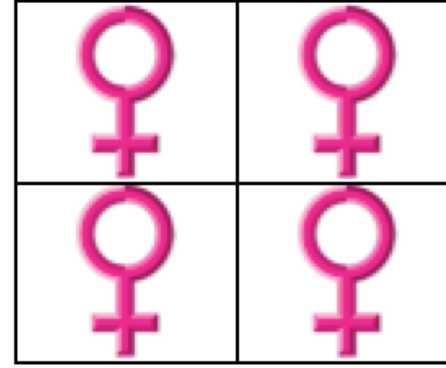
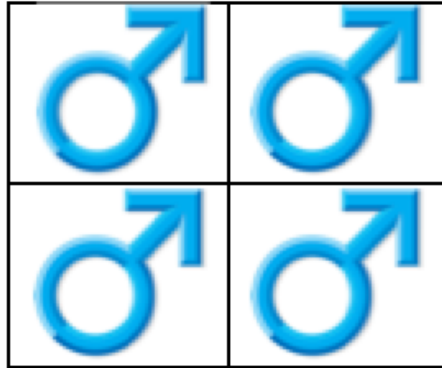
☐ Black

☐ Asian

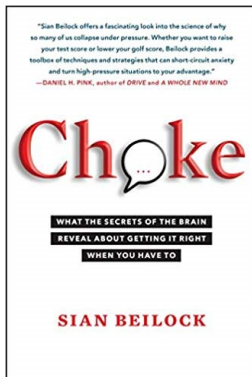
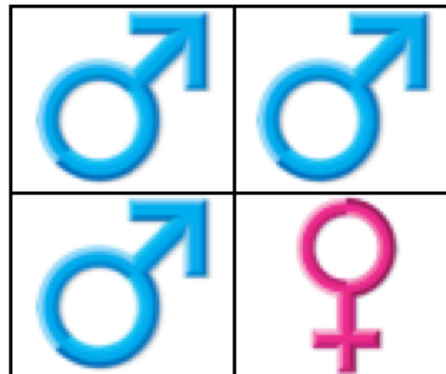
“Merely being aware of a stereotype can bring down your performance.”



Be Aware of *Their* Bias



SAT Results

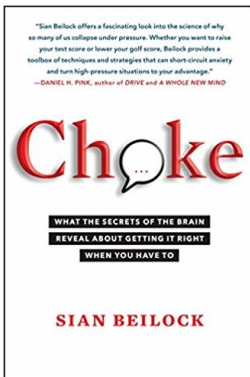


Be Aware of *Their* Bias

37 - 17 =



37
- 17



The Expectation Gap

The Achievement Gap = An Expectation Gap

Teachers' Expectations of Students

Teachers' Expectations of Themselves

Students' Expectations of Themselves

Students' Expectations of Teachers

Chapter Four

The Skills Gap



Don't Remediate; Accelerate & Support

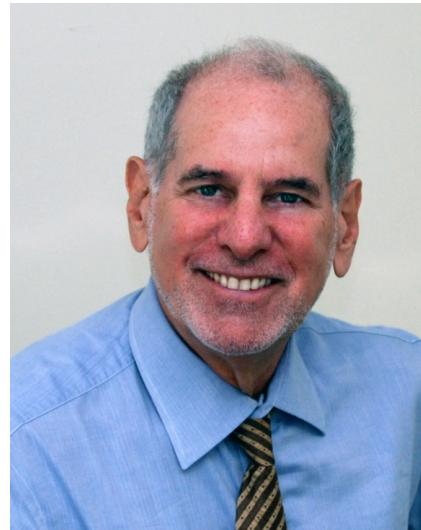
**Research Finding #1: Outside Support Systems
help low-income black boys succeed.**



Dr. Robert Berry, NCTM President, University of Virginia
on supporting & mentoring the underprivileged



Don't Remediate; Accelerate & Support



Dr. Uri Treisman
University Texas, Austin

Don't Ignore; Accelerate & Support

		HS Grade			
		A	B	C	F
MS Grade	A	12%	6%		
	B	6%	15%	2%	
	C	1%	6%	15%	
	D		2%	10%	4%
	F			4%	4%
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100% of F's had D-F in MS or No Transcript


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 = 30%

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Redefine What 'Works'

9th Grade

10th Grade

Algebra → Geometry

Pre-Algebra → Algebra

Pre-Algebra ? Geometry



What will get them to grade level next year!

Redefine What 'Works'

Above = Pass

**LEXILE of 1200
for ACT, SAT & AP**

Below = Pass



Don't Enable; Accelerate & Support

Education by Mandate No-Options Engagement Intervention



Chaparral Leadership Team

No-Options Engagement



Dr. Muhammad Khalifa
University of Minnesota

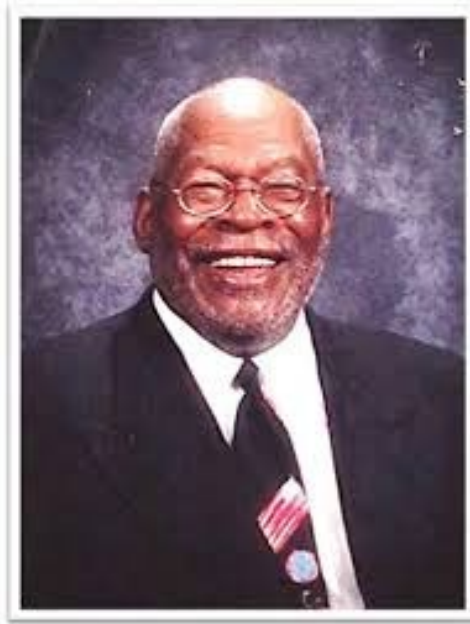


Dr. Anthony Muhammad

“Despite being a black man from a socially conscious family, I was guilty of holding a deficit view of black students (and others who are marginalized).”

No-Options Engagement

Being a “warm demander.”



Joe Dulin
Principal

Confronting teacher-student “deal-making.”

No-Options Engagement

Ms. Withers has implemented the “no exceptions” on homework. Do all your homework or don’t get a grade....

Today, there were 44 students working productively in her office hours. I told her good job and wow.

Her response,
(with amazement),
“I guess when you give
them no option or they
don’t get a grade, kids do
their work.”



Redefine Equity

Equality



Equity

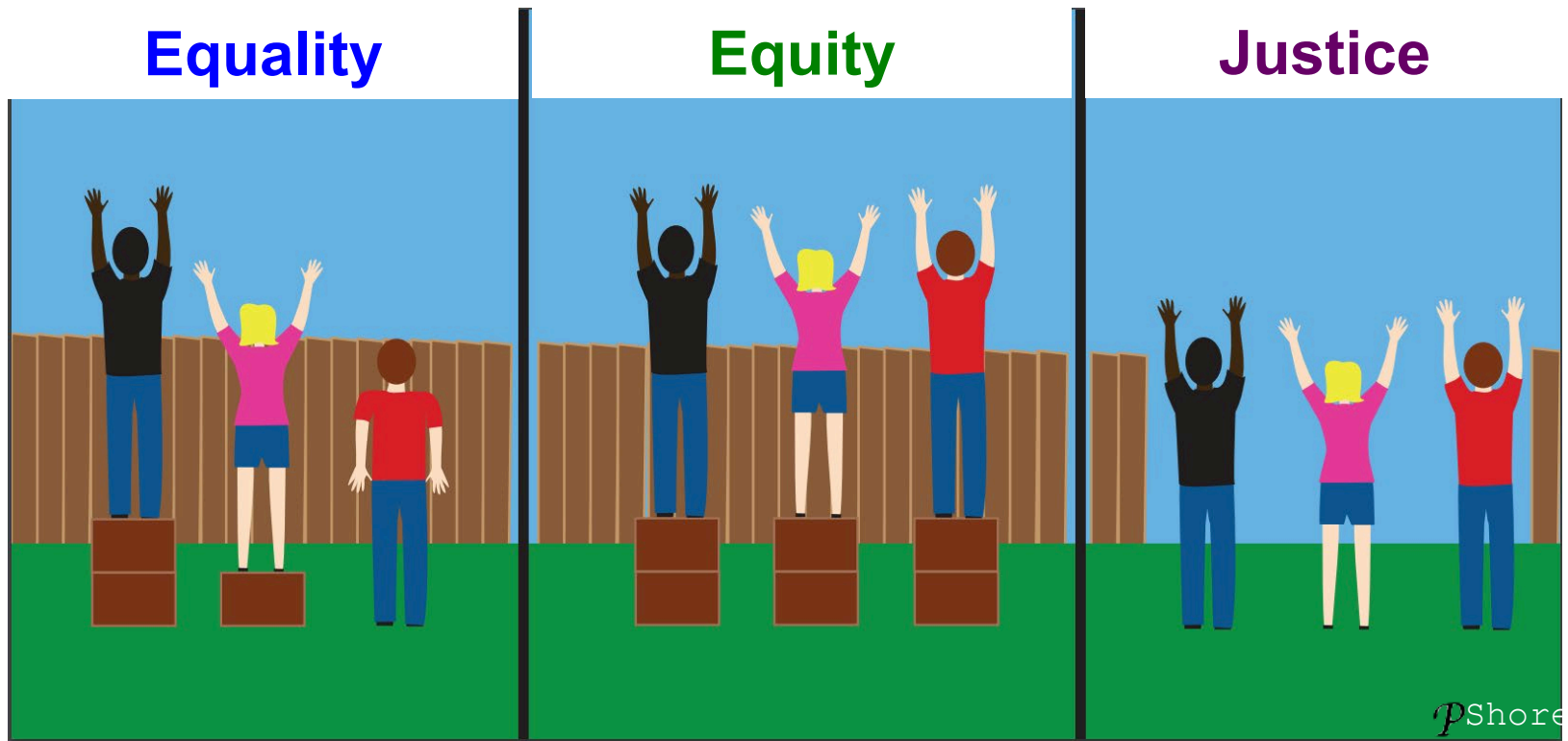


Justice



“Build Bigger Boxes”
– Tim Kanold

Redefine Equity



“Build Bigger Boxes” – Tim Kanold

The Skills Gap

The Achievement Gap = A Skills Gap

**Don't Remediate;
Accelerate & Support
by
Building Bigger Boxes!**



Chapter Five



What Are You Looking At?

Monitor your systems... because they create the walls that form the gaps!

“The data we collect on classroom practices is somewhere between nonexistent and laughably rudimentary. In other words, *we know almost nothing about almost everything that matters.*”

— Michael Petrilli, Education Gadfly, Dec 5, 2018



What Are You Looking At?

Monitor your systems... because they create the walls that form the gaps!

- **SPED**
- **Accelerated Placement**
- **The Elementary Divide**
- **Demographics of Courses**
- **Counselor Placement**
- **Grades**
- **Intervention**

Find the Narrative

The Achievement Gap = A Data Gap

Chapter Six

The Participation Gap



Provide An Invitation



Steve Maxey on Girls in Math Competition

Provide Leadership



Mind Body and Soul Concepts | Don't Talk About It...Be About It!
James D. Wallace | Founder & Program Director



Provide A Forum

African-American Parents Advisory Council



“A forum to advocate for high quality educational experiences that will improve academic and behavioral outcomes and ensure equitable opportunities”



Provide... a lot!



SB NATION

**LEBRON'S
I PROMISE SCHOOL**

- FOCUSES ON ACCELERATED LEARNING
- PROVIDES JOB PLACEMENT ASSISTANCE FOR PARENTS
- HAS AN ON-SITE FOOD BANK
- SUPPORTS STUDENTS WITH STRESS FROM ECONOMIC CAUSES
- GIVES EVERY STUDENT A BIKE, TO ESCAPE DANGEROUS PARTS OF TOWN AND EXPLORE
- GUARANTEES FREE COLLEGE TUITION TO THE UNIVERSITY OF AKRON TO ALL GRADUATES STARTING IN 2021

The image shows LeBron James in a grey suit, holding a microphone, standing next to a whiteboard. The whiteboard has the 'I PROMISE' logo repeated. The background is a dark wall with the same logo repeated.

LeBron James on Acceleration & Equity...
...and on Mentors & Support

Provide Mentors & Support

Research Finding #2: Mentors helped low-income black boys succeed.



Dr. Robert Berry, NCTM President, University of Virginia
on mentoring the underprivileged



Provide Mentors & Support



**Stacey (and Carolyn) Abrams on Mentors
and on Changing the World**

The Participation Gap

Provide:

- **An Invitation**
- **Student Leadership**
- **A Forum for Parent Involvement**
- **And above all else... Mentors & Support**

The Achievement Gap = A Participation Gap

Equity is a Story About People



Epilogue: Find Your Walls, Close Your Gaps, and Write Your Equity Story

Opportunity Gap

Students should have equal access to courses and quality teaching.

Teaching Gap

Deliver 21st Century Math Instruction to ALL students.

Expectation Gap

Be aware of your own biases.

Chris Shore

@MathProjects

shore@mathprojects.com

Skills Gap

Don't remediate; accelerate by building bigger boxes.

Data Gap

Monitor your systems as well as their results.

Participation Gap

Invite, Mentor and Support.

