

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
@MathProjects
#mathequity
#RXmathnetwork





**Everyone has the right to
education**





**So if you're tired of the same old story,
Oh, turn some pages**

**I will be here when you are ready
To roll with the changes.**

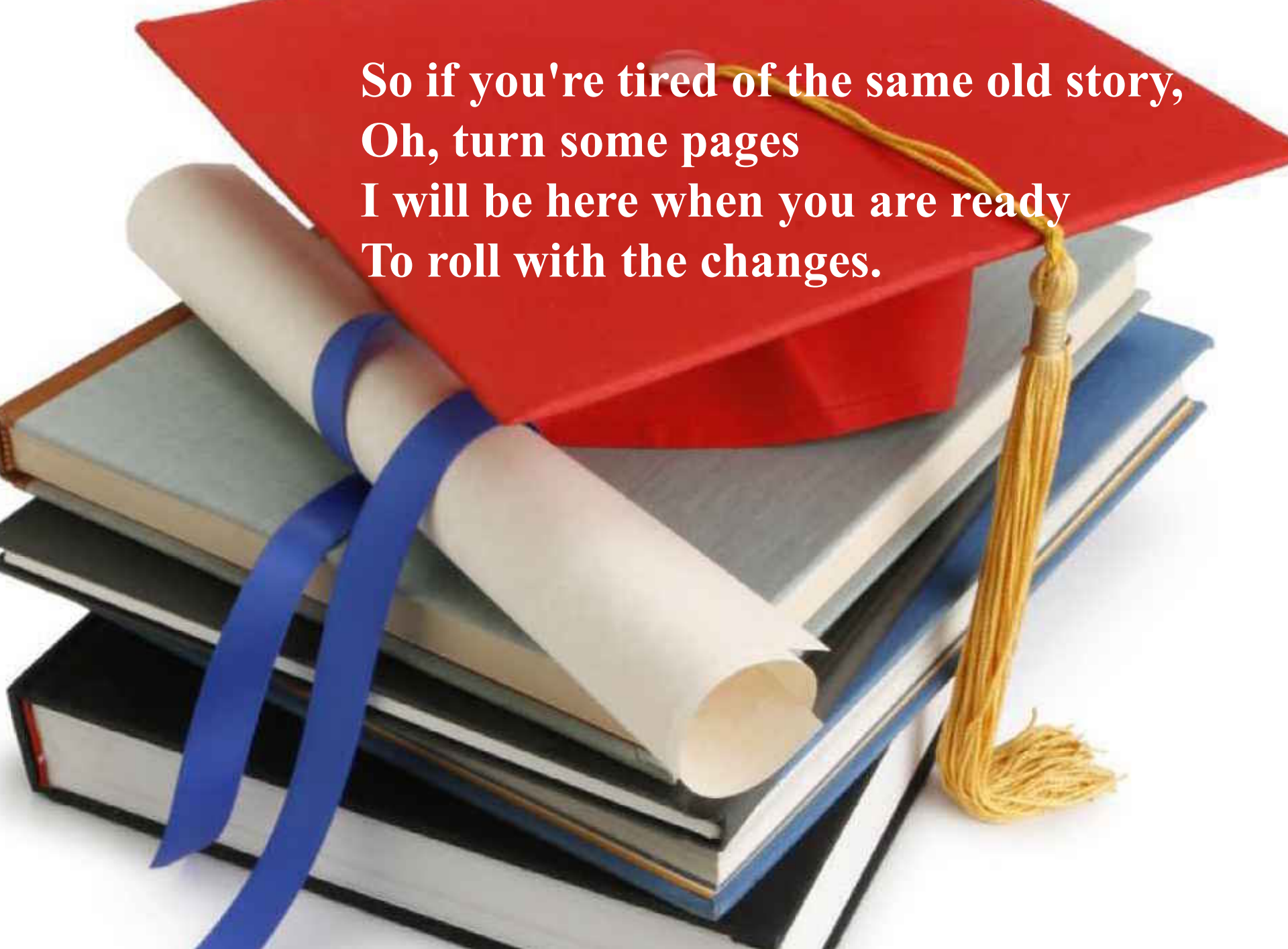








**So if you're tired of the same old story,
Oh, turn some pages
I will be here when you are ready
To roll with the changes.**







**So if you're tired of the same old story,
Oh, turn some pages**





**I will be here when you are ready
To roll with the changes.**

Human Rights

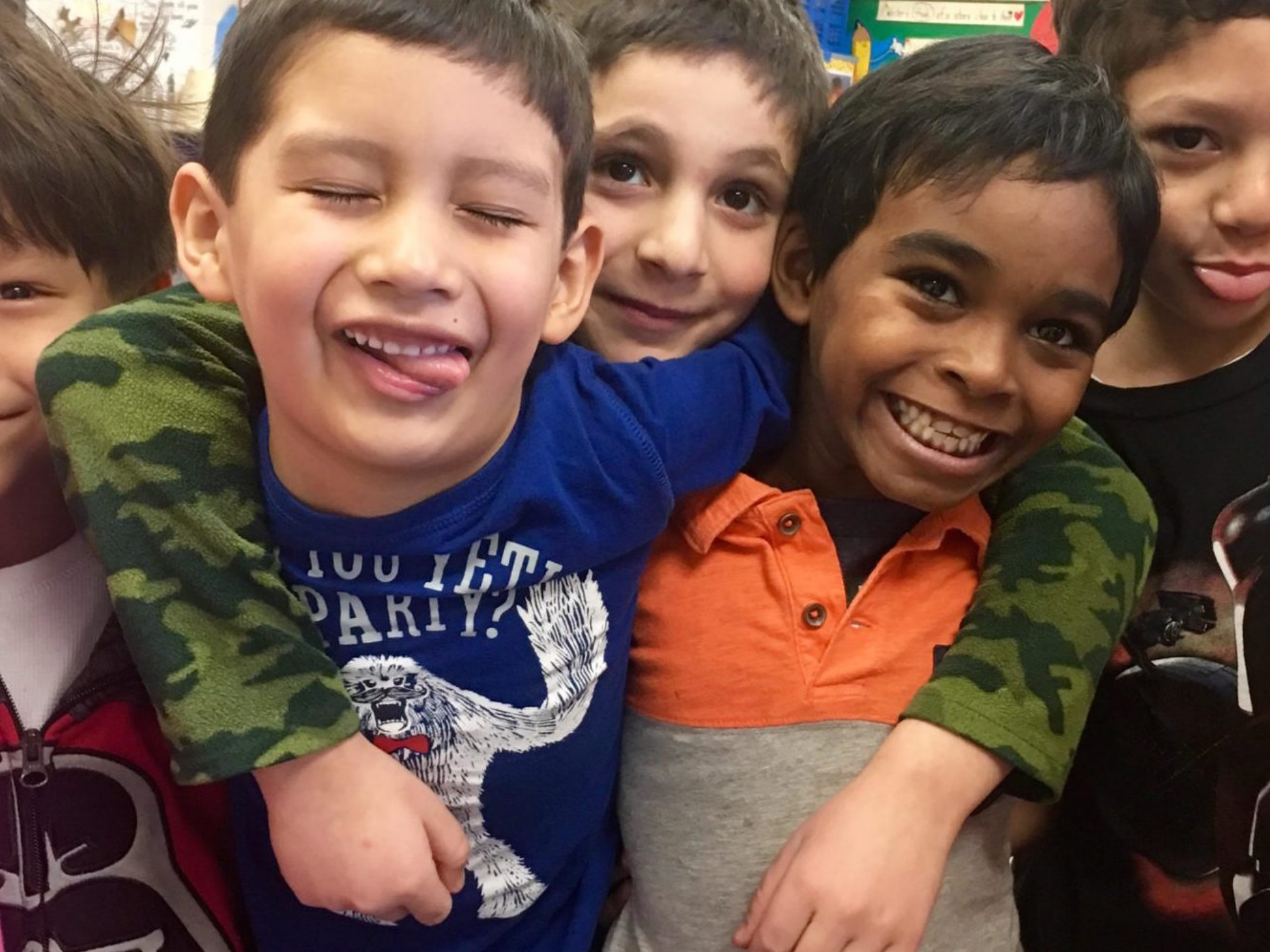












SPENDING PER STUDENT, BY SCHOOL DISTRICT

Adjusted for regional differences, for primary and unified school districts

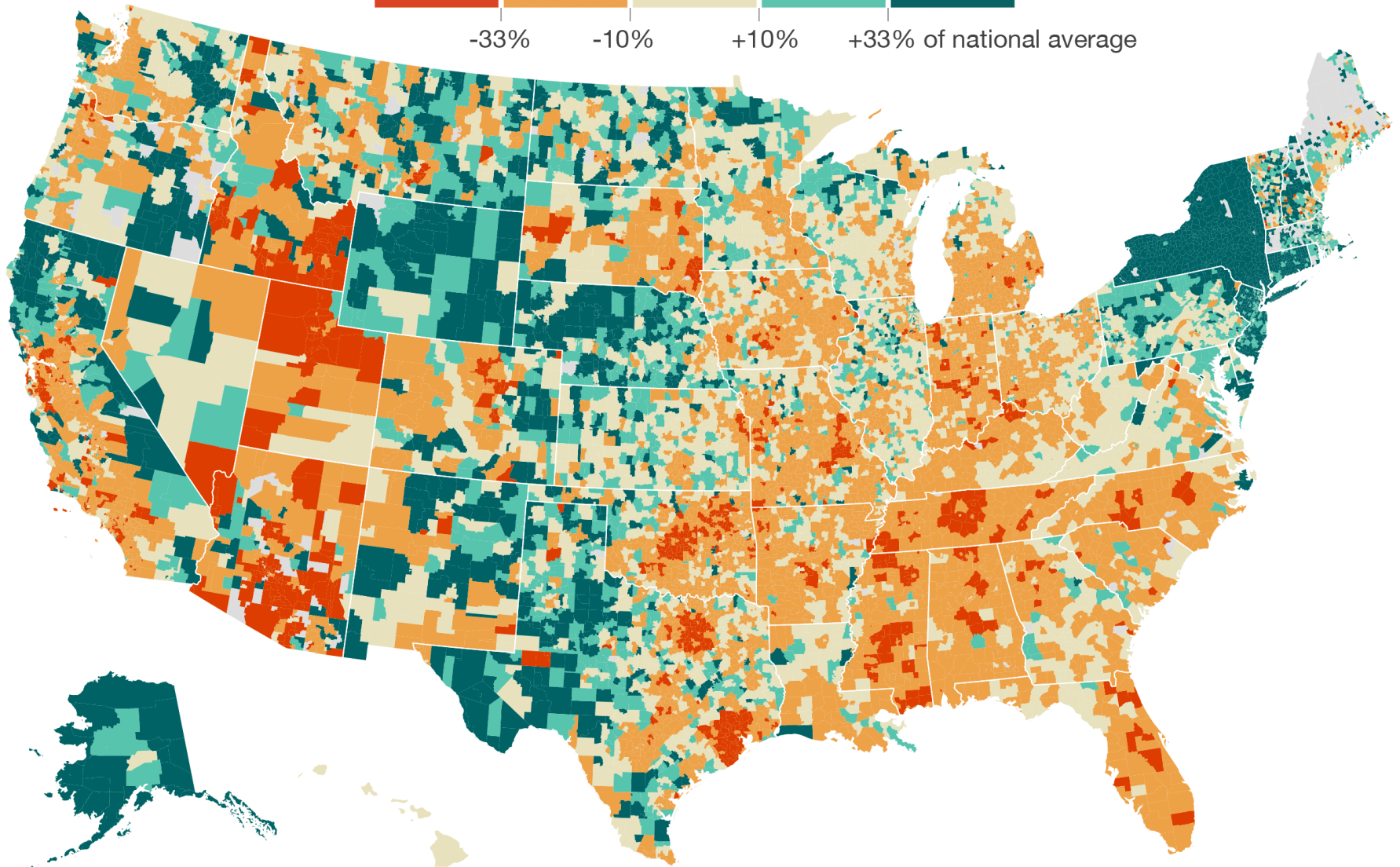
National average: \$11,841

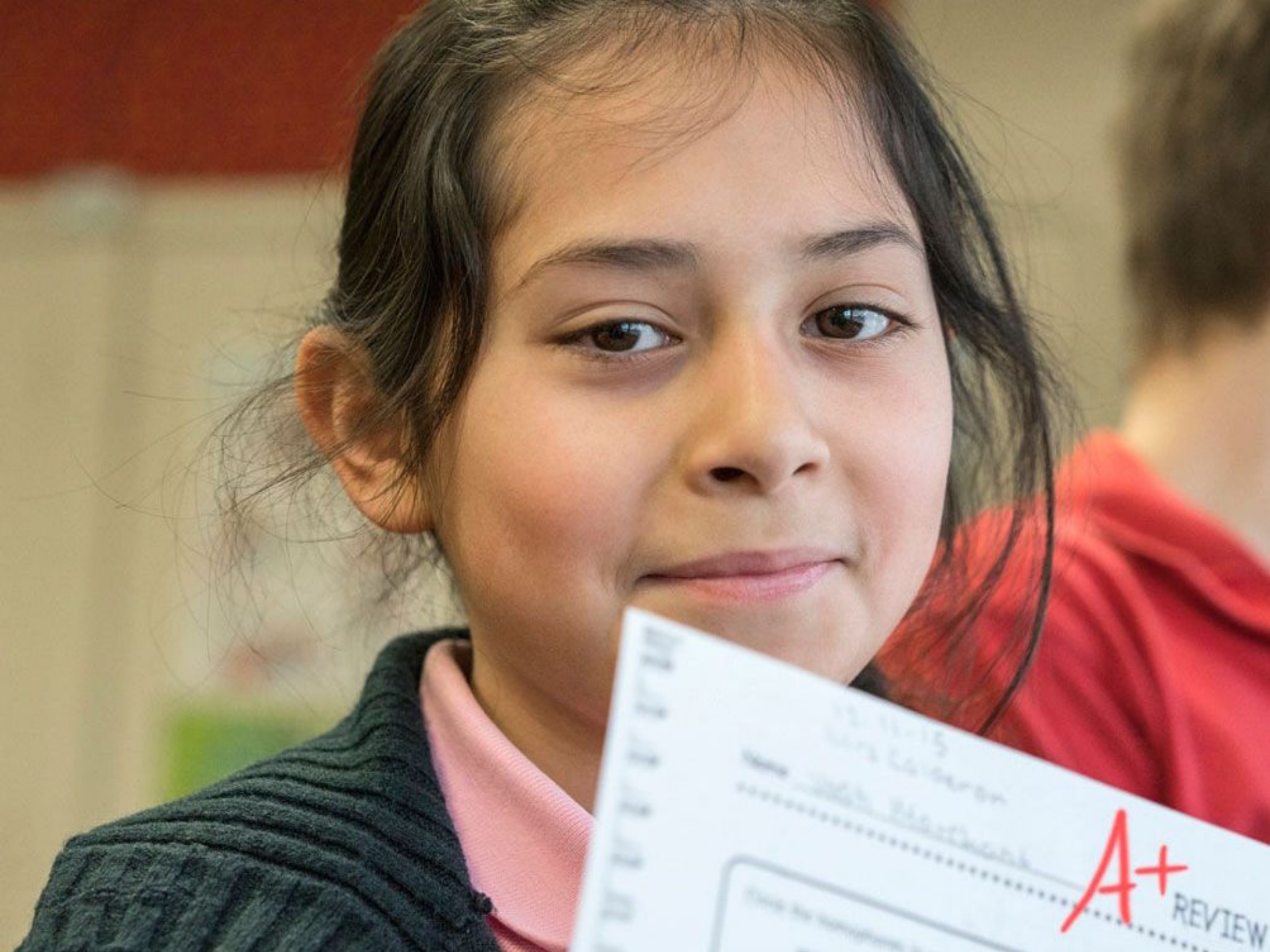
-33%

-10%

+10%

+33% of national average





12-15-15
Lily Calderon

Name _____
Date _____

A+ REVIEW







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
@MathProjects
#mathequity
#RXmathnetwork

Debate Free Zone



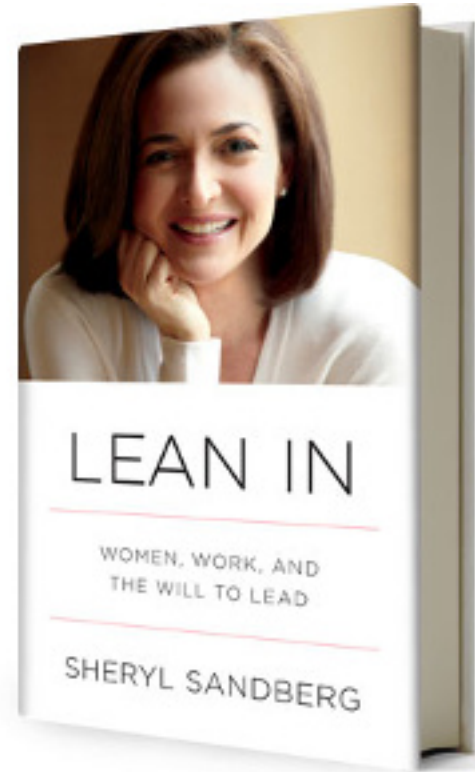
DAVE GRANLUND © www.davegranlund.com

The Genius of 'And'



The Tyranny of 'Or'

Rick DuFour



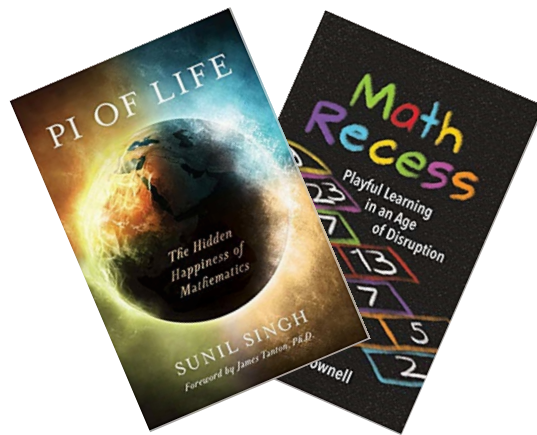
Change the systems AND the people.

Challenge Accepted

**“White = Content.
Non-White = Equity.”**

-- Sunil Singh

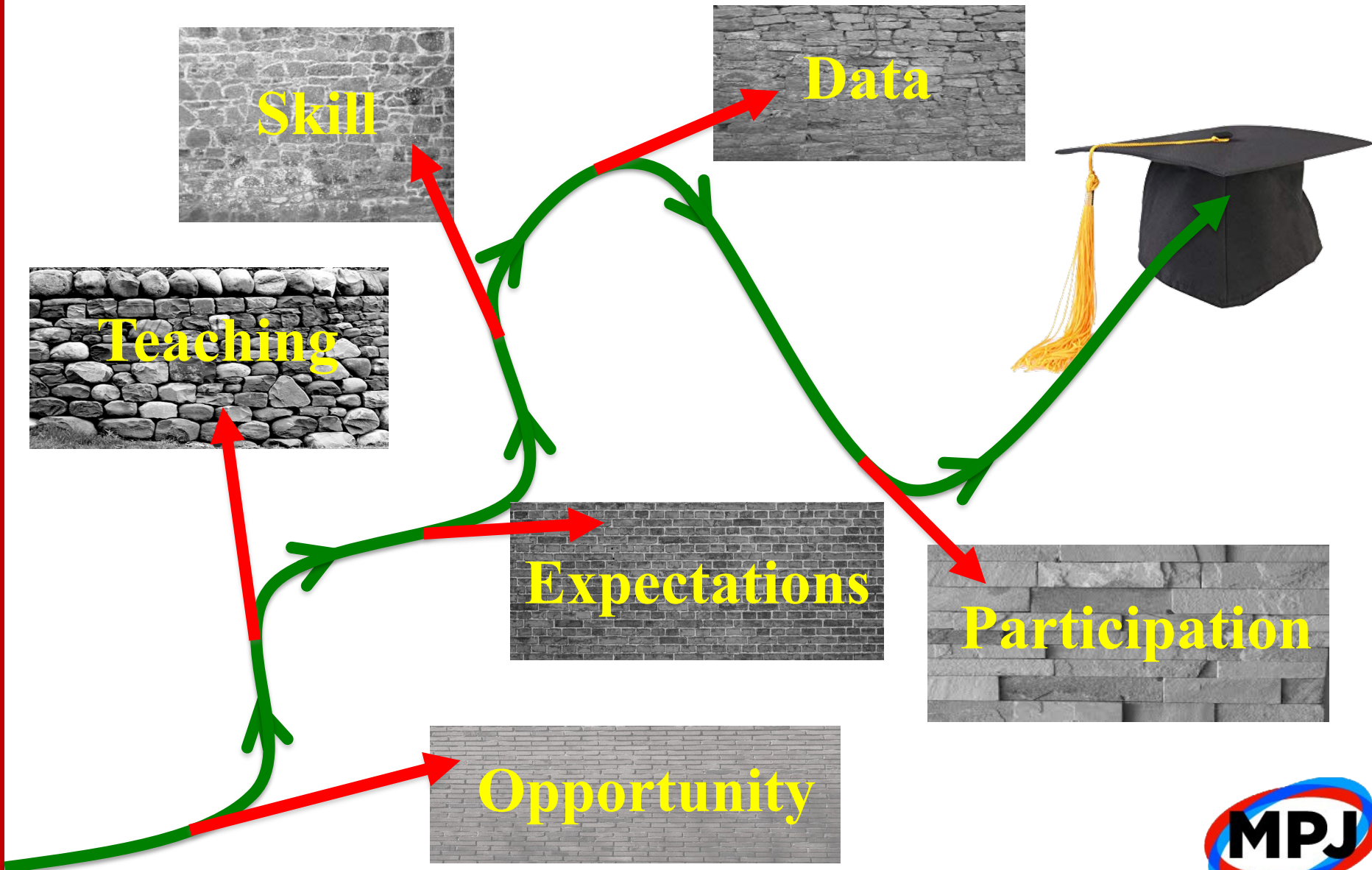
Ideas of Math Equity Must Come From White People



My Story



Table of Contents



Chapter One

The Opportunity Gap



Once Upon a Time...

— 40.10% —

Math	# Students	Exceeded	Met	Nearly Met	Not Met
Econ Disadv.	193	8.85	31.25	26.04	33.85
Non-Econ Dis.	560	12.14	29.11	32.5	26.25

— 41.25% —

The Subplot of the Sub-Groups

11th Graders

CAASPP Data by Ethnicity					
Math	# Students	Exceeded	Met	Nearly Met	Not Met
African American	44	0 30%	29.55	20.45	50
Hispanic	282	7.8 31%	23.76	35.46	32.98
White	265	10.23 41%	30.68	32.58	26.52
Asian	25	36 80%	44	8	12
Filipino	57	28.07 65%	36.84	29.82	5.26
Two or More	79	13.92 52%	37.97	22.78	25.32

“Is this an access issue?”

The Old Pathways

Middle School

Math 6 – Math 7 – Math 8

Math 7 – Math 8 – Alg 1

Math 7 – Alg 1 – Geom

High School

Alg 1 – Geom – Alg 2 – PreCalc

↓ ↓ ↓
**Algebra – Int 1 – Int 2
Essentials**

Geom – Alg 2 – PreCalc – Calc AB

Alg 2 – PreCalc – Calc AB – Calc BC

or

**Alg 2+ – Accel – Calc BC – Calc D/
PreCalc IB HL**

The New Pathways

Middle School

Math 6 – Math 7 – Math 8

Math 7 – Math 8 – Alg 1

Math 6/7 – Alg 1 – Geom

High School

Alg 1 – Geom – Alg 2 – PreCalc

No more tracking

No more retention

No D's

Geom – Alg 2 – PreCalc – Calc AB

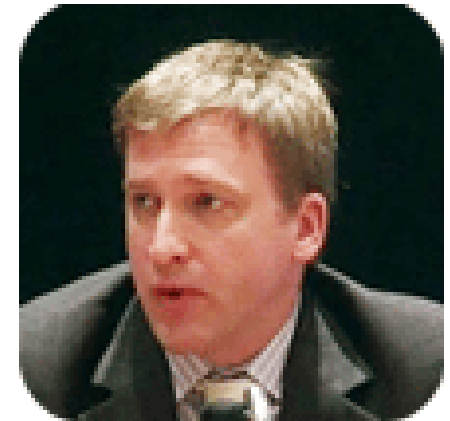
Alg 2 – PreCalc – Calc AB – Calc BC

or

**Alg 2+ – Accel – Calc BC – Calc D/
PreCalc IB HL**

“Same Train, Different Boxcars.”

Should We Be Accelerating?



Should We Be Accelerating?



Dr. Patrick Callahan
UC Office of the President
Illustrative Mathematics
Smarter Balance

Students don't need calculus to get into college. They would be better served to slow down and learn deeply.

EDUCATION WEEK



Should We Be Accelerating?

“But the students can’t sit with the professors unless they get by the Admission’s office, which wants to see calculus on the transcript.”

Most college freshmen did NOT take high school Calculus!

17% take Calculus
40% go to 4-Year Schools

Admittance Rates

Harvard = 7%

UC Berkley = 14%

UC Merced 67%

Results by Pathways

SBAC 2018 Chaparral Math

<u>Alg 2</u>	<u>Prob/Stat</u>	<u>PreCalc</u>	<u>Accel PreCal</u>	<u>AP Calc/Stats</u>
33%	43%	71%	95%	96%

The Road to Inequity



The Road to Inequity

Is ethnicity influencing in which math class 9th graders are enrolled?

9th Graders 2017-18

Percentage of Ethnicity that is in a Given Course

	Hispanic	Indian	Asian	Black	Islander	White	Two Races	Totals
Alg 1 Ext	3%	0%	0%	10%	25%	4%	7%	4%
Alg 1	84%	0%	61%	77%	75%	74%	71%	76%
Geometry	11%	0%	24%	10%	0%	15%	14%	14%
Algebra 2+	3%	0%	13%	3%	0%	7%	9%	6%
AccelPreCalc	0%	0%	3%	0%	0%	0%	0%	0%
Total	275	0	71	31	4	225	58	331

Percentage of Course that is a Given Ethnicity

	Algebra 1 Ext	Algebra 1	Geometry	Algebra 2+	Accel PreCal	Totals
Hispanic/Latino	33%	45%	32%	19%	0%	41%
Indian or Alaskan	0%	0%	0%	0%	0%	0%
Asian	0%	8%	19%	24%	67%	11%
Black	11%	5%	3%	3%	0%	5%
Pacific Islander	4%	1%	0%	0%	0%	1%
White	37%	33%	37%	41%	33%	34%
Two or more Races	15%	8%	9%	14%	0%	9%
Total	27	507	90	37	3	664

The Road to Inequity

Is ethnicity influencing in which math class 6th graders are enrolled?

The 5th Grade Placement Test



The Road to Inequity

Is ~~ethnicity~~ influencing in which math class 6th graders are enrolled?
(school or teacher)

The 5th Grade Placement Test

	26	19
	26	19
	26	20
	25	
	25	15.5
	25	19
	25	17
	24	16
	23	12.5
	22	18.5
	21	19
	21	16
	20	17
	18	
	16	
	16	
	15	
	7	
	6	
	2	

	26	20
	21	13
	17	
	17	15
	17	9.5
	13	14
	13	
	12	
	11	
	9	
	8	
	8	
	7	
	7	
	7	
	6	
	2	

	21	7
	20	15
	20	
	20	13.5
	20	11
	18	
	17	
	17	
	16	
	16	
	16	
	14	
	14	
	14	
	13	
	13	
	13	
	13	
	12	
	12	
	12	
	12	
	11	
	11	
	10	
	9	
	9	
	9	
	9	
	8	
	8	

1st Part: 30 Questions M.C. (70%, 21)

2nd Part: 20 Points, 5 Tasks (80%, 16)

The Road to Inequity

Is ~~ethnicity~~ influencing in which math class 6th graders are enrolled?
(parent involvement)

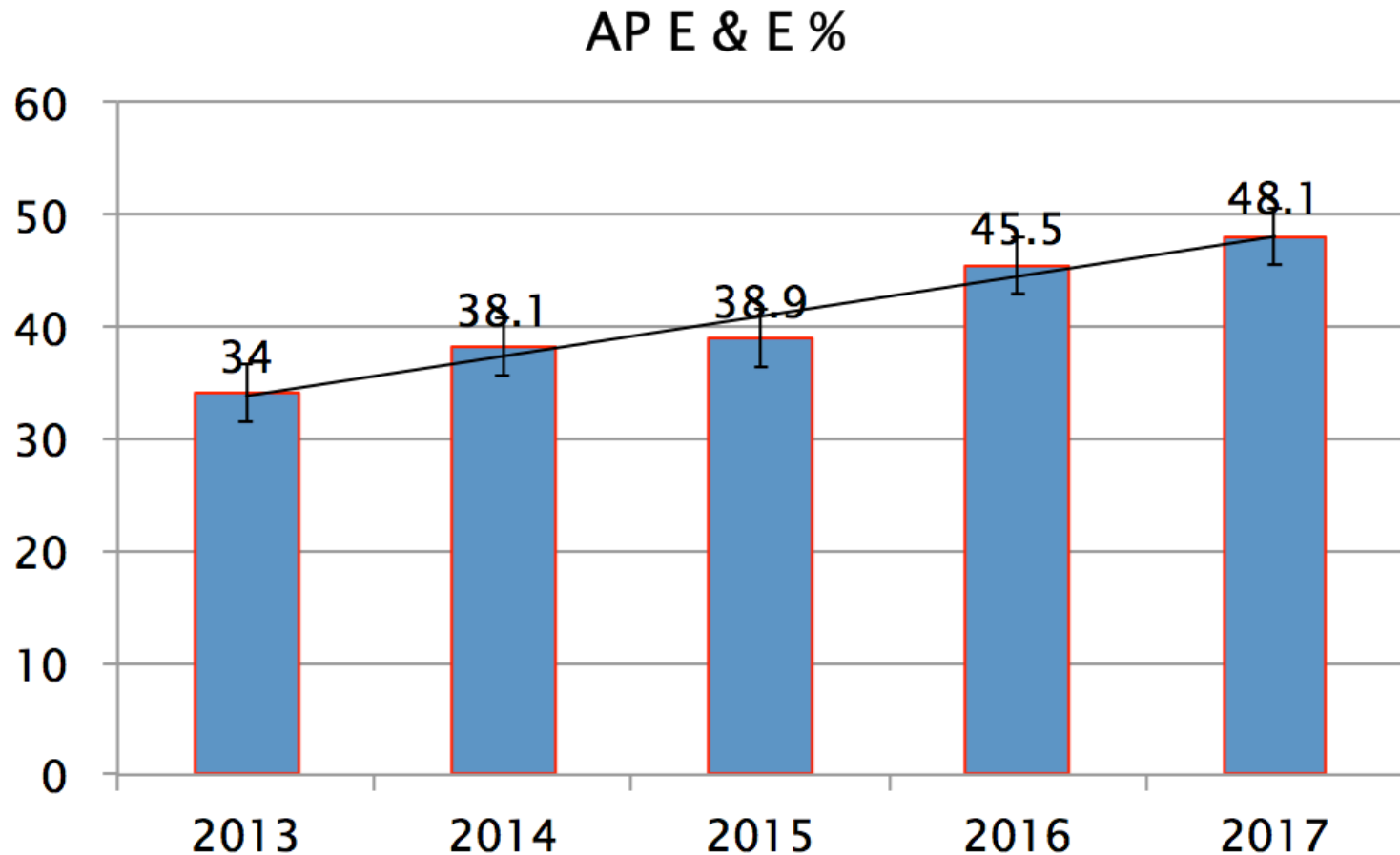
The 5th Grade Placement Test

	MS1	MS2	MS3	MS4	MS5	MS6	TVUSD
% Override	20%	23%	26%	32%	34%	45%	31%

	Asian	Latino	Black	White
Enrolled	27%	17%	4%	52%
Passed Test	27%	16%	4%	53%
Overrode	27%	18%	5%	52%
TVUSD	21%	31%	7%	42%

And the Parents Were Right!

What About Open Access?



Great Oak High School's Open Access Record



What About Open Access?



...so why a placement test?

The Road to Inequity

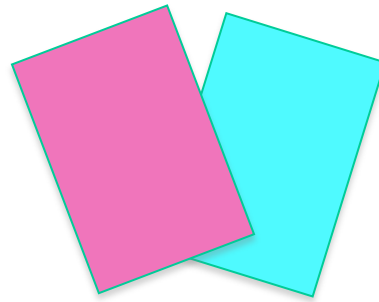
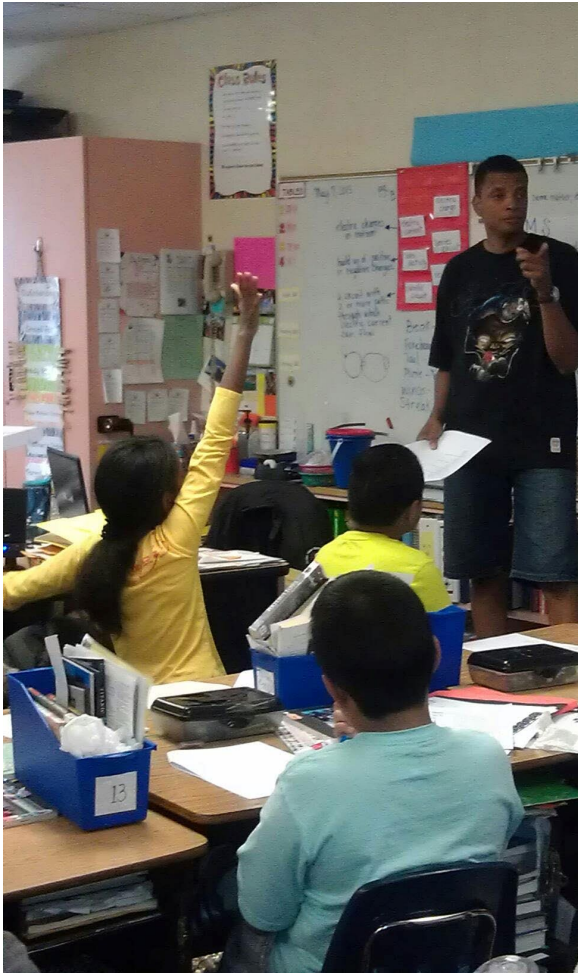
“We start dividing them,
once they start dividing.”

3rd Grade

The **Gate** Class

The **Regular** Class

The **EL** Class



Pink & Blue Cards

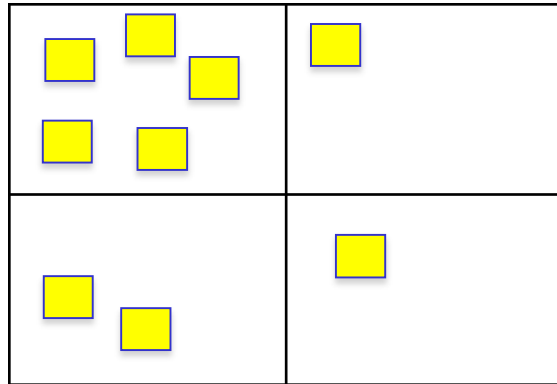
The Road to Inequity

Behavior			
1	2	3	4
best	ave	concern	stopper
Academic Level			
G	HA	A	BA
Gifted	High Ave	Ave	Below Ave
Independent Worker?			
YES or NO			
SPED	Speech	504	EL
Intrvtns:	Literacy	PLC	PBIS
DRA:			
McLeod's / QRI:			
Ever been in a combo?			
YES or NO			
Student a good candidate for a:			
Upper combo?	YES	or	NO
Lower combo?	YES	or	NO
Ever retained?			
YES or NO			
SST'd?			
YES or NO			
Parent Volunteer?			
YES or NO			
Needs extra support:			
Work Completion: YES or NO			
Time on Task - YES or NO			
Redirection - YES or NO			
Parent - YES or NO			
DNPW:			
Special concerns:			

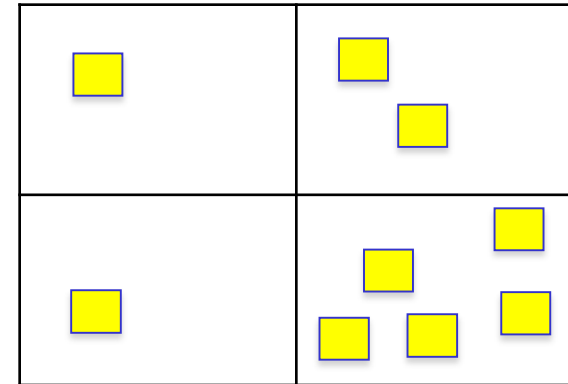
Behavior			
1	2	3	4
best	ave	concern	stopper
Academic Level			
G	HA	A	BA
Gifted	High Ave	Ave	Below Ave
Independent Worker?			
YES or NO			
SPED	Speech	504	EL
Intrvtns:	Literacy	PLC	PBIS
DRA:			
McLeod's / QRI:			
Ever been in a combo?			
YES or NO			
Student a good candidate for a:			
Upper combo?	YES	or	NO
Lower combo?	YES	or	NO
Ever retained?			
YES or NO			
SST'd?			
YES or NO			
Parent Volunteer?			
YES or NO			
Needs extra support:			
Work Completion: YES or NO			
Time on Task - YES or NO			
Redirection - YES or NO			
Parent - YES or NO			
DNPW:			
Special concerns:			

The Road to Inequity

Teacher 1



Teacher 2



Academics

Behavior

Behavior

**The influence of parents,
veteran teachers, and
the combo class?**

Behavior		1	2	3	4
		best	ave	concern	stopper
Academic Level					
G	HA	A	BA		
Gifted	High Ave	Ave	Below Ave		
Independent Worker?					
YES or NO					
SPED	Speech	SMA	EL		
Intrinsics	Literacy	PLC	PBIS		
DRA:					
McLeod's / QRI:					
Ever been in a combo?					
YES or NO					
Student a good candidate for a:					
Upper combo?	YES	or	NO		
Lower combo?	YES	or	NO		
Ever retained?	YES	or	NO		
SST'd?	YES	or	NO		
Parent Volunteer?	YES	or	NO		
Needs extra support:					
Work Completion:	YES	or	NO		
Time on Task -	YES	or	NO		
Redirection -	YES	or	NO		
Parent -	YES	or	NO		
DNPW:					
Special concerns:					

Behavior		1	2	3	4
		best	ave	concern	stopper
Academic Level					
G	HA	A	BA		
Gifted	High Ave	Ave	Below Ave		
Independent Worker?					
YES or NO					
SPED	Speech	SMA	EL		
Intrinsics	Literacy	PLC	PBIS		
DRA:					
McLeod's / QRI:					
Ever been in a combo?					
YES or NO					
Student a good candidate for a:					
Upper combo?	YES	or	NO		
Lower combo?	YES	or	NO		
Ever retained?	YES	or	NO		
SST'd?	YES	or	NO		
Parent Volunteer?	YES	or	NO		
Needs extra support:					
Work Completion:	YES	or	NO		
Time on Task -	YES	or	NO		
Redirection -	YES	or	NO		
Parent -	YES	or	NO		
DNPW:					
Special concerns:					

The Road to Inequity

5th Grade Enrollments

School A	Asian	Latino	Black	White
Teacher A	3%	66%	21%	10%
Teacher B	12%	46%	12%	31%
Teacher C	11%	78%	4%	7%
Teachers D & E	30%	60%	10%	0%
School	11%	63%	12%	14%

School B	Asian	Latino	Black	White
Teacher A	30%	41%	4%	26%
Teacher B	14%	25%	4%	57%
Teacher C	24%	20%	12%	44%
Teachers D	37%	30%	3%	30%
Teachers E	11%	22%	11%	56%
Teachers F	21%	41%	7%	0%
School	24%	28%	8%	41%

3rd Grade Enrollments

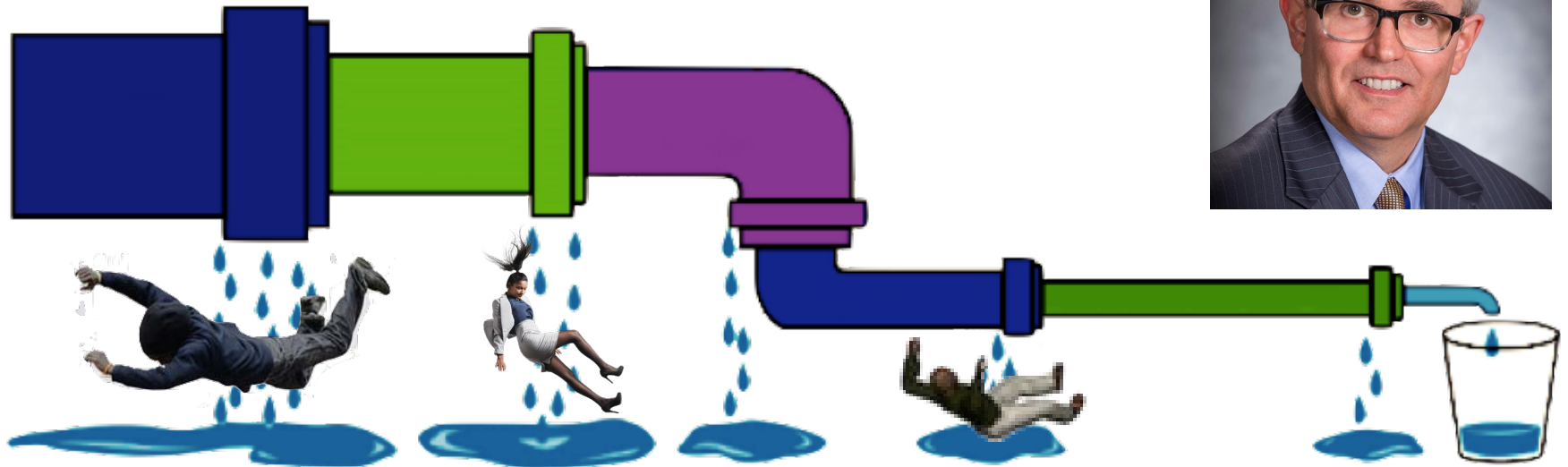
School C	Asian	Latino	Black	White
Teacher A	5%	14%	0%	82%
Teacher B	13%	35%	0%	52%
Teacher C	18%	41%	0%	41%
Teachers D	18%	41%	0%	41%
Teachers E	13%	39%	4%	43%
Teachers F	23%	41%	0%	36%
Teachers G	9%	39%	0%	52%
School	14%	34%	1%	51%

*We do start dividing them,
before they start dividing.*

The Road to Inequity

Is ethnicity influencing in which math class 11th graders are enrolled?

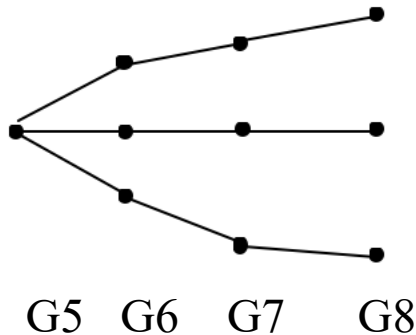
“We are leaking students of color.” – Matt Larson



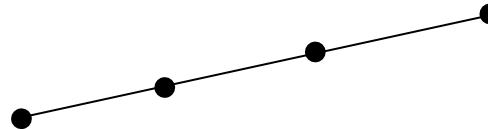
The Road to Inequity



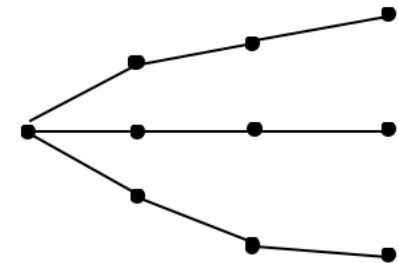
-- Dr. Lee Stiff,
North Carolina State University
Former President of NCTM



Previous System
Created the Gap.



Changed System
Closed the Gap.



Resurrected System
Resurrected the Gap.

The Road to Inequity

Is ethnicity influencing in which math class 11th graders are enrolled?

	9th	10th	11th	
	Alg 1	Geom	Alg 2	Other
Asian	13%	13%	14%	12%
Latino	41%	41%	40%	48%
Black	10%	10%	10%	5%
White	36%	37%	37%	35%

	Geom	Alg 2	Pre-Cal
Asian	20%	24%	22%
Latino	38%	36%	39%
Black	5%	5%	6%
White	37%	35%	33%

	Alg 2	Pre-Cal	AP Calc
Asian	36%	36%	39%
Latino	31%	32%	30%
Black	3%	4%	4%
White	29%	29%	27%

The Road to Inequity

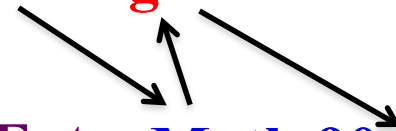
Middle School

Math 6 – Math 7 – Math 8

High School

Alg 1 – Geom – Alg 2 – PreCalc

Alg Ext – Alg Ext – Math 90–Math 96



The Road to Inequity

F Rates of Algebra 1 Teachers

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
16%	20%	25%	34%	48%

“Is this a Master Schedule issue?”

The Road to Inequity

54 SPED Freshmen Enrolled in Algebra 1 Extended

54 < **27**: From 8th Grade SPED
27: From 8th Grade Gen Ed Math
 21: Middle School A
 6: Middle School B

“Is this a Counseling issue?”



The Road to Inequity

Middle School

Math 6 – Math 7 – Math 8

↓ ↓ ↓
Concepts (SPED)
6 – 7 – 8



High School

Alg 1 – Geom – Alg 2 – PreCalc

↓ ↓ ↓
Alg Ext – Alg Ext – Math 90 – Math 96

“Is this a Counseling issue?”

The Road to Inequity

Middle School

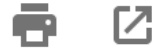
<u>SpEd</u>	<u>GenEd</u>	<u>Advanced</u>
Math 6 Basic	Math 6	Accel 6
Math 7 Basic	Math 7	Accel 7
Math 8 Basic	Math 8	Adv Math 1
MA Essentials		
MS MA Essentials 1		
MS MA Essentials 2		
Math Intervention		

High School

<u>SpEd</u>	<u>GenEd</u>	<u>Advanced</u>
Transitional Math Basic	Transitional Math	
Math I Basic A	Math I	Adv Math I
Math I Basic B	Math II	Adv Math II
Math Essentials 1	Math III	Adv Math III
Math Essentials 2		
Math SC Essentials		
Math BP		

The Road to Inequity

Your RSP student in Algebra Extended  Inbox x



Chris Shore <cshore@tvusd.k12.ca.us>

11:16 AM (11 hours ago)



to Marc ▼

Good Day Mr Horton,

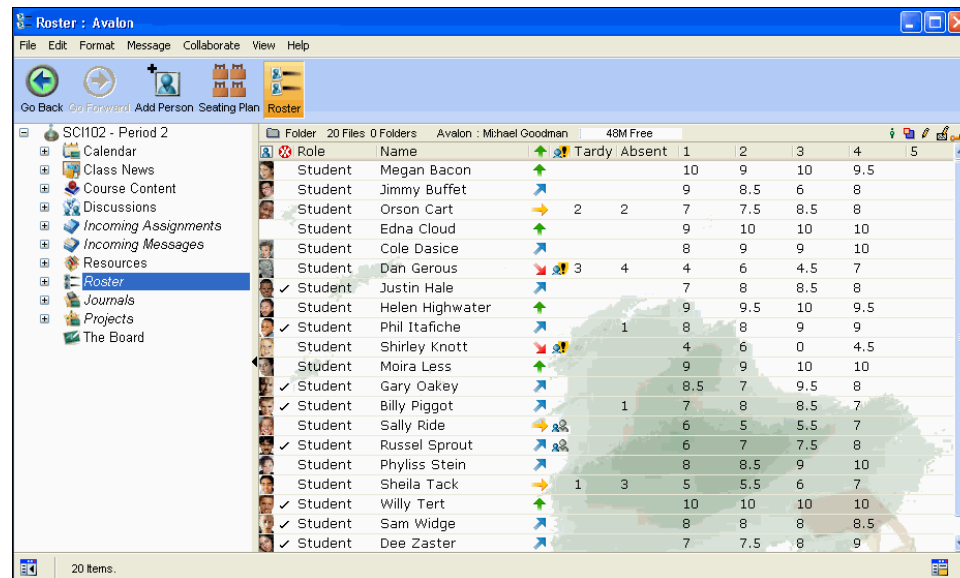
I am the typical RSP student in your district. You wanted to know the narrative of my math trajectory. Well, I spent all three of my middle school years in Math Concepts classes for which there is no official district curriculum with a Special Ed teacher who was never formally trained in mathematics or mathematics education. When I arrived at high school, it was a crap shoot as to whether I was enrolled in Pre-Algebra Concepts, Algebra Extended or Algebra 1. Of my few friends who were allowed to take the Gen Ed Math classes in middle school, they all started high school in Algebra Extended. All of us will take that State Test our Junior year, rarely having had interaction with a credentialed math teacher and having seen only a third of the curriculum that we are assessed on, while the few adults that are paying attention to us scratch their heads on why our scores on this high profile exam suck so badly.

Sincerely,
Helplessly Left Out

The Opportunity Gap

The Achievement Gap = An Opportunity Gap

“A student’s chances of passing and learning all depends on where they are sitting.”



Folder	20 Files	0 Folders	Avalon : Michael Goodman	48M Free						
Role	Name	Tardy	Absent	1	2	3	4	5		
Student	Megan Bacon	↑		10	9	10	9.5			
Student	Jimmy Buffet	↑		9	8.5	6	8			
Student	Orson Cart	↑	2	7	7.5	8.5	8			
Student	Edna Cloud	↑		9	10	10	10			
Student	Cole Dasice	↑		8	9	9	10			
Student	Dan Gerous	↑	3	4	6	4.5	7			
Student	Justin Hale	↑		7	8	8.5	8			
Student	Helen Highwater	↑		9	9.5	10	9.5			
Student	Phil Itafiche	↑	1	8	8	9	9			
Student	Shirley Knott	↑		4	6	0	4.5			
Student	Moir Less	↑		9	9	10	10			
Student	Gary Oakley	↑		8.5	7	9.5	8			
Student	Billy Piggot	↑	1	7	8	8.5	7			
Student	Sally Ride	↑		6	5	5.5	7			
Student	Russel Sprout	↑		6	7	7.5	8			
Student	Phylliss Stein	↑		8	8.5	9	10			
Student	Sheila Tack	↑	1	3	5	5.5	6	7		
Student	Willy Tert	↑		10	10	10	10			
Student	Sam Widge	↑		8	8	8	8.5			
Student	Dee Zaster	↑		7	7.5	8	9			

Epilogue: Find Your Walls, Close Your Gaps, and Write Your 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.

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.

