## RAISING ACHIEVEMENT AND CLOSING GAPS BETWEEN GROUPS: <br> Lessons from Schools and Districts on the Performance Frontier

## First, some good news.

After more than a decade of fairly flat achievement and stagnant or growing gaps, we appear to be turning the corner.

## $4^{\text {th }}$ Grade Reading: <br> Record Performance with Gap Narrowing

9 Year Olds - NAEP Reading


## $4^{\text {th }}$ Grade Math: <br> Record Performance with Gap Narrowing <br> 9 Year Olds - NAEP Math <br> 

## $8^{\text {th }}$ Grade Reading: Recent Gap Narrowing for Blacks, Less for Latinos

13 Year Olds - NAEP Reading


## $8^{\text {th }}$ Grade Math: <br> Progress for All Groups, Some Gap Narrowing



## Progress Even Clearer When Examined Over a Decade on the "Main NAEP" Exam

## 1996 NAEP Grade 4 Math



## 2007 NAEP Grade 4 Math



## NAEP Grade 4 Math 1996 Compared to 2007

Low-Income Students - Nation


## Bottom Line:

When we really focus on something, we make progress!

Clearly, much more remains to be done in elementary and middle school

## Too many youngsters still enter high school way behind.

# But at least we have some traction on elementary and middle school problems. 

The same is NOT true of our high schools.

## Achievement Flat in Reading

## 17 Year Olds Overall - NAEP



## Math achievement flat over time

17-Year-Olds


# And gaps between groups are mostly wider today than in late eighties, early nineties 

## $12^{\text {th }}$ Grade Reading: No Progress, Gaps Wider than 1988

17 Year Olds - NAEP Reading


## 12 Grade Math: Results Mostly Flat Gaps Same or Widening

17 Year Olds - NAEP Math


# And no matter how you cut the data, our students aren't doing well compared to their peers in other countries. 

## PISA Performance

## U.S.A. Ranks Near Bottom, Has Fallen Since 2000

## Subject

## Mathematics

Science

## 2000 Rank

 (out of 26)$17^{\text {th }}$
$22^{\text {nd }}$
$22^{\text {nd }}$

## 2003 Rank

(out of 26)

## 2006 Rank <br> (out of 26)

$13^{\text {th }} \quad$ Tied for $17^{\text {th }} \quad 19^{\text {th }}$

Rankings are for the 26 OECD countries participating in PISA in 2000, 2003, and 2006.

A closer look at math

## Of 29 OECD Countries, U.S.A. Ranked $24^{\text {th }}$



## Problems are not limited to our high-poverty and high-minority schools...

U.S. Ranks Low in the Percent of Students in the Highest Achievement Level (Level 6) in Math

U.S. Ranks $23^{\text {rd }}$ out of 29 OECD Countries in the Math Achievement of the HighestPerforming Students*


Source: Organization for Economic CooperatiPerdeptilement (OECD), PISA 2003 Results, data available at

## U.S. Ranks $23^{\text {rd }}$ out of 29

OECD Countries in the Math Achievement of High-SES Students


Source: Organization for Economic Cooperation and Development (OECD), PISA 2003 Results, data available at

## Problems not limited to math, either.

## Science?

## PISA 2006 Science <br> Of 30 OECD Countries, U.S.A. Ranked $21^{\text {st }}$


$\square$ Higher than U.S. average $\square$ Not measurably different from U.S. average $\square$ Lower than U.S. average

## Immigrants? The U.S.A. does have a larger percentage of immigrants and children of immigrants than most OECD countries



## But ranks $21^{\text {st }}$ out of 30 OECD countries when only taking into account native student* scores

PISA 2006 Science


# Even in problem-solving, something we consider an American strength... 

## U.S.A. Ranks $24^{\text {th }}$ Out of 29 OECD Countries in Problem-Solving

2003 PISA
600


# Only place we rank high? 

## Inequality.

# PISA 2003: Gaps in Performance Of U.S. 15 Year-Olds Are Among the Largest of OECD Countries 

|  | Rank in Performance <br> Gaps Between Highest <br> and Lowest Achieving <br> Students $*$ |
| :--- | :---: |
| Mathematical Literacy | $8^{\text {th }}$ |
| Problem Solving | $6^{\text {th }}$ |

*Of 29 OECD countries, based on scores of students at the $5^{\text {th }}$ and $95^{\text {th }}$ percentiles.

Source: Organization for Economic Cooperation and Development (OECD), PISA 2003 Results, data available at

Among OECD Countries, U.S.A. has the $4^{\text {th }}$ Largest
Gap Between High-SES and Low-SES Students



# These gaps begin before children arrive at the schoolhouse door. 

But, rather than organizing our educational system to ameliorate this problem, we organize it to exacerbate the problem.

## How?

By giving students who arrive with less, less in school, too.

# Some of these "lesses" are a result of choices that policymakers make. 

## National Inequities in State and Local Revenue Per Student

Gap

High Poverty vs.
Low Poverty Districts
High Minority vs.
Low Minority Districts
-\$773
per student
-\$1,122
per student

# In truth, though, some of the most devastating "lesses" are a function of choices that we educators make. 

## Choices we make about what to expect of whom...

## Students in Poor Schools Receive 'A's for Work That Would Earn 'Cs' in Affluent Schools


$\square$ Low-poverty schools ■ High-poverty schools

## Choices we make about what to teach whom...

## African American, Latino \& Native American high school graduates are less likely to have been enrolled in a full college prep track



Full College Prep track is defined as at least: 4 years of English, 3 years of math, 2 years of natural science, 2 years of social science and 2 years of foreign language

## Percent of Students Who Earned Credits in Advanced Math Courses



Source: MPR Research (2010). STEM Coursetaking Among High School Graduates 1990-2005.

## Percent of Students Who Earned Credits in Advanced Science Courses



Source: MPR Research (2010). STEM Coursetaking Among High School Graduates 1990-2005.

## And choices we make about who teaches whom...

## More Classes in High-Poverty, High-Minority Schools Taught By Out-of-Field Teachers

## Percent of Classes Taught by Out 

## $\left[\begin{array}{l} \\ 34 \%\end{array}\right.$



High poverty Low poverty
High minority Low minority
Note: High Poverty school-50\% or more of the students are eligible for free/reduced price lunch. Low-poverty school -15\% or fewer of the students are eligible for free/reduced price lunch.

High-minority school - 50\% or more of the students are nonwhite. Low-minority school-15\% or fewer of the students are nonwhite.

## Poor and Minority Students Get More Inexperienced* Teachers



Note: High poverty refers to the top quartile of schools with students eligible for free/reduced price lunch. Low povertybottom quartile of schools with students eligible for free/reduced price lunch. High minority-top quartile; those schools with the highest concentrations of minority students. Low minority-bottom quartile of schools with the lowest concentrations of minority students

# Results are devastating. 

Kids who come in a little behind, leave a lot behind.

African American and Latino
17 Year-Olds Do Math at Same Levels As White 13 Year-Olds

$\rightarrow$ White 13 Year-Olds $\rightarrow$-African American 17 Year-Olds $\rightarrow$ Latino 17-Year Olds

African American and Latino 17 Year-Olds Read at Same Levels As White 13 Year-Olds

$\rightarrow$ White 13 Year-Olds $\rightarrow$-African American 17 Year-Olds $\rightarrow$-Latino 17 Year-Olds
Note: Long-Term Trends NAEP

And these are the students who remain in school through $12^{\text {th }}$ grade.

Add those all up and throw in college entry and graduation, and...

## Of Every 100 White Kindergartners:

## 94 Graduate from high school or get a GED <br> 67 Complete at least some college <br> 37 Obtain at least a Bachelor's Degree

## (25-to 29-Year-Olds)

## Of Every 100 African American Kindergartners:

## 88 Graduate from High School or get a GED <br> 51 Complete at Least Some College

$20 \begin{aligned} & \text { Obtain at Least a } \\ & \text { Bachelor's Degree }\end{aligned}$
(25-to 29-Year-Olds)

## Of Every 100 Latino Kindergartners:

68
Graduate from high school or get
a GED
36 Complete at least some college

12 Obtain at least a
Bachelor's Degree
(25-to 29-Year-OIds)

## Of Every 100 American Indian/Alaskan Native Kindergartners:

## 71 Graduate from high school

## 30 <br> Complete at least some college

## 12 Obtain at least a Bachelor's Degree

(25 Years Old and Older)

## College Graduates by Age 24

## Young People From 75\% High Income Families <br> Young People From <br> $9 \%$ Low Income Families

# What Can We Do? 

An awful lot of educators have decided that we can't do much.

What We Hear Many Educators Say:

- They're poor
- Their parents don't care
- They come to schools without breakfast
- Not enough books
- Not enough parents

But if they are right, why are lowincome students and students of color performing so much higher in some schools...

## Frankford Elementary School


© 2010 THE EDUCATION TRUST

## Frankford Elementary School Frankford, Delaware

- 523 students in grades K-5
- 25\% African American
- 45\% Latino
- 28\% White
- 78\% Low-Income
- 29\% ELL


## Frankford Elementary

 Closing Gaps, Grade 5 Reading

## Frankford Elementary Closing Gaps, Grade 5 Math



Source: Delaware Department of Education, DSTP Online Reports, http://dstp.doe.k12.de.us/DSTPmart/default.asp

## Frankford Elementary

## Higher Proficiency Rates than the State, 2005 Grade 3 Reading



Source: Delaware Department of Education, DSTP Online Reports, http://dstp.doe.k12.de.us/DSTPmart/default.asp 2005 Grade 3 Math


Source: Delaware Department of Education, DSTP Online Reports,
http://dstp.doe.k12.de.us/DSTPmart/default.asp

## Exceeding Standards at Frankford Elementary



## 2005 orm All Groups of Students Achieving at Frankford Elementary



## George Hall Elementary School

Mobile, AL

- 530 Students
- 100\% African American
- 99\% Low-Income

Four years ago, school was lowest performing in the district and among the bottom few in the state. District reconstituted-and restaffed.

## Rapid Improvement



## George Hall Elementary, Grade 5 Math 2008



## George Hall Elementary, Grade 5 Reading 2008



## Osmond A. Church School (P.S./M.S. 124) Queens, New York



- 1,107 students in grades pK-8
- 36\% African American
- 40\% Asian
- 21\% Latino
- 97\% low-income (more than double the rate for the state)


## Meeting State Math Standards, 2008



## P.S./M.S. 124 <br> Meeting and Exceeding Standards



## Elmont Memorial Junior-Senior High Elmont, New York

- 1,880 students in grades 7-12
- 76\% African American
- 14\% Latino
- 28\% Low-Income



## Elmont: Out-Performing the State Secondary-Level English



## Improvement and High Performance at Elmont Memorial Junior-Senior High



## More Students Graduate at Elmont Memorial Junior-Senior High




## Available at Harvard Education Press (www.hepg.org) or Amazon.com



Karin Chenoweth

Very big differences at district level, too-even in the performance of the "same" group of students.

## Low-Income African American Students

 do Better in Some Districts (NAEP Reading 4th 2003)

* There is a 19 point gap between Poor African American $4^{\text {th }}$ graders in the District of Columbia and Boston (roughly equivalent to 2 years' worth of learning)


## Low-Income African American Students do Better in Some Districts (NAEP Math 8th 2003)



* There is a 28 point gap between Poor African American $8^{\text {th }}$ graders in Los Angeles and Houston (roughly equivalent to 3 years' worth of learning)


## Bottom Line:

At every level of education, what we do matters a lot!

## So where does Michigan fit?

Michigan: Student Performance on State Exams vs. National Assessment Grade 4 Reading 2009


## Grade 4 Reading

Michigan: Student Performance on State Exams vs. National Assessment Grade 8 Math 2009


Grade 8 Math
Source: Wisconsin Department of Education and NAEP Data Explorer ${ }^{10}$ THE EDUCATION TRUST

## Compared with other states?

## Average Overall Scale Scores by State

Grade 4 - NAEP Reading (2009)


## Average White Scale Scores by State

Grade 4 - NAEP Reading (2009)


## Average African-American Scale Scores by State

Grade 4 - NAEP Reading (2009)


## Average Latino Scale Scores by State

Grade 4 - NAEP Reading (2009)


Average Low-Income Scale Scores by State
Grade 4 - NAEP Reading (2009)


## Average Overall Scale Scores by State



## Average White Scale Scores by State



## Average African-American Scale Scores by State



## Average Latino Scale Scores by State



## Average Low-Income Scale Scores by State



## What can we learn from the high performers?

A lot of people in Michigan have been seduced by idea that all of Michigan's problems would go away if we just radically expanded charter schools.

## We've got to get over that myth.

Fall 2009 Math proficiency rates at Michigan's charter elementary and middle schools


Fall 2009 Math proficiency rates at Michigan's regular public elementary and middle schools


Fall 2009 Math proficiency rates at Michigan's regular public and charter elementary and middle schools


## North Godwin Elementary School Wyoming, Michigan

- 414 students in grades preK-6
- 36\% African American
- 23\% Latino
- 37\% White
- 70\% Low-Income



## High Performance Across Groups at North Godwin


\#1. They focus on what they can do, rather than what they can't.

## Some schools and districts get all caught up in "correlations".

Spend endless time tracking:

- Percent of babies born at low birth-weight
- Percent of children born to single moms
- Percent of children in families receiving government assistance
- Education levels of mothers

The leaders in high-performing high poverty schools and districts don't do that.
" Some of our children live in pretty dire circumstances. But we can't dwell on that, because we can't change it. So when we come here, we have to dwell on that which is going to move our kids."

Barbara Adderly, Principal,
M. Hall Stanton Elementary, Philadelphia

# \#2. They don't leave anything about teaching and learning to chance. 

An awful lot of our teachers-even brand new ones-are left to figure out on their own what to teach and what constitutes "good enough" work.

## Result?

## A System That:

- Doesn't expect very much from MOST students
- Expects much less from some types of students than others.
"No," say the education leaders. "They're supposed to teach to standards!"
But when is the last time you looked at a standard?


## Sample Language Arts Standard: Grade 9

"The student will develop and apply expansive knowledge of words and word meanings to communicate."

## Sample Language Arts Standard: Grade 10

"The student will develop and apply expansive knowledge of words and word meanings to communicate."

## Sample Language Arts Standard:

 Grade 11"The student will develop and apply expansive knowledge of words and word meanings to communicate."

## Sample Language Arts Standard: Grade 12

"The student will develop and apply expansive knowledge of words and word meanings to communicate."

## Sample History Standard

"Students understand how science, technology and economic activity have developed, changed and affected societies throughout history."

## What does this do?

Leaves teachers entirely on their own to figure out what to teach, what order to teach it in, HOW to teach it....and to what level.

## ' $A$ ' Work in Poor Schools Would Earn 'Cs' in Affluent Schools


$\square$ Low-poverty schools ■ High-poverty schools

# Students can do no better than the assignments they are given... 

## Grade 10 Writing Assignment

A frequent theme in literature is the conflict between the individual and society. From literature you have read, select a character who struggled with society. In a well-developed essay, identify the character and explain why this character's conflict with society is important.

## Grade 10 Writing Assignment

Write a composition of at least 4 paragraphs on Martin Luther King's most important contribution to this society. Illustrate your work with a neat cover page. Neatness counts.

## Grade 7 Writing Assignment

## Essay on Anne Frank

Your essay will consist of an opening paragraph which introduced the title, author and general background of the novel.

Your thesis will state specifically what Anne's overall personality is, and what general psychological and intellectual changes she exhibits over the course of the book

You might organize your essay by grouping psychological and intellectual changes OR you might choose 3 or 4 characteristics (like friendliness, patience, optimism, self doubt) and show how she changes in this area.

## Grade 7 Writing Assignment



# -My Best Friend: 

## -A chore I hate:

## - A car I want:

## -My heartthrob:

## The Odyssey <br> Ninth Grade

High-level Assignment

## Comparison/Contrast Paper Between Homer's Epic Poem, The Odyssey and the Movie "0 Brother Where Art Thou"

By nature, humans compare and contrast all elements of their world. Why? Because in the juxtaposition of two different things, one can learn more about each individual thing as well as something about the universal nature of the things being compared.

For this 2-3 page paper you will want to ask yourself the following questions: what larger ideas do you see working in The Odyssey and "0 Brother Where Art Thou"? Do both works treat these issues in the same way? What do the similarities and differences between the works reveal about the underlying nature of the larger idea?

# The Odyssey 

## Ninth Grade

## Low-level Assignment

Divide class into 3 groups:
Group 1 designs a brochure titled "Odyssey Cruises". The students listen to the story and write down all the places Odysseus visited in his adventures, and list the cost to travel from place to place.

Group 2 draws pictures of each adventure.
Group 3 takes the names of the characters in the story and gods and goddesses in the story and designs a crossword puzzle.

## High Performing Schools and Districts

- Have clear and specific goals for what students should learn in every grade, including the order in which they should learn it
- Provide teachers with common curriculum, assignments
- Have regular vehicle to assure common marking standards
- Assess students every 4-8 weeks to measure progress
- Act immediately on the results of those assessments


# In other words, they strive for consistency in everything they do. 

 do.}

And they bring that consistency to school discipline, as well.
\#3. They set their goals high.

## Elementary Version...

## M. Hall Stanton Elementary: Percent of $5^{\text {th }}$ Graders ADVANCED



## High School Version...

# Even when they start with high drop out rates, high impact high schools focus on preparing all kids for college and careers 

Education Trust 2005 study, "Gaining Traction, Gaining Ground."

# \#4. Higher performing secondary schools put all <br> kids—not just some—in a demanding high school core curriculum. 

And those demanding courses are not just demanding in name only.

The single biggest predictor post-high school success is the QUALITY AND INTENSITY OF THE HIGH SCHOOL CURRICULUM

Cliff Adelman, The Toolbox Revisited, U.S. Department of Education

## College prep curriculum has benefits far beyond college.

## Students of all sorts will learn more...

## Low Quartile Students Gain More From College Prep Courses*


$■$ Vocational - College Prep
*Grade 8-grade 12 test score gains based on 8th grade achievement.
Source: USDOE, NCES, Vocational Education in the United States: Toward the Year 2000, in Issue Brief: Students Who Prepare for College and Vocation

## They will also fail less often...

## Challenging Curriculum Results in Lower Failure Rates, Even for Lowest Achievers

Ninth-grade English performance, by high/low level course, and eighth-grade reading achievement quartiles


Source: SREB, "Middle Grades to High School: Mending a Weak Link". Unpublished Draft, 2002.

## And they'll be better prepared for the workplace.

## Twenty-two states now making college prep the default curriculum.

# And some districts are going even further. 

## Setting goals to close gaps in AP, IB Enrollment.

All kids in at least some college-level courses.

# \#5. Principals are hugely important, ever present, but NOT the only leaders in the school 

## Elmont Memorial Junior-Senior High Elmont, New York

## In high performing schools...

- Teachers regularly observe other teachers
- Teachers have time to plan and work collaboratively
- New teachers get generous and careful support and acculturation
- Teachers take on many other leadership tasks at the school


# \#6. Good schools know 

 how much teachers matter, and they act on that knowledge.
## 10 Percentile Point Average Difference for Students who have Top and Bottom QuartileTeachers

Figure 2. Teacher Impacts on Math Performance in Third Year By Ranking after First Two Years


Note: Classroom-level impacts on average student performance, controlling for baseline scores, student demographics, and program participatlon. LAUsD elementary teachers, < 4 years' experience.

Source: Gordon, R., Kane, T.J., and Staiger, D.O. (2006). Identifying Effective teachers Using Performance on the Job. Washington, D.C.: The Brookings Institution.
© 2010 THE EDUCATION TRUST

# Students in Dallas Gain More in Math with Effective Teachers: One Year Growth From $3^{\text {rd }}-4^{\text {th }}$ Grade 



## Cumulative Teacher Effects On Students' Math Scores in Dallas (Grades 3-5)



## Students Assigned to Effective Teachers Dramatically Outperformed Students Assigned to Ineffective Teachers



## So, there are VERY BIG

 differences among our teachers.
## BUT...

## We pretend that there aren't.

## The Widget Effect

"When it comes to measuring instructional performance, current policies and systems overlook significant differences between teachers. There is little or no differentiation of excellent teaching from good, good from fair, or fair from poor. This is the Widget Effect: a tendency to treat all teachers as roughly interchangeable, even when their teaching is quite variable. Consequently, teachers are not developed as professionals with individual strengths and capabilities, and poor performance is rarely identified or addressed."

- The New Teacher Project, 2009

In districts that use a two-rating teacher performance evaluation system-most commonly "satisfactory" or "unsatisfactory"-the "unsatisfactory" rating is rarely used.

| Site | S <br> Number of Satisfactory <br> Evaluation Ratings <br> SY03-04-SY07-08 | Number of Unsatisfactory <br> Evaluation Ratings <br> SY03-04-SY07-08 |
| :--- | :---: | :---: |
| Denver ${ }^{3}$ | 2,676 | $22(0.8 \%)$ |
| Jonesboro $^{4}$ | 246 | $0(0 \%)$ |
| Pueblo |  |  |
| Toledo $^{6}$ | 1,284 | $2(0.2 \%)$ |
| 1,768 | $3(0.2 \%)$ |  |

[^0]1 Source: District extant data supplied between April 2008 and March 2009
2 Source: District extant data supplied between April 2008 and March 2009
3 Number evaluation ratings assigned between SY 2003 -04 to SY 2007-08
4 Number of evaluation ratings assigned between SY $2003-04$ to SY $2005-06$
5 Number of evaluation ratings assigned between SY $2005-06$ to SY $2007-08$
6 Number of evaluation ratings assigned between SY $2005-06$ to SY 2007-08

Districts that use multiple evaluation ratings-three or more ratingsregularly award teachers the highest evaluation ratings.

Estimated percent of tenured/non-probationary teachers who received one of the top two highest performance evaluation ratings for evaluations conducted in SY 2007-08.


[^1]So, we paper over the differences among our teachers AND...we continue to assign our weakest to the kids who need the strongest.

## Math Classes at High-Poverty and High- Minority Schools More Likely to be Taught by Out of Field* Teachers



## Students at High-Minority Schools More Likely to Be Taught By Novice* Teachers



## Tennessee: High poverty/high minority schools have fewer of the "most effective" teachers and more "least effective" teachers



## Low-Achieving Students are More Likely to be Assigned to Ineffective Teachers than Effective Teachers



## High performing schools and districts...

- Work hard to attract and hold good teachers
- Make sure that their best are assigned to the students who most need them
- Chase out teachers who are not "good enough" for their kids.


# \#7. Good schools are nice places to be-both for teachers and for students. 

Saying that they are nice, doesn't mean that they are easy places to work. Principals and teachers work hard. But there is also a kind of shared sense of mission and camaraderie.

## For students, they are even more different.

"At my old school, it was functional for me to act stupid. If I did that, nobody expected anything of me and I could kind of just slip by. But at this school, nobody lets me act stupid. Not the principal. Not my teachers. Not the other students."
--Elmont Student

## None of this is magic.

It's mostly just common sense. The only thing that is NOT common sense is that we don't act on this at scale.

The children in the pictures that follow are some of the lucky ones. Though they are poor...they live on the high end of the gap because they attend schools that enable their students to soar.

© 2010 THE EDUCATION TRUST

© 2010 THE EDUCATION TRUST




# But most of the children who look like them aren't 

 so lucky. They live on the bottom side of the gap.Not because they couldn't learn...but because we didn't bother to teach them.

# The most important agenda for all of us? 

Turning that around.

## For more information, visit www.edtrust.org

1250 H Street N.W. Suite 700
Washington, D.C. 20005
202/293-1217


[^0]:    All data for tenured/non-probationary teachers.

[^1]:    Source: District evaluation data supplied by Cincinnati Public Schools and Rockford Public Schools human resources departments from October 2008 to March 2009.

