RAISING ACHIEVEMENT AND CLOSING GAPS BETWEEN GROUPS:

Lessons from Schools and Districts on the Performance Frontier

The Education Trust

New York City Department of Education

NYC, NY

January, 2012

America: Two Enduring Stories

1. **Land of Opportunity**:

Work hard, and you can become anything you want to be.

2. Generational Advancement:

Through hard work and sacrifice, each generation of parents will be able to assure a better life—and better education—for their children.

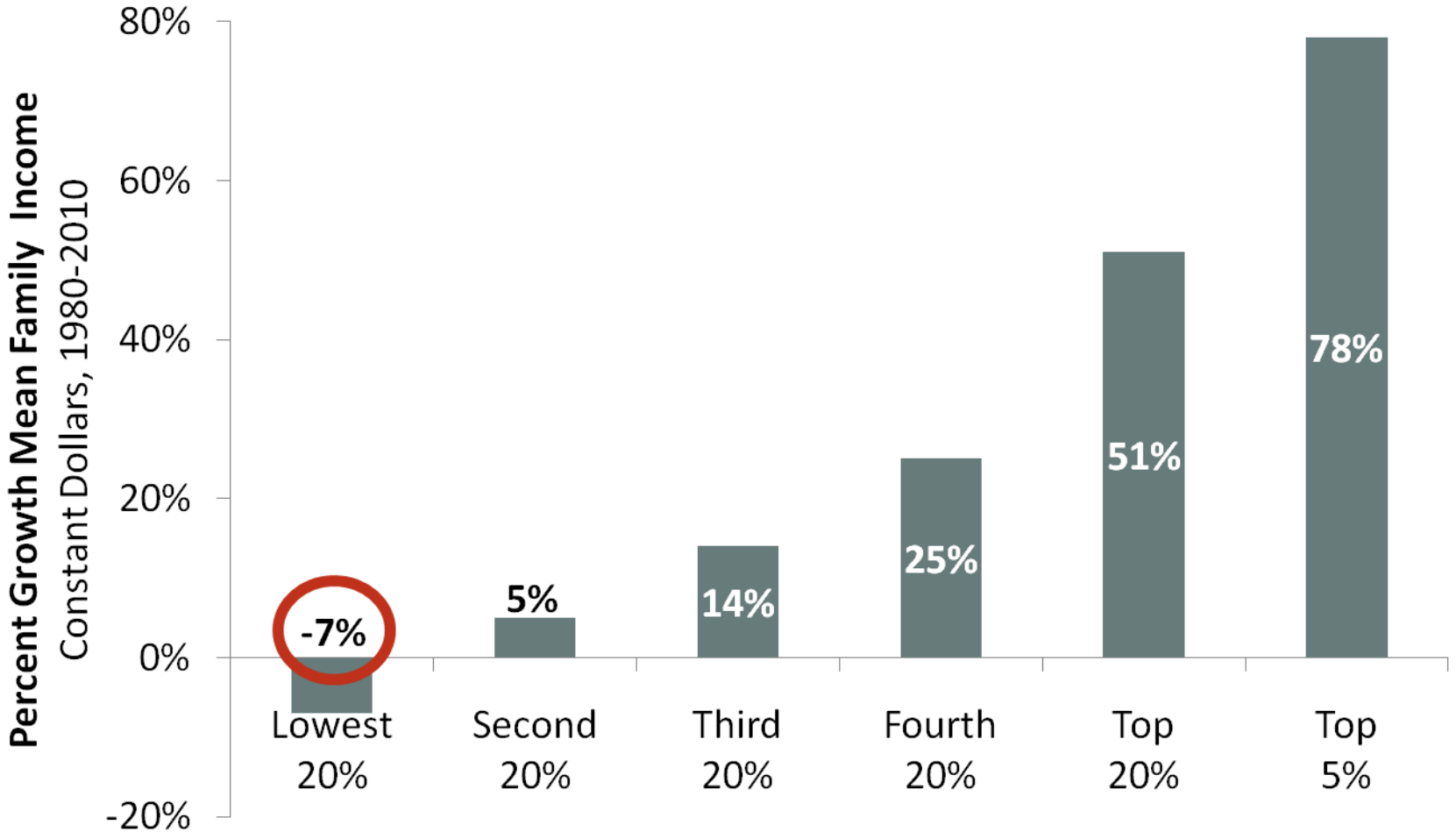
Powerful

Pervasive

Wrong

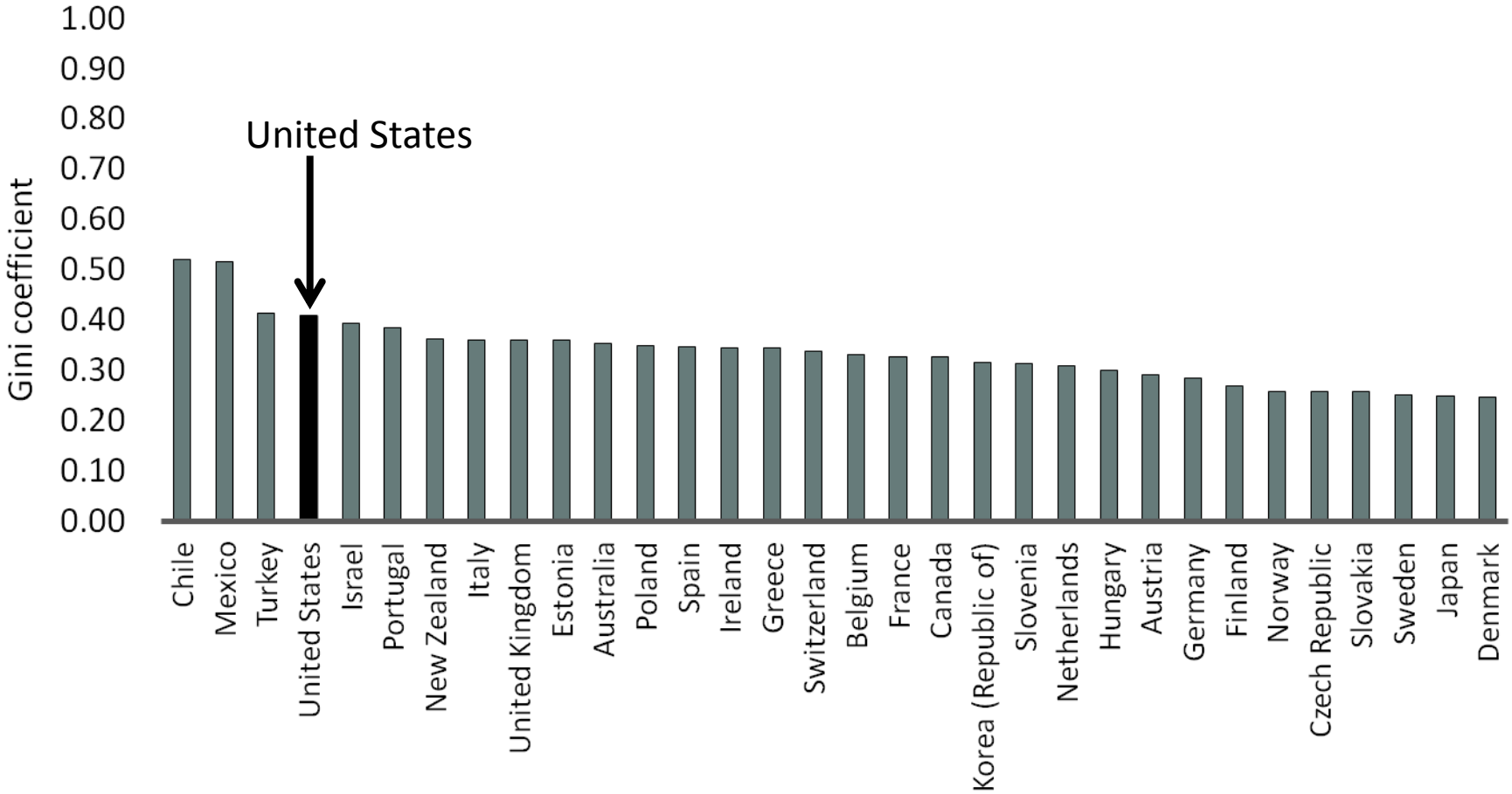
Source:

Over past 30 years, earnings among the lowest income families have declined—while biggest increases have occurred at the top



Source: The College Board, "Trends in College Pricing 2011" (New York: College Board, 2010), Figure 16A.

U.S. has the fourth-highest income inequality among OECD nations



Note: Gini coefficient ranges from 0 to 1, where 0 indicates total income equality and 1 indicates total income inequality

Source: United Nations, UNdata, http://data.un.org/DocumentData.aspx?q=gini&id=230

For people of color, the past four years have brought an economic Tsunami.

Real Median Annual Income

	2007	2011	Percent Change
Black Head of Household	35,072	31,784	- 9.4%
Hispanic Head of Household	41,945	39,901	- 4.9%
White Head of Household	59,111	56,320	- 4.7%

Source:

2010 Poverty Rates

Black	**27%**
Latino	**26%**
Asian	**12.1%**
White	**9.9%**

Source:

Change in Median Wealth, 2005-2009

Hispanic Households	**Down 66%**
Black Households	**Down 53%**
Asian Households	**Down 54%**
White Households	**Down 16%**

Source:

Median Wealth of White Families

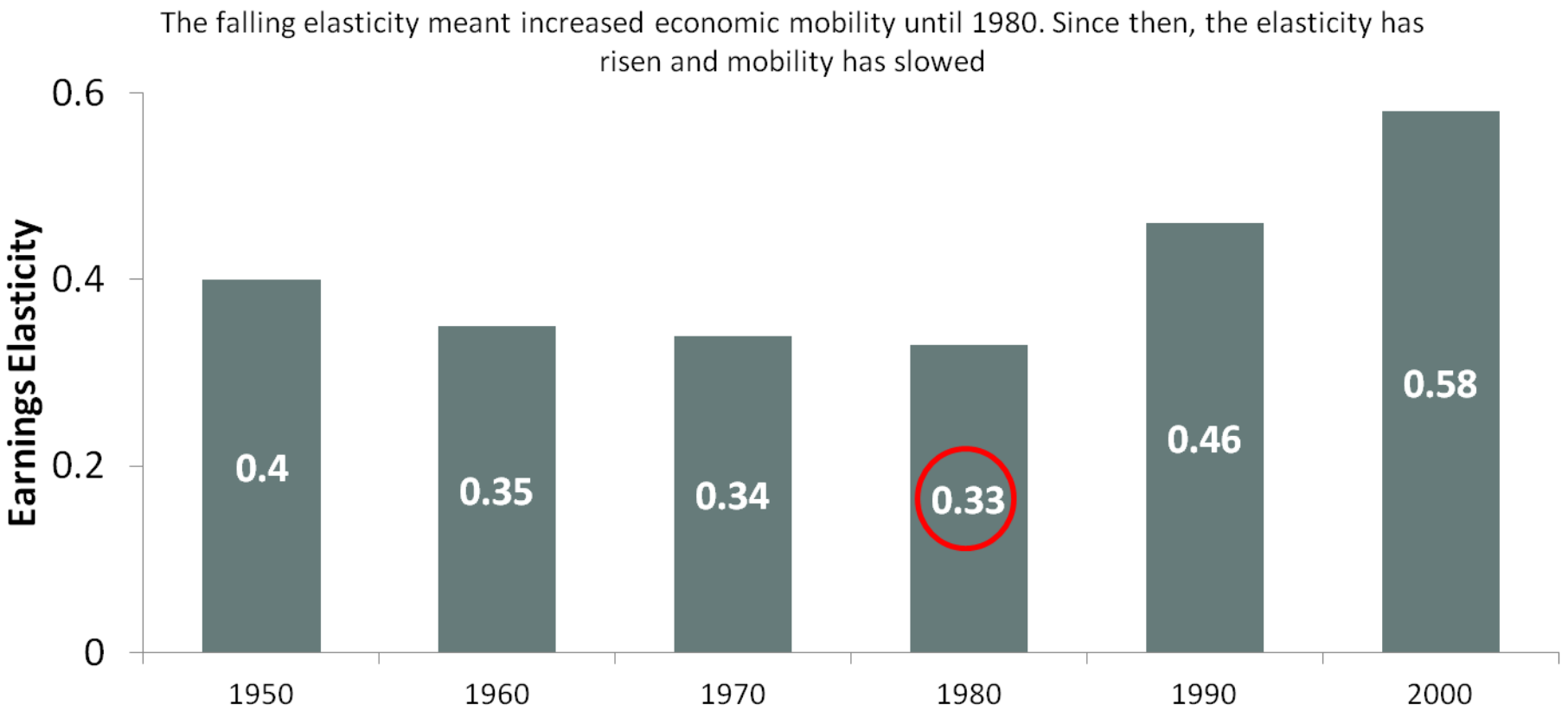
20 X that of African Americans

18 X that of Latinos

Source:

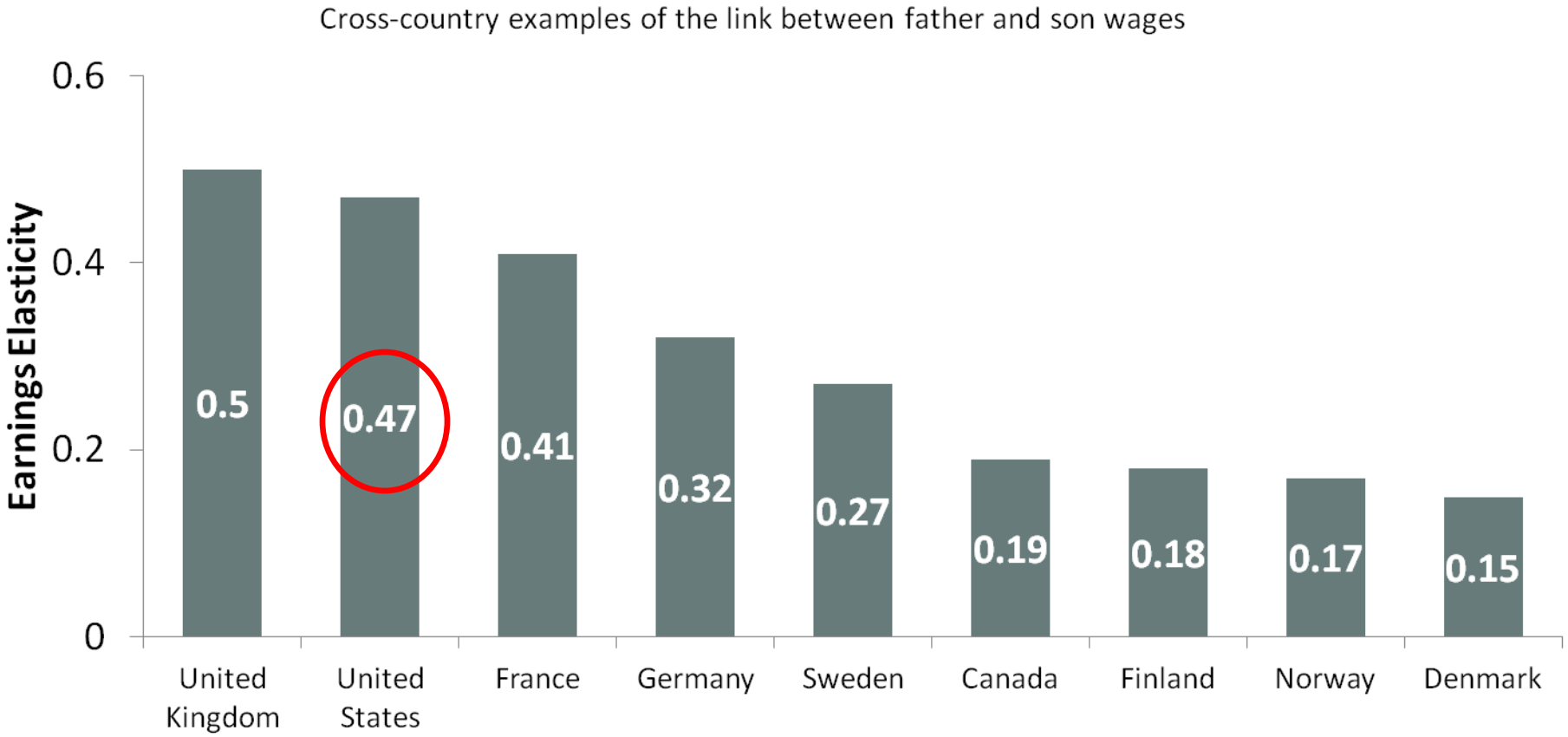
Not just wages, but mobility as well.

US intergenerational mobility was increasing until 1980, and has sharply declined since



Source: Aaronson and Mazumder. *Intergenerational Economic Mobility in the U.S.. 1940-2000.* Federal Reserve Bank of Chicago WP 2005-12: Dec. 2005.

The US now has one of lowest rates of intergenerational mobility



Source: Hertz, Tom. *Understanding Mobility in America*. Center for American Progress: 2006.

What does that mean?

That we have essentially hollowed out the middle class, and are fast becoming a country where those at the top stay at the top and those at the bottom stay there, too.

At macro level, better and more equal education is not the only answer.

But at the individual level, it really is.

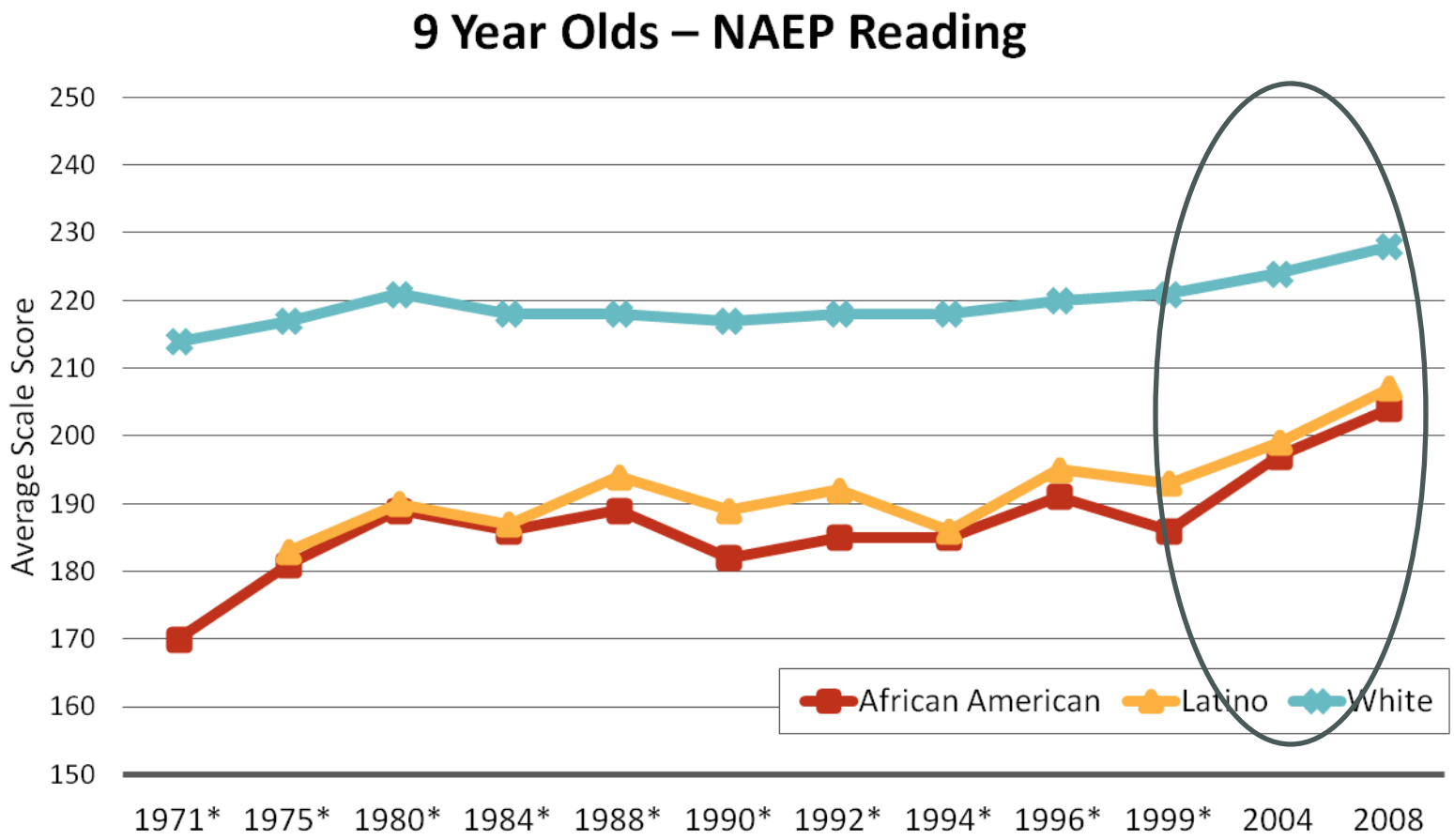
What schools and colleges do, in other words, is hugely important to returning this country to the principles on which it was founded.

So, how are we doing?

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.

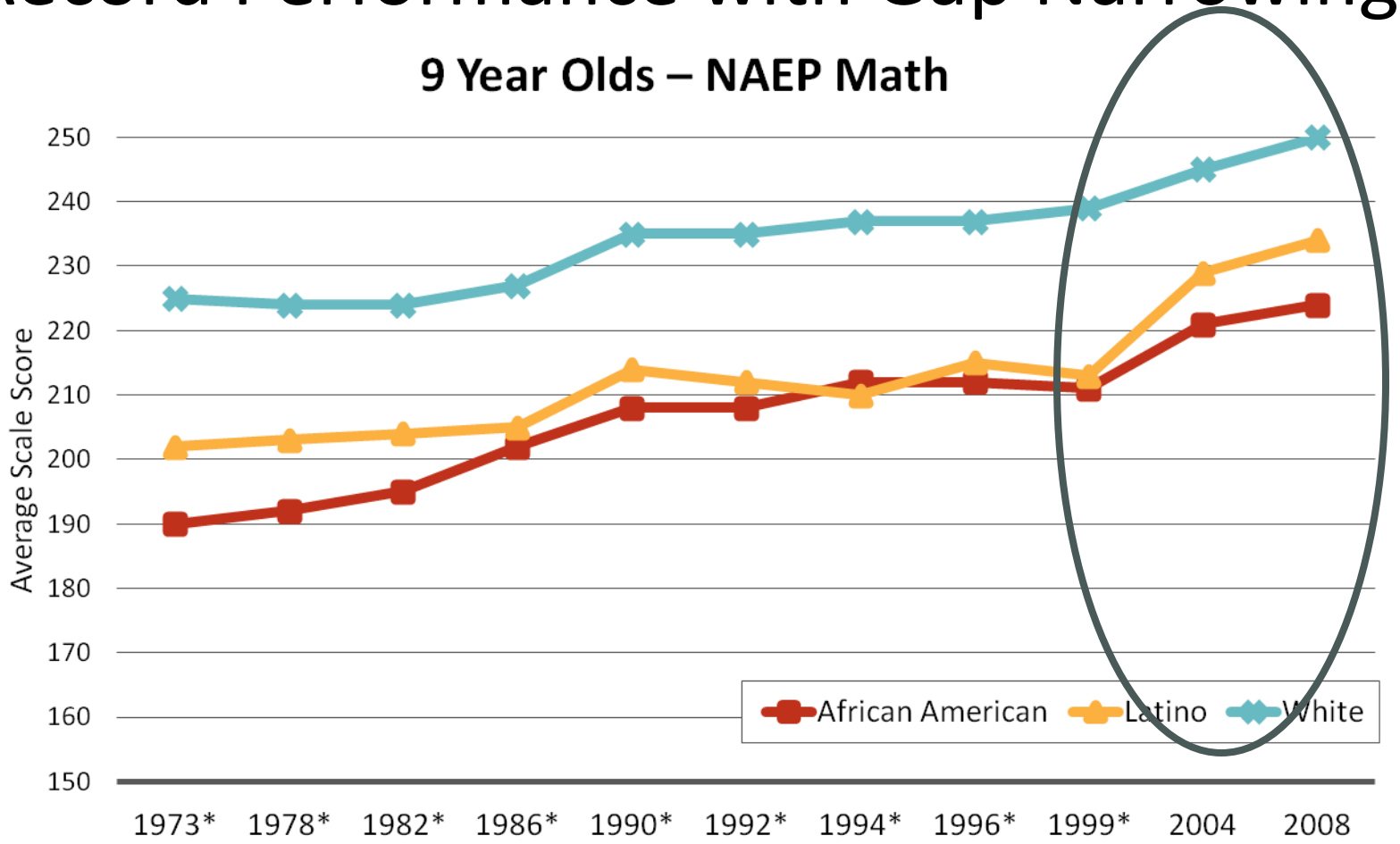
4th Grade Reading: Record Performance with Gap Narrowing



*Denotes previous assessment format

Source: NAEP 2008 Trends in Academic Progress, NCES

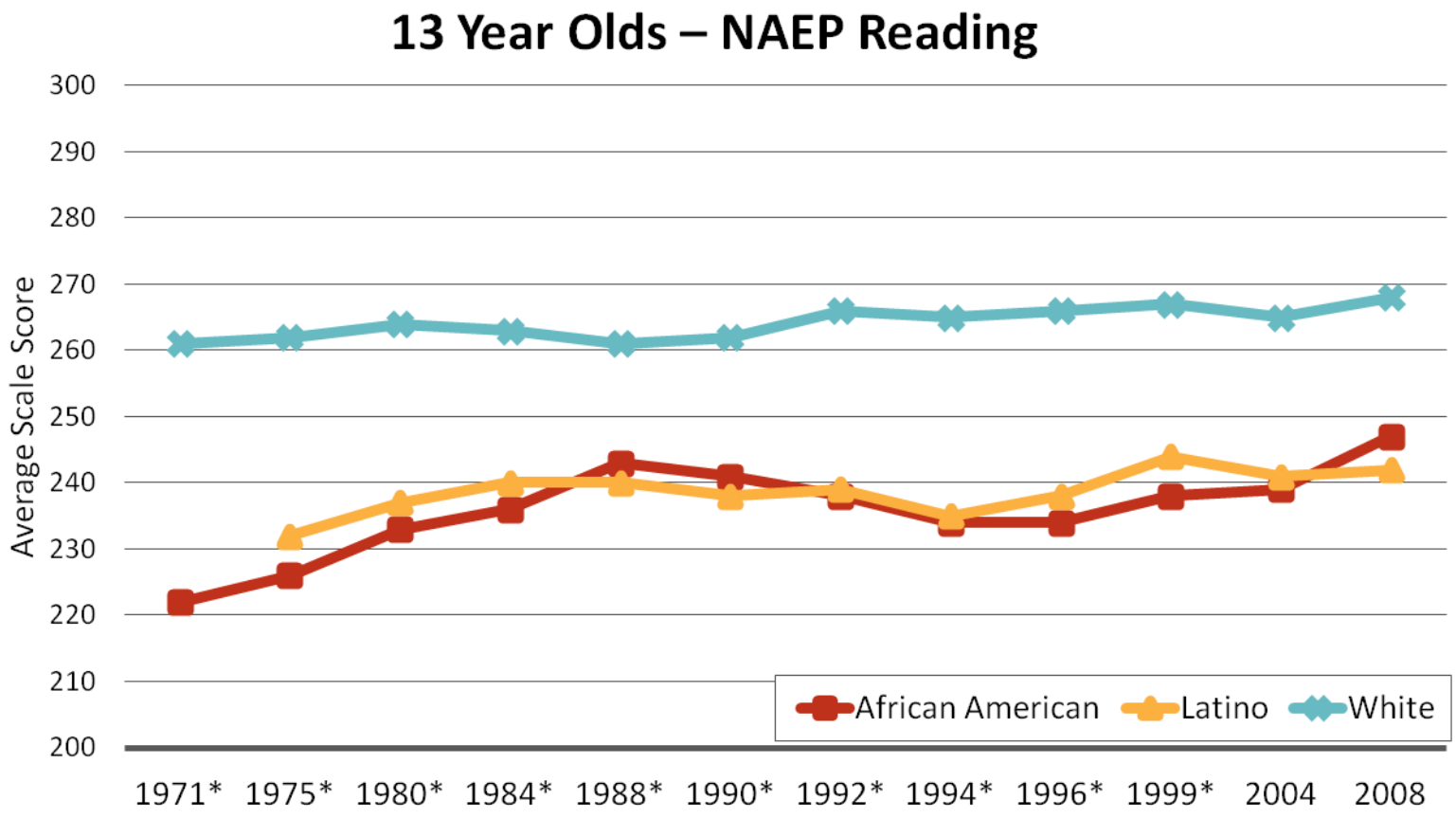
4th Grade Math: Record Performance with Gap Narrowing



*Denotes previous assessment format

Source: NAEP 2008 Trends in Academic Progress, NCES

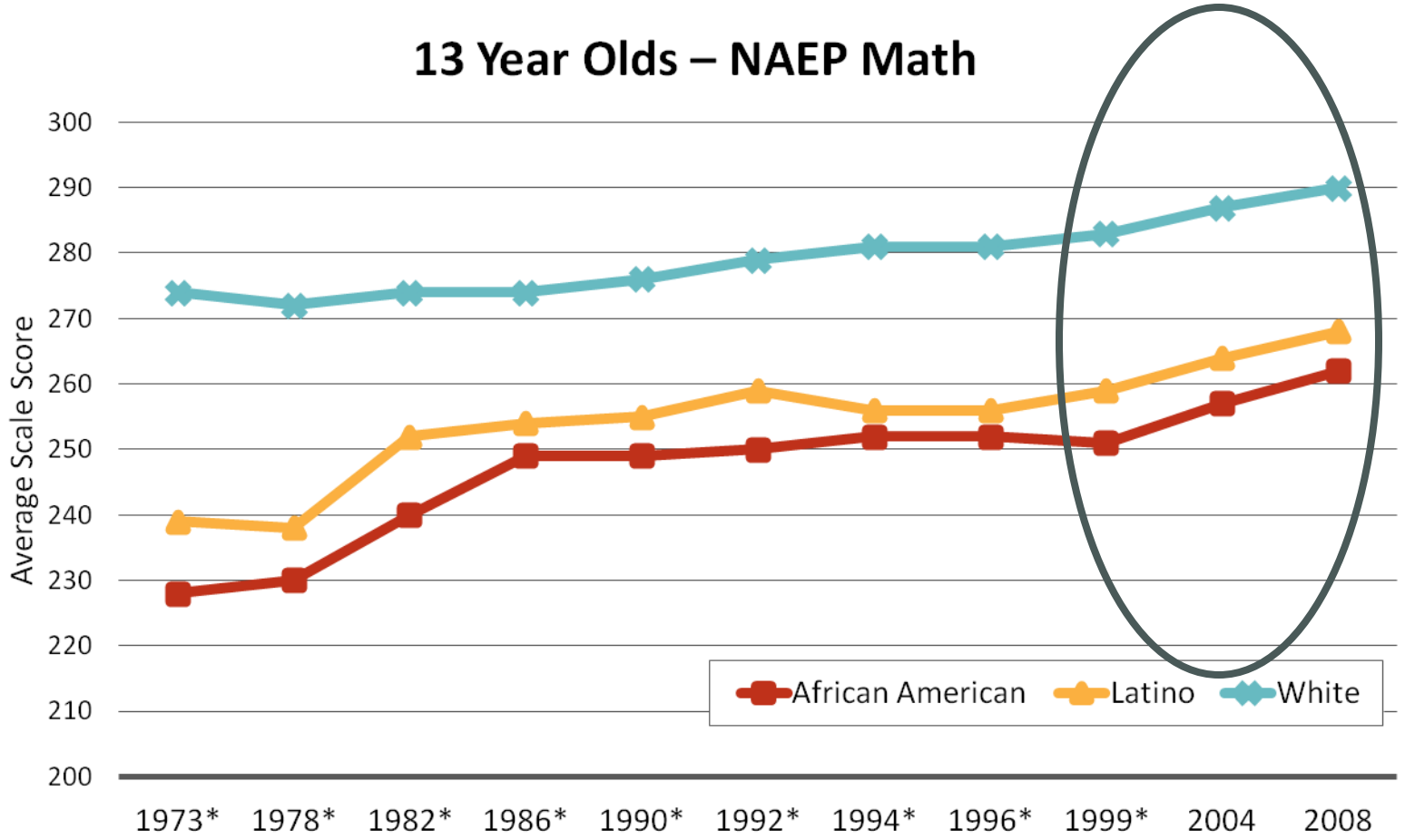
8th Grade Reading: Recent Gap Narrowing for Blacks, Less for Latinos



*Denotes previous assessment format

Source: NAEP 2008 Trends in Academic Progress, NCES

8th Grade Math: Progress for All Groups, Some Gap Narrowing

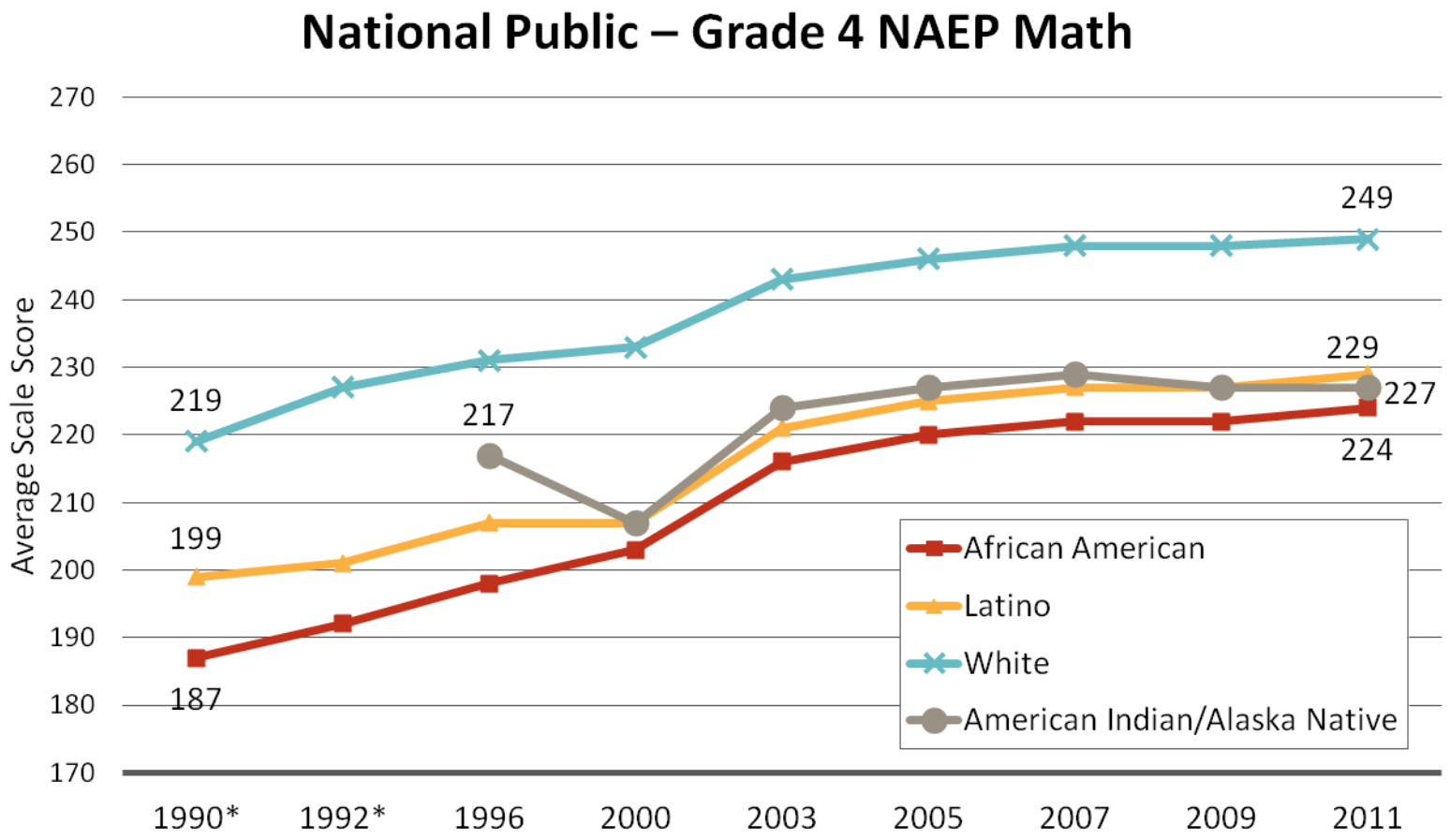


*Denotes previous assessment format

Source: NAEP 2008 Trends in Academic Progress, NCES

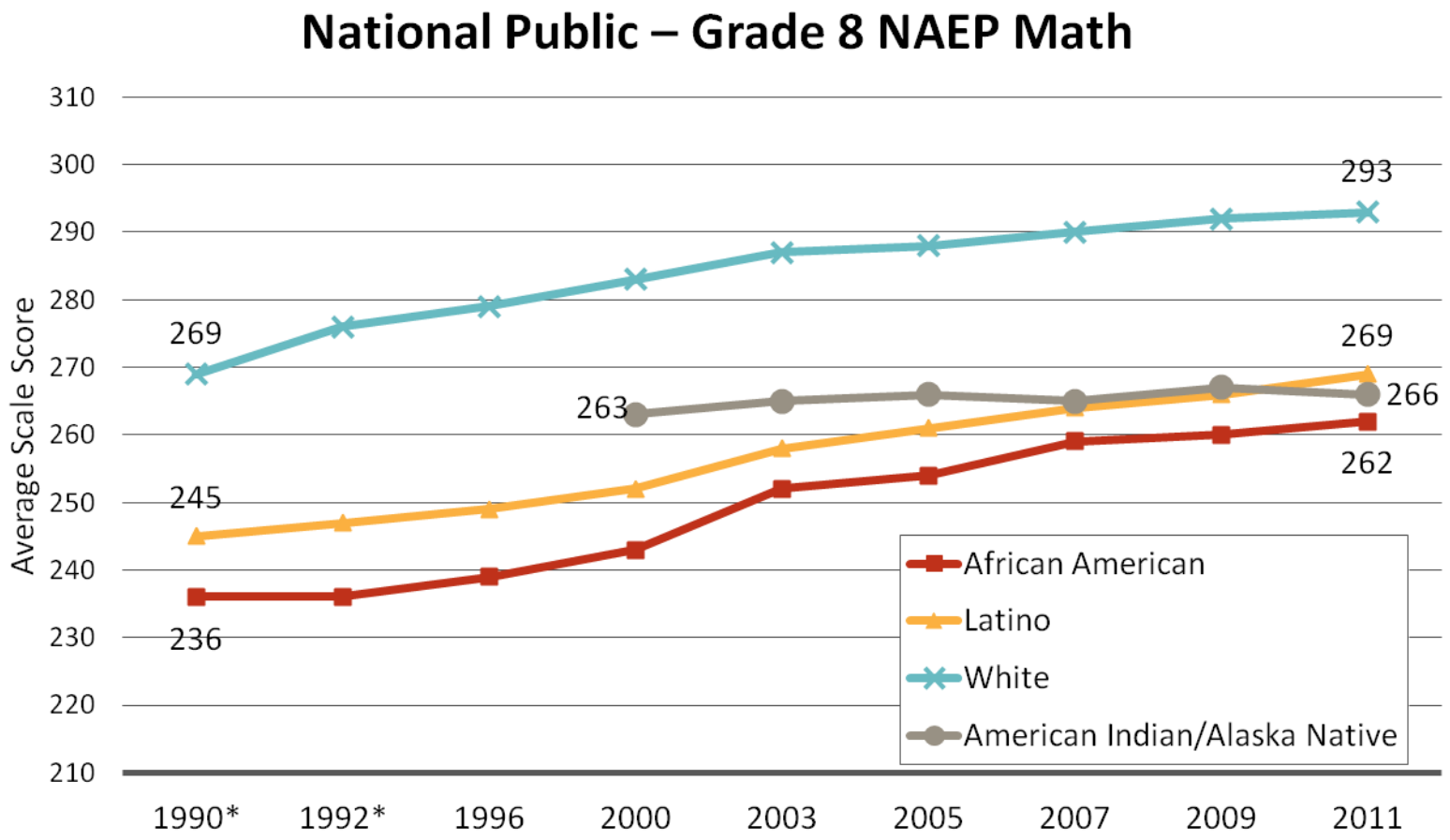
Same pattern on Main NAEP exams.

All groups have improved since 1990, and gaps between groups have narrowed



*Accommodations not permitted
Source: NAEP Data Explorer, NCES (Proficient Scale Score = 249)

Over the last decade, all groups have steadily improved and gaps have narrowed

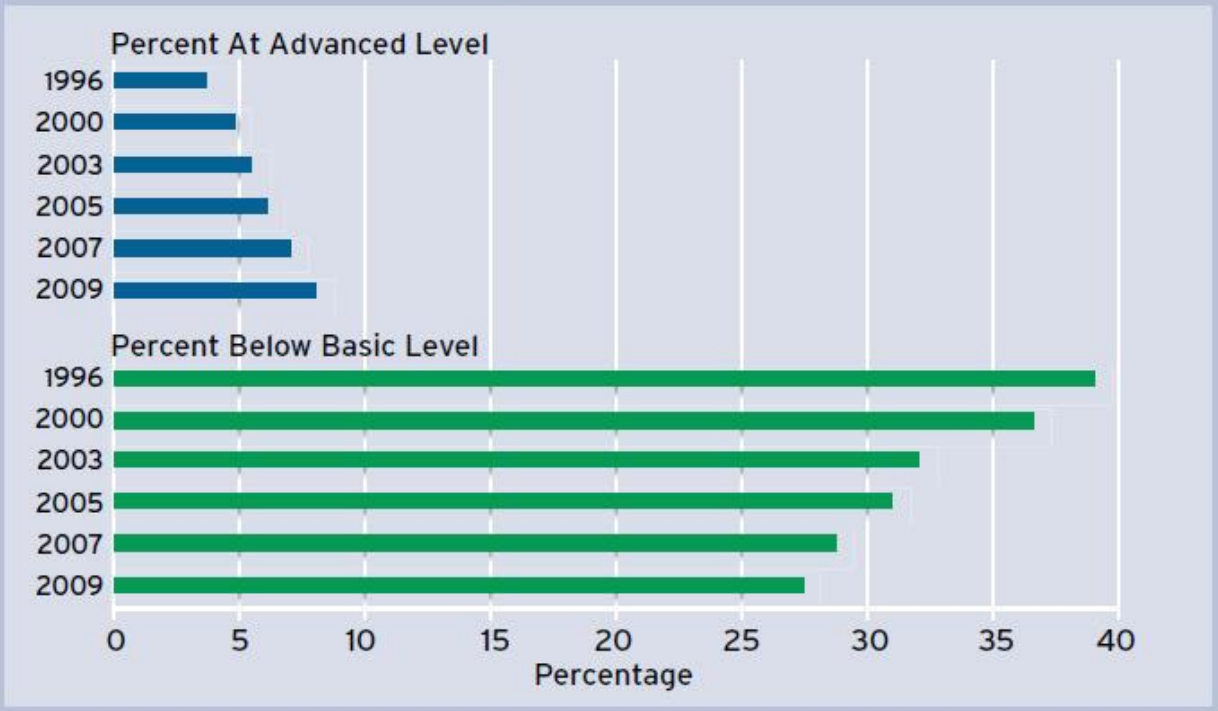


*Accommodations not permitted

Source: NAEP Data Explorer, NCES (Proficient Scale Score = 299)

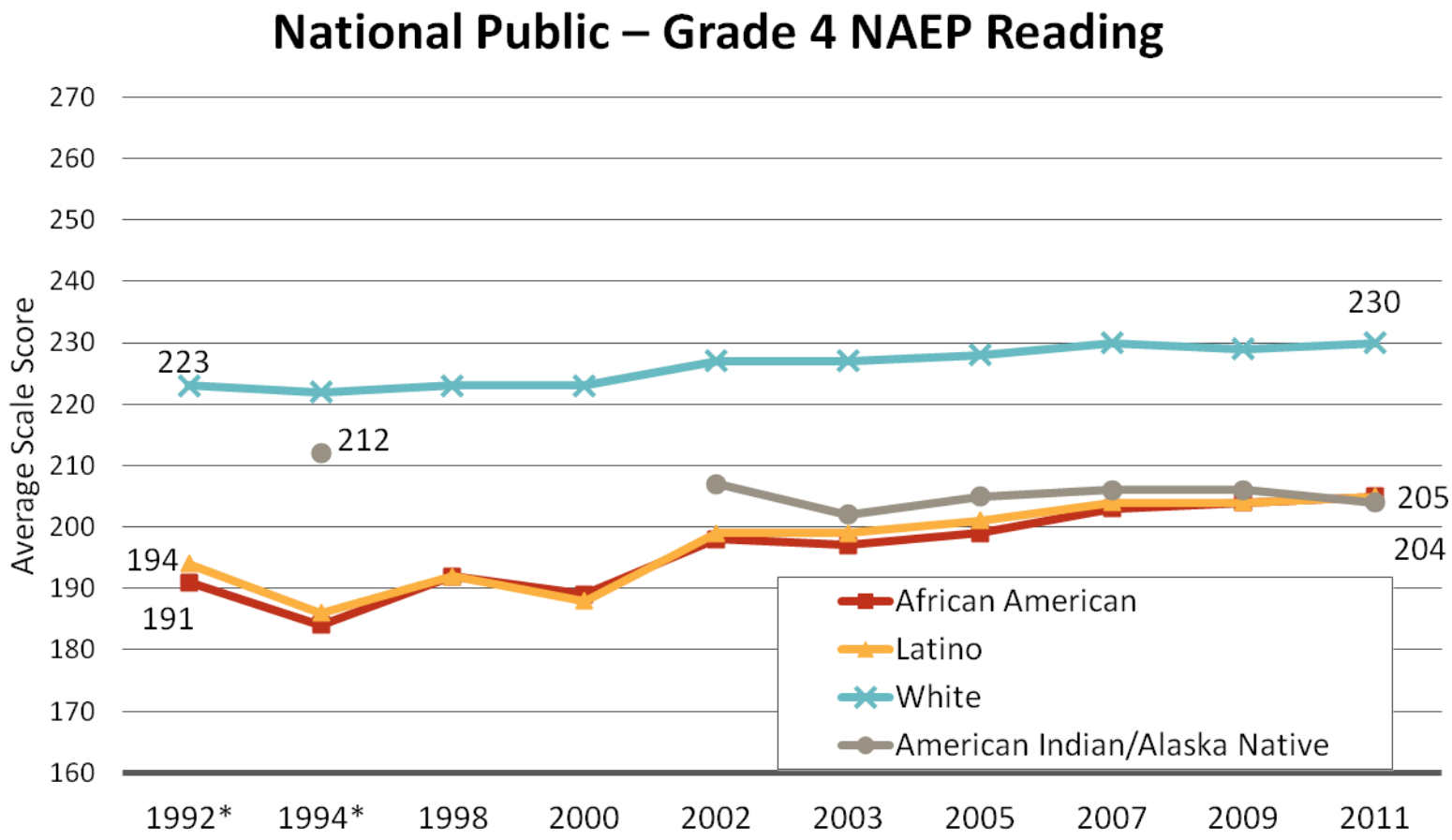
Gains Are Not Just Among Low-Achievers: Increase at the Top, Too

Percentage of 8th grade students at the advanced level and below basic level in mathematics on National Assessment of Educational Progress, 1996 to 2009. (Figure 5)



Source: Hanushek, Peterson and Woesmann. "US Math Performance in Global Perspective; November, 2010

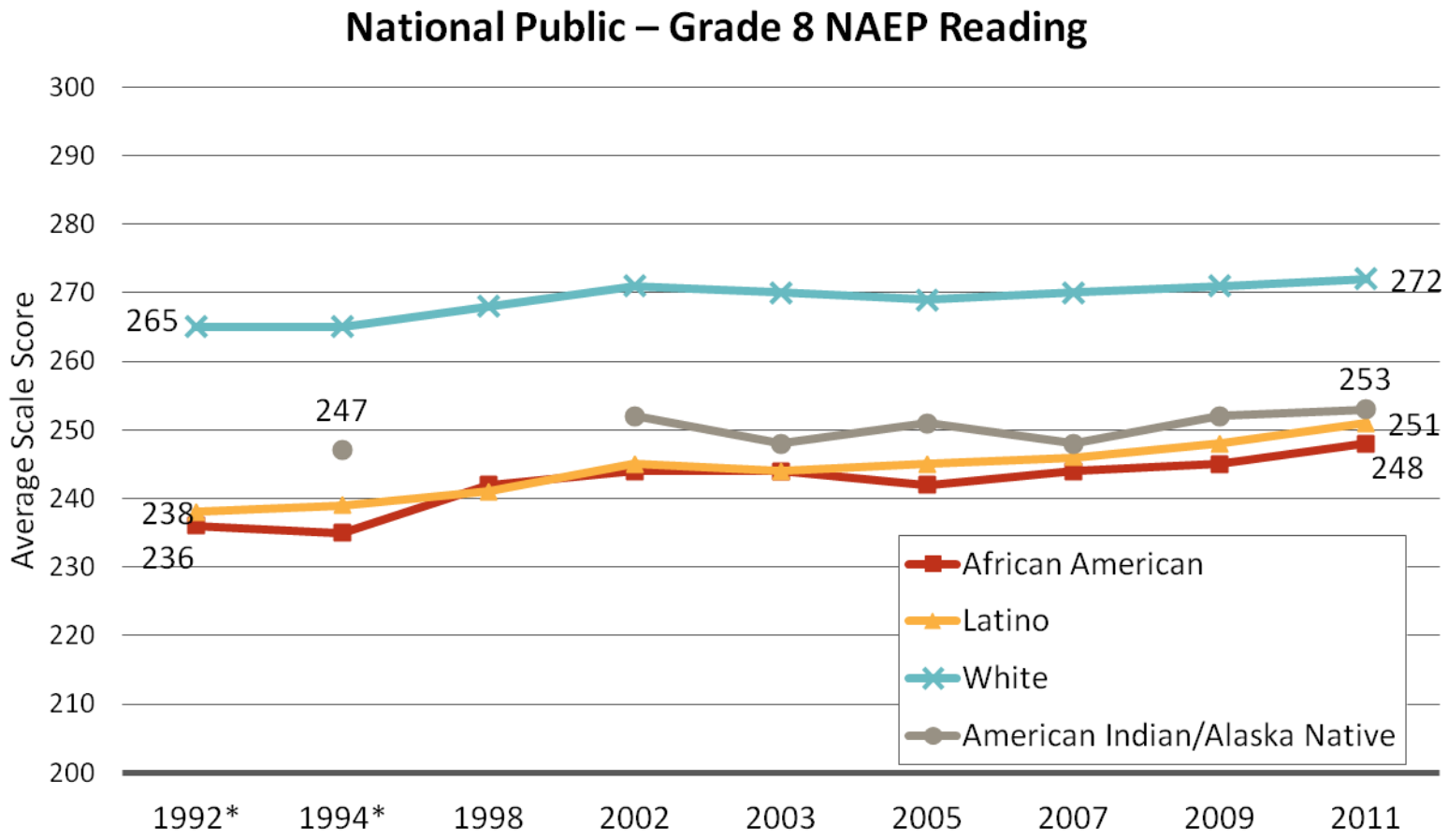
Some gap-closing over last decade



*Accommodations not permitted

Source: NAEP Data Explorer, NCES (Proficient Scale Score = 238)

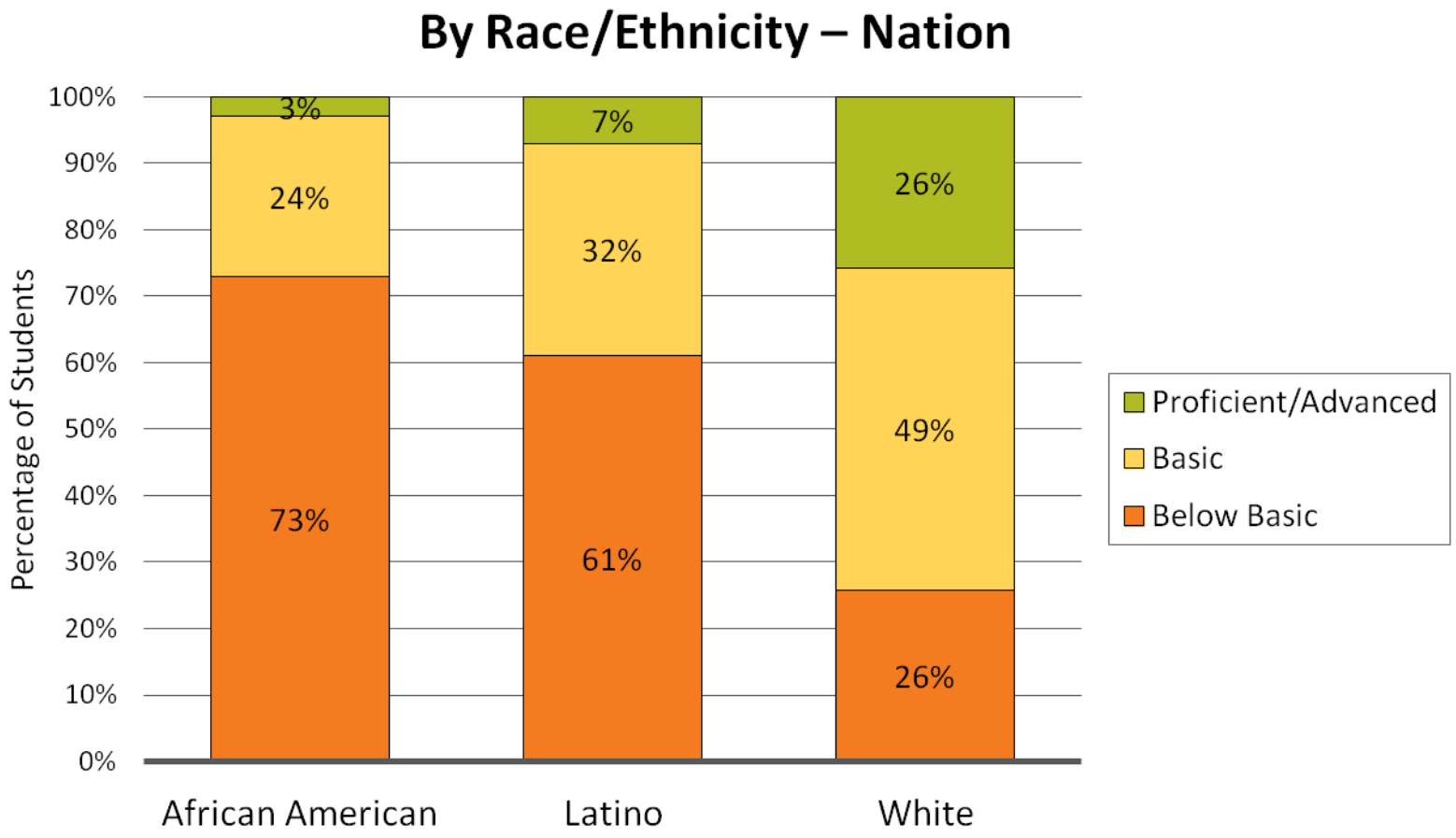
Some gap closing over the last decade



*Accommodations not permitted
Source: NAEP Data Explorer, NCES (Proficient Scale Score = 281)

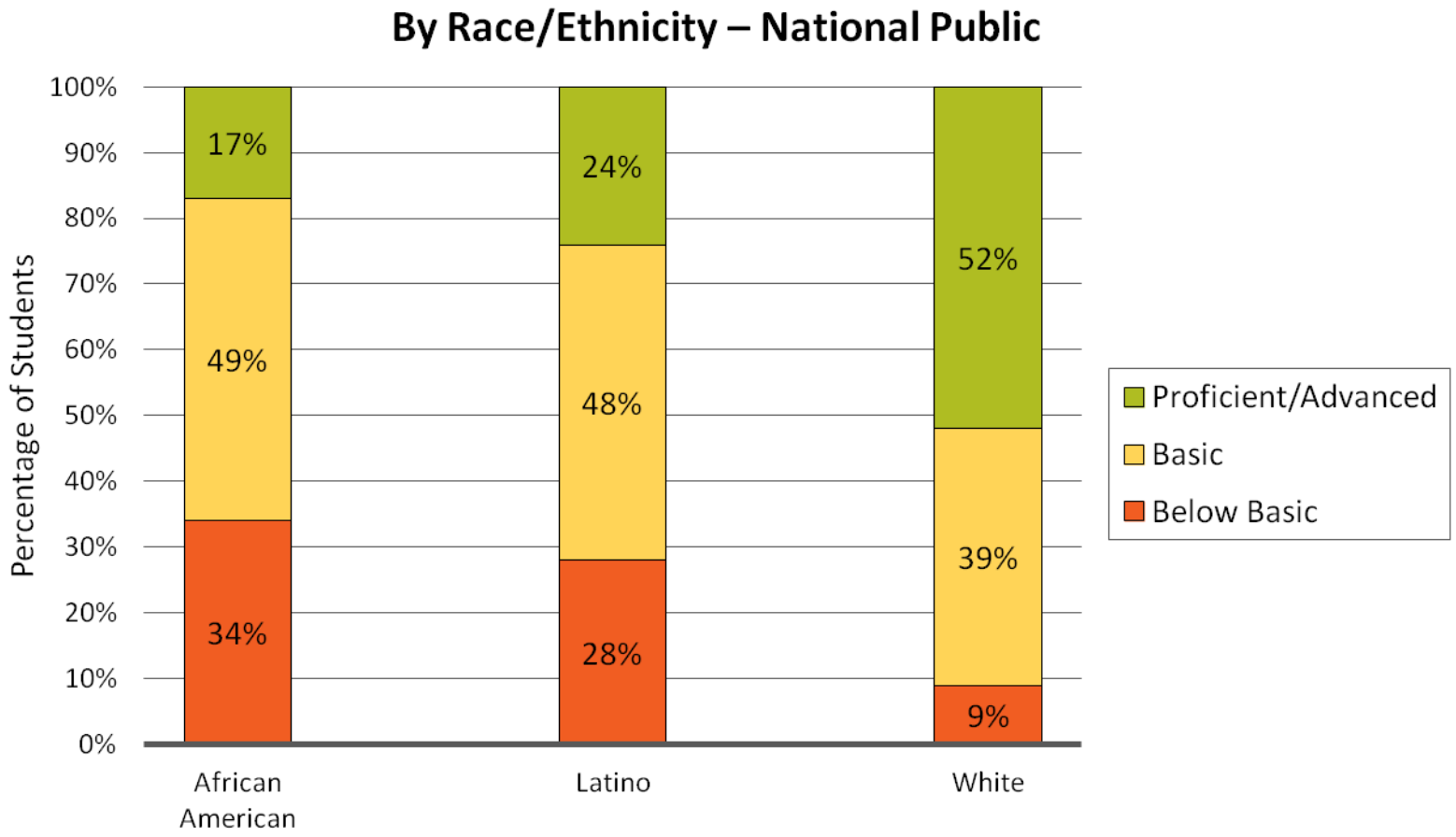
What do these changes mean for individual children?

1996 NAEP Grade 4 Math

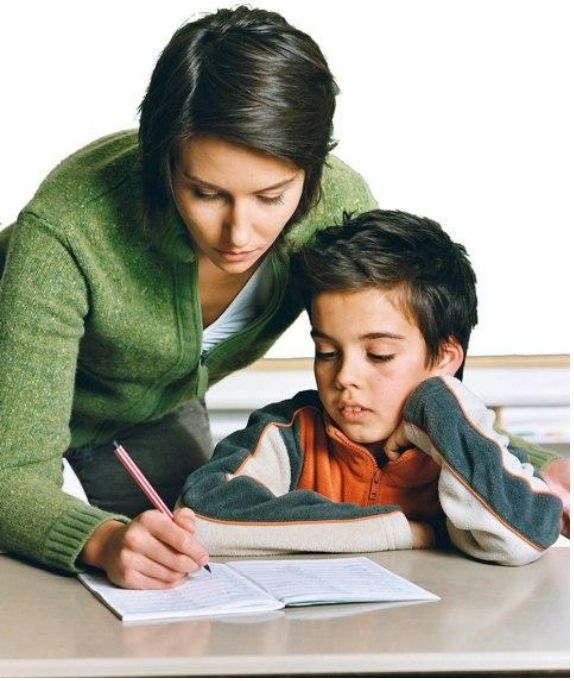


Source: NAEP Data Explorer, NCES

2011 NAEP Grade 4 Math



Source: National Center for Education Statistics, NAEP Data Explorer, http://nces.ed.gov/nationsreportcard/nde/



Bottom Line:

When we really focus on something, we make progress!

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

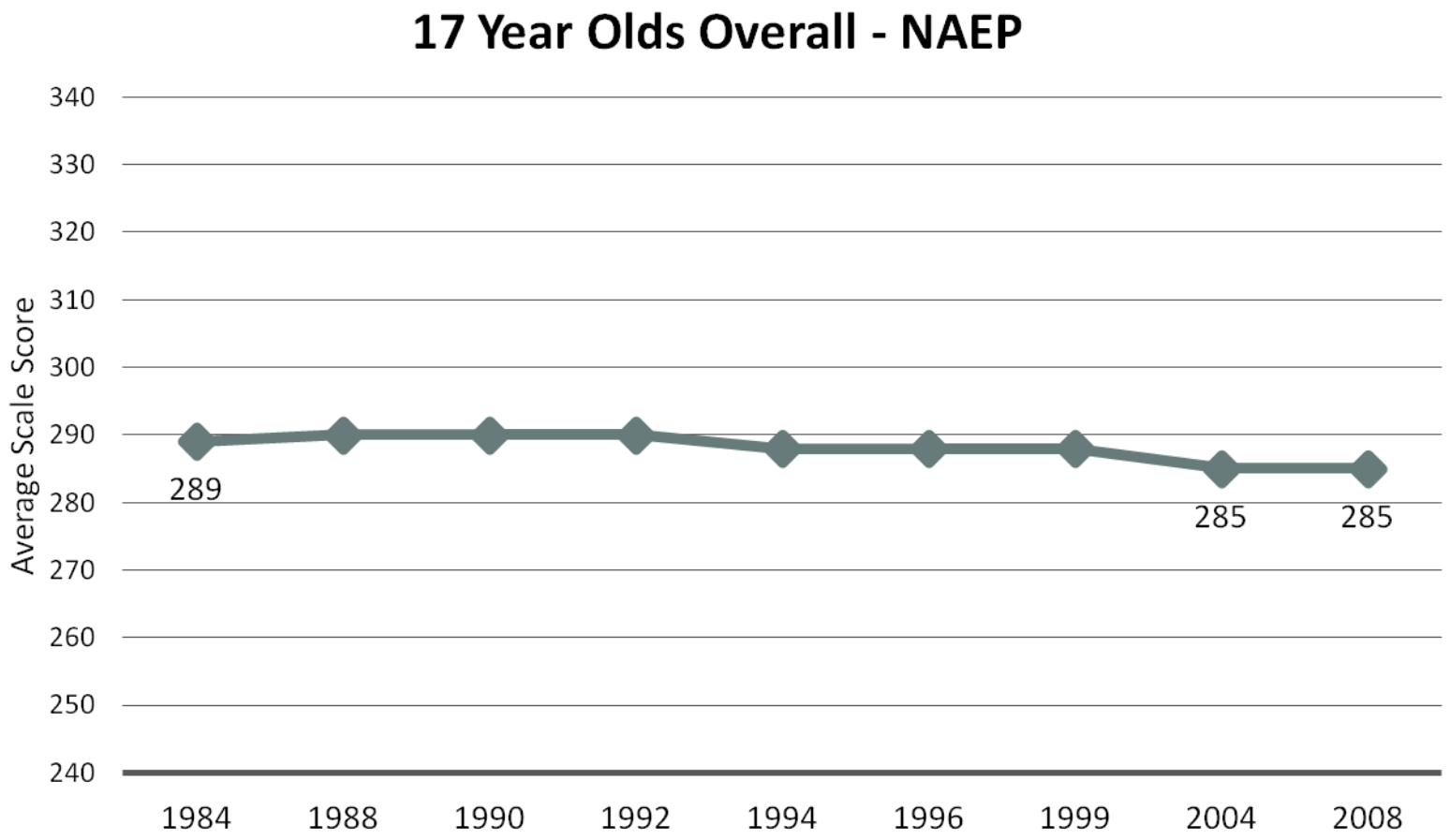
Too many youngsters still enter high school way behind.

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

The same is NOT true

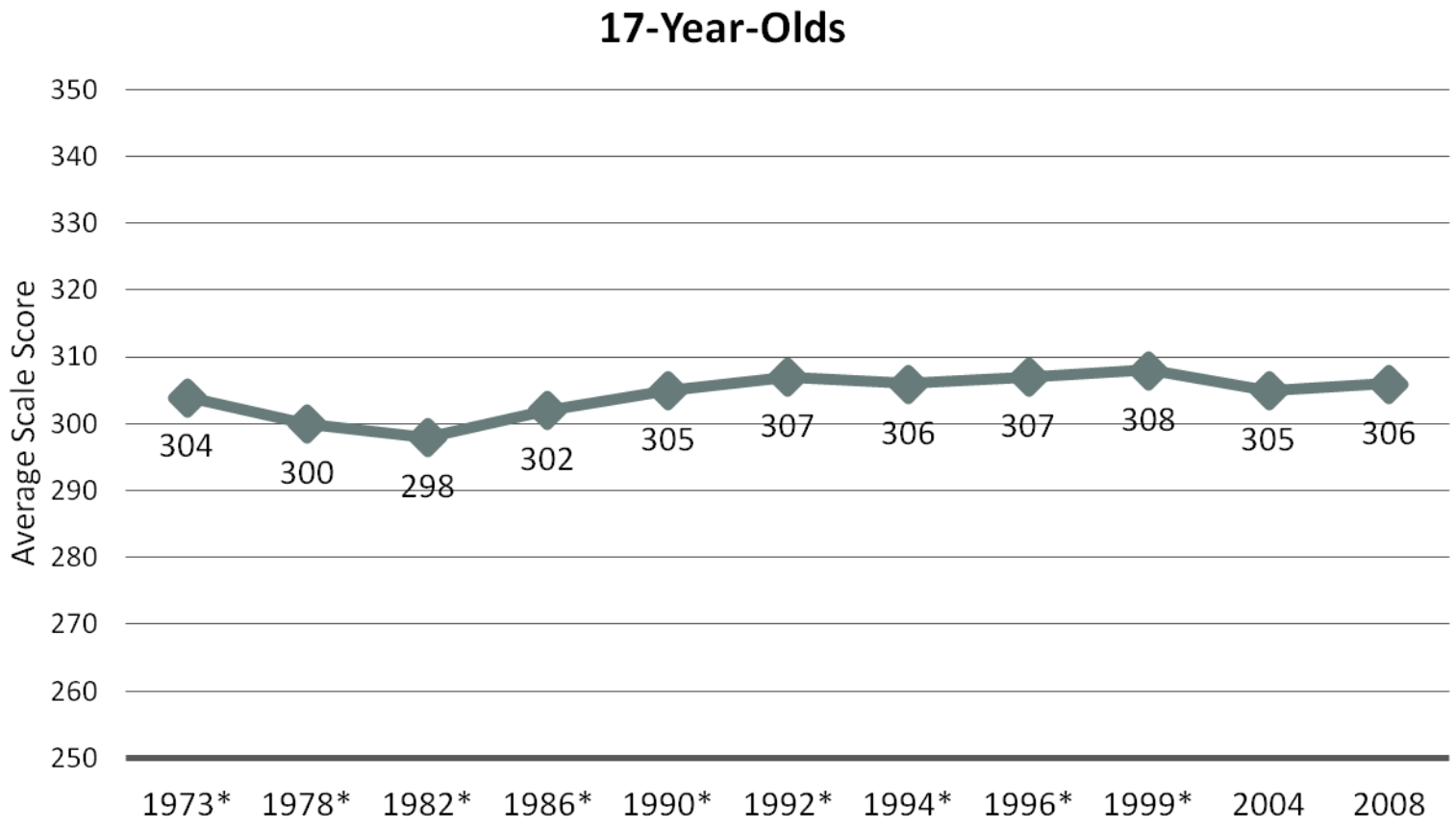
of our high schools.

Achievement Flat in Reading



Source: NAEP Long-Term Trends, NCES (2004)

Math achievement flat over time

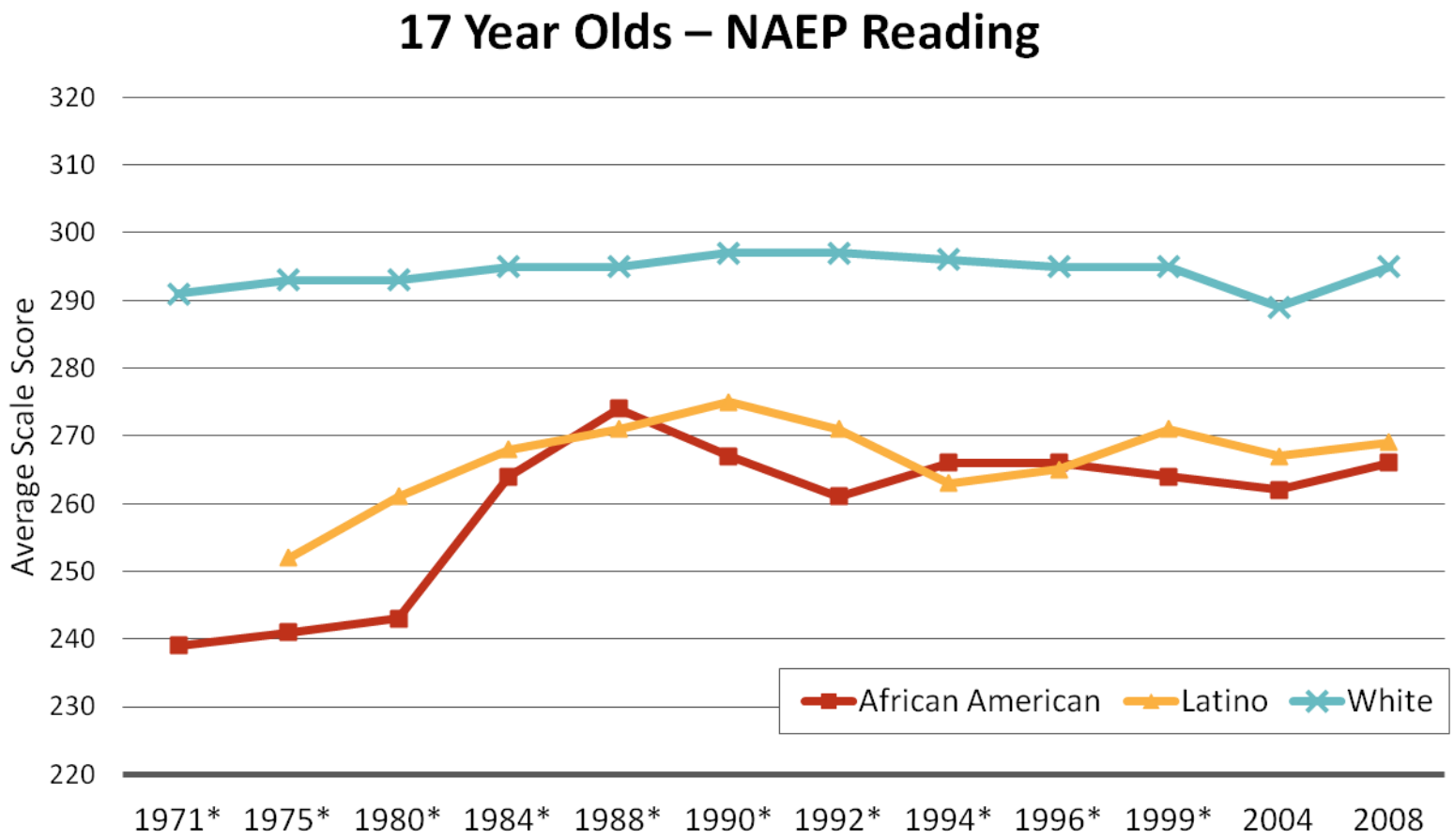


* Denotes previous assessment format

Source: National Center for Education Statistics, NAEP 2008 Trends in Academic Progress

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

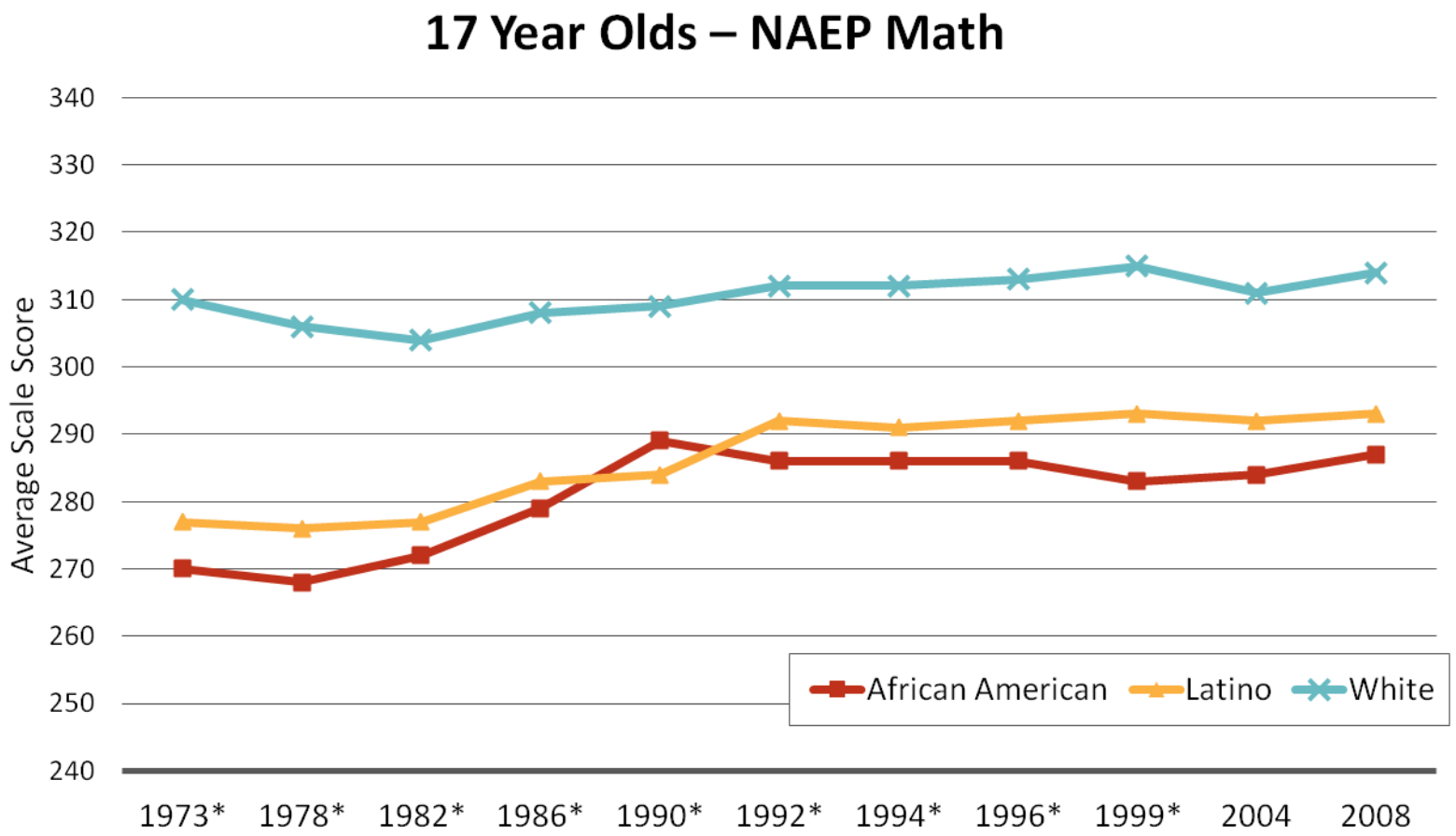
12th Grade Reading: No Progress, Gaps Wider than 1988



*Denotes previous assessment format

Source: NAEP 2008 Trends in Academic Progress, NCES

12 Grade Math: Results Mostly Flat Gaps Same or Widening



*Denotes previous assessment format

Source: NAEP 2008 Trends in Academic Progress, NCES

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

PISA Performance

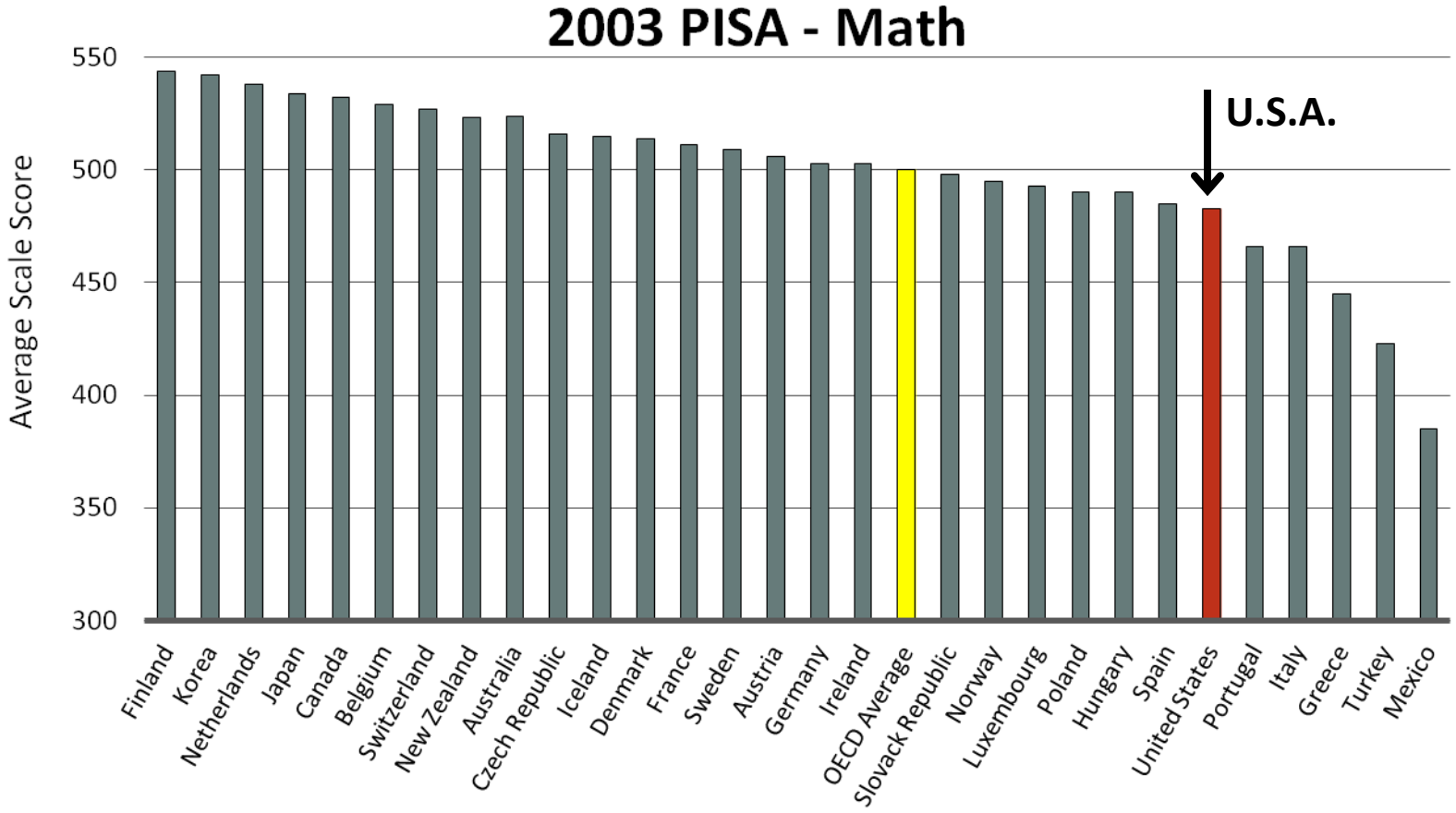
U.S.A. Ranks Near Bottom, Has Mostly Fallen Since 2000

Subject	2000 Rank (out of 26)	2003 Rank (out of 26)	2006 Rank (out of 26)	2009 Rank (out of 26)
Math	17th	22nd	22nd	Tied 20th
Science	13th	Tied for 17th	19th	13th
Reading	14th	14th	n/a	Tied 10th

Source: Organization for Economic Cooperation and Development (OECD), PISA 2006 Results, http://www.oecd.org/

A closer look at math

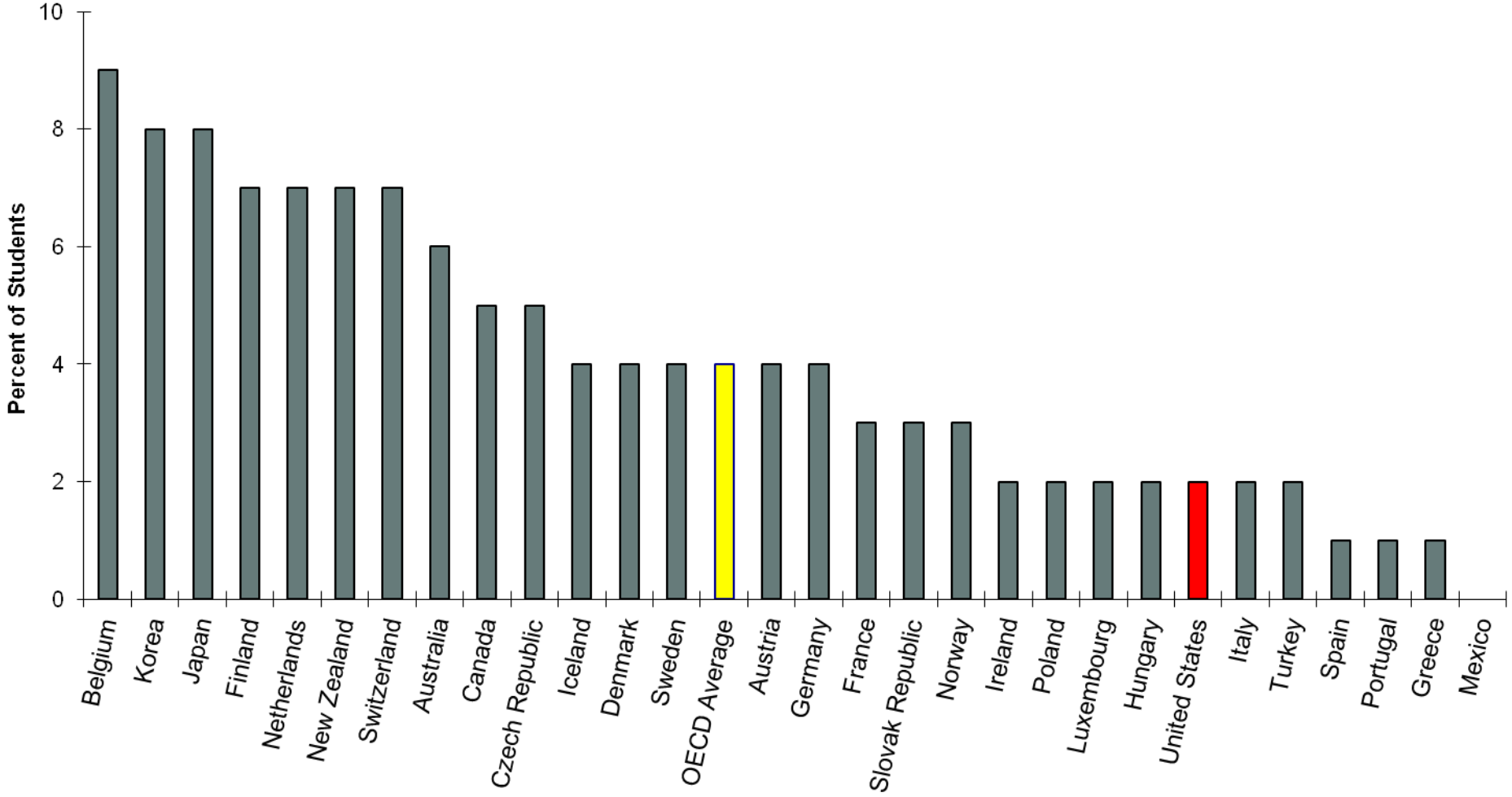
Of 29 OECD Countries, U.S.A. Ranked 24th



Source: PISA 2003 Results, OECD

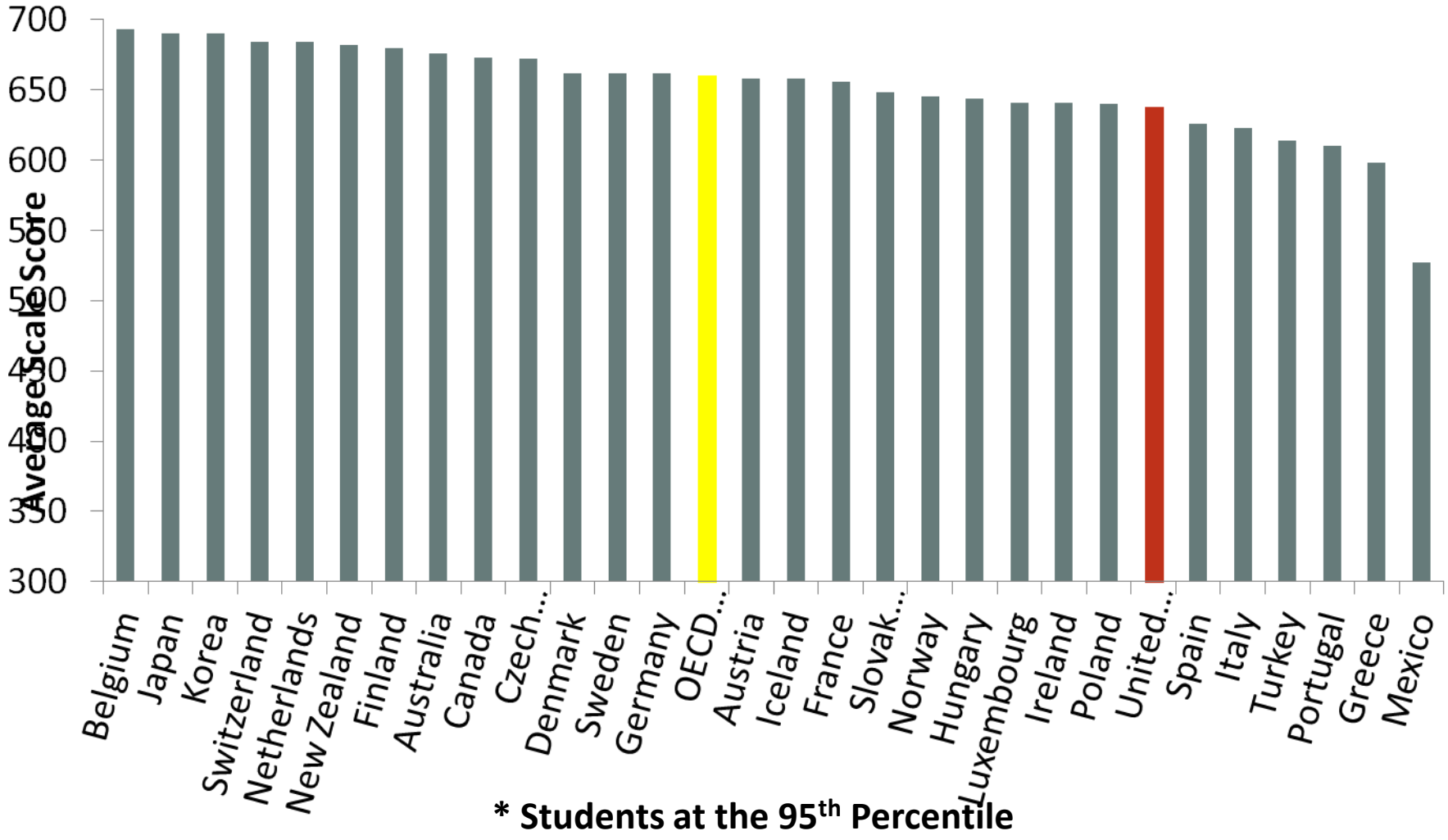
Problems are not limited to our high-poverty and high-minority schools . . .

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



Source: Organization for Economic Cooperation and Development (OECD), PISA 2003 Results, data available at http://www.oecd.org/

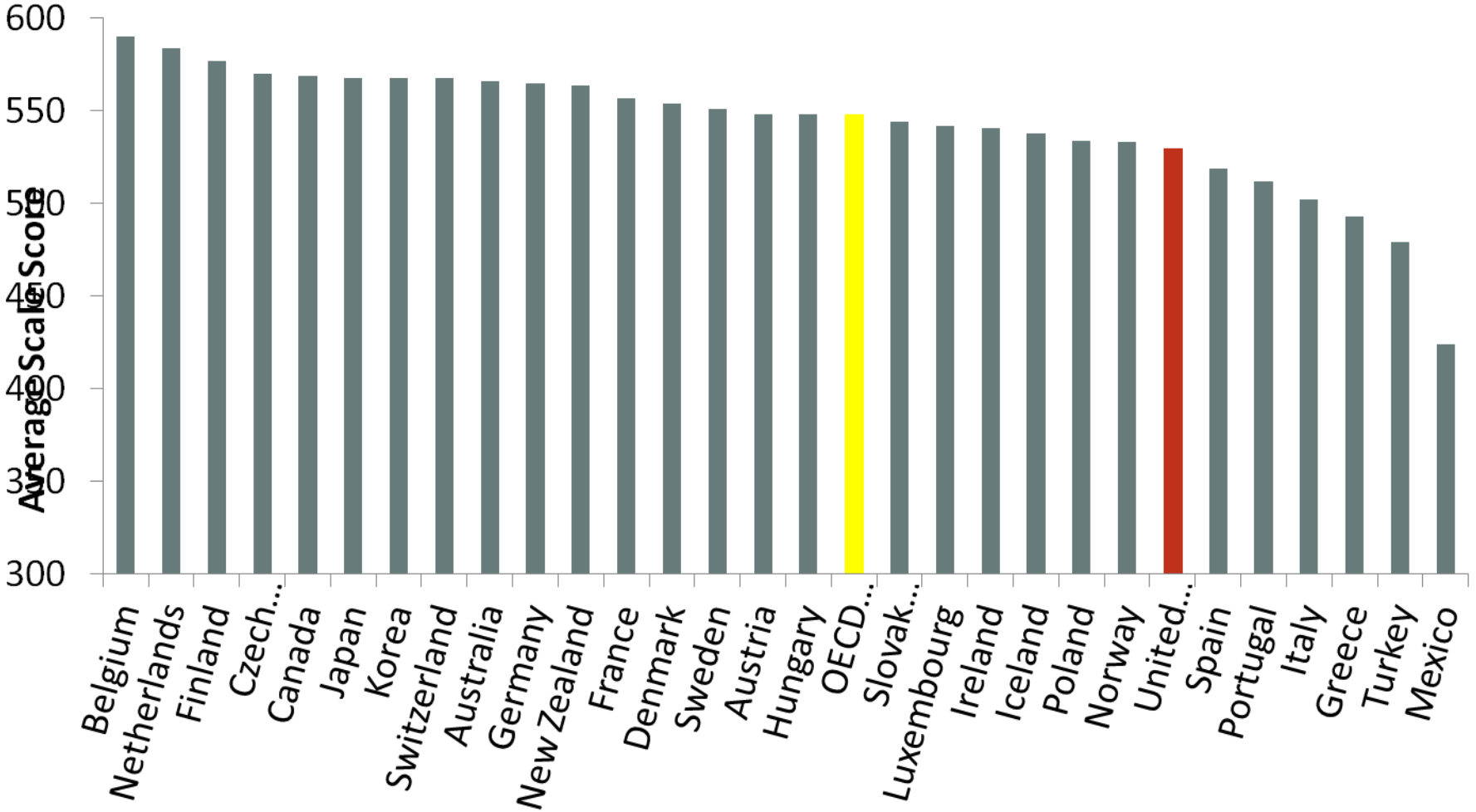
U.S. Ranks 23rd out of 29 OECD Countries in the Math Achievement of the Highest-Performing Students*



*** Students at the 95th Percentile**

Source: Organization for Economic Cooperation and Development (OECD), PISA 2003 Results, data available at http://www.oecd.org/

U.S. Ranks 23rd out of 29
OECD Countries in the Math Achievement of High-SES Students



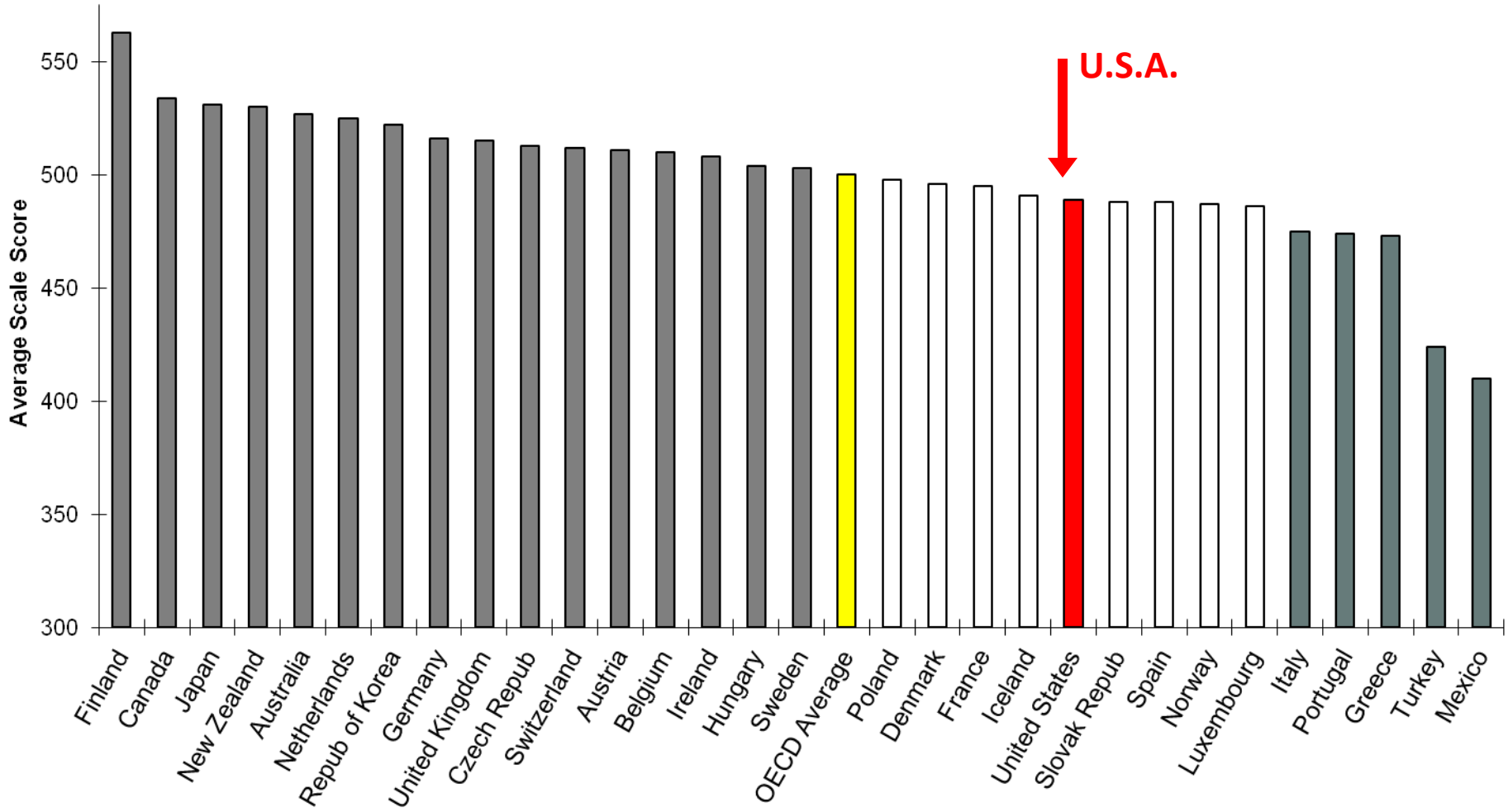
Source: Organization for Economic Cooperation and Development (OECD), PISA 2003 Results, data available at http://www.oecd.org/

Problems not limited to math, either.

Science?

PISA 2006 Science

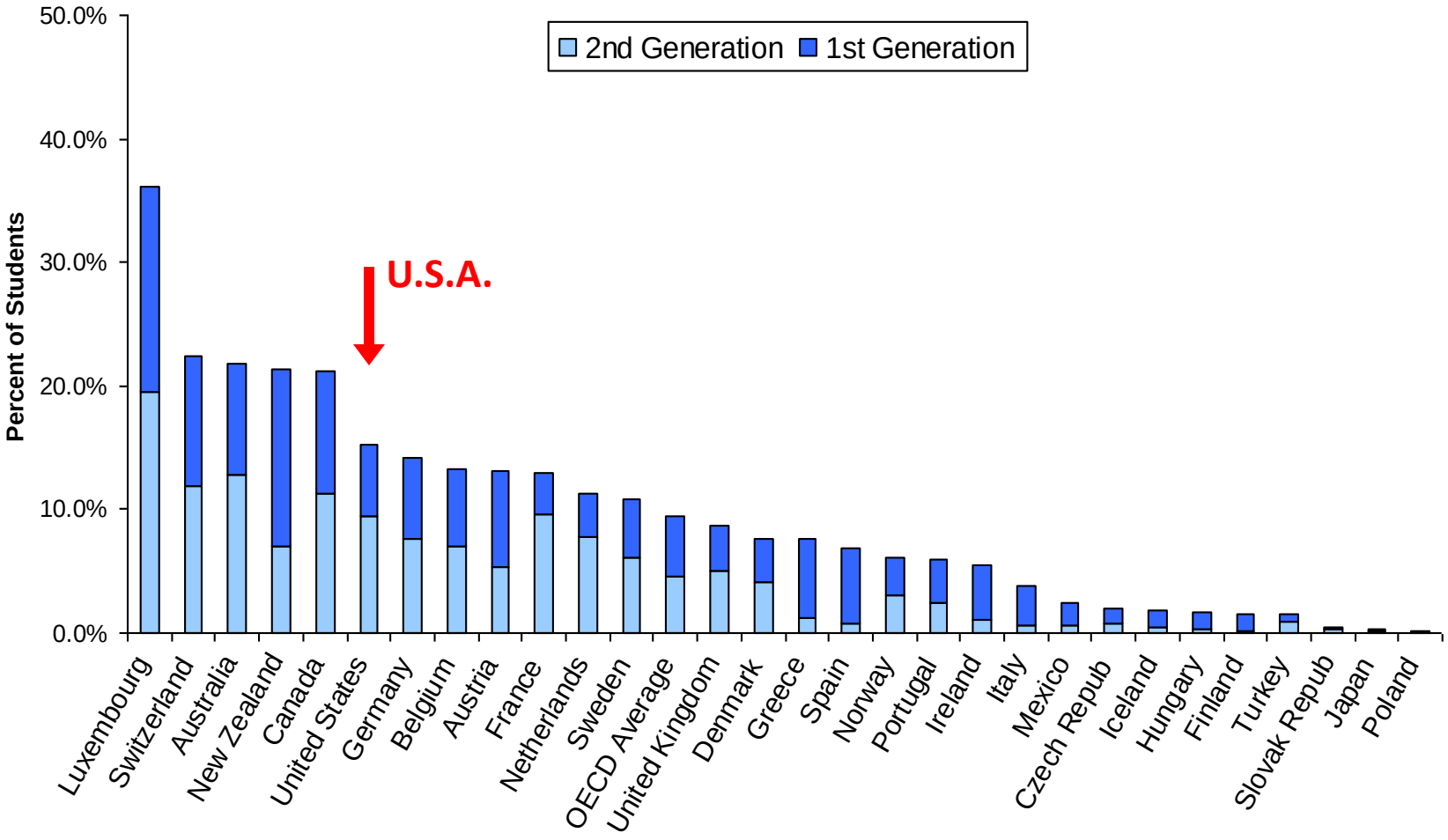
Of 30 OECD Countries, U.S.A. Ranked 21st



Higher than U.S. average **N measurably different from U.S. average** **Lower th U.S. average**

Source: NCES, PISA 2006 Results, http://nces.ed.gov/surveys/pisa/

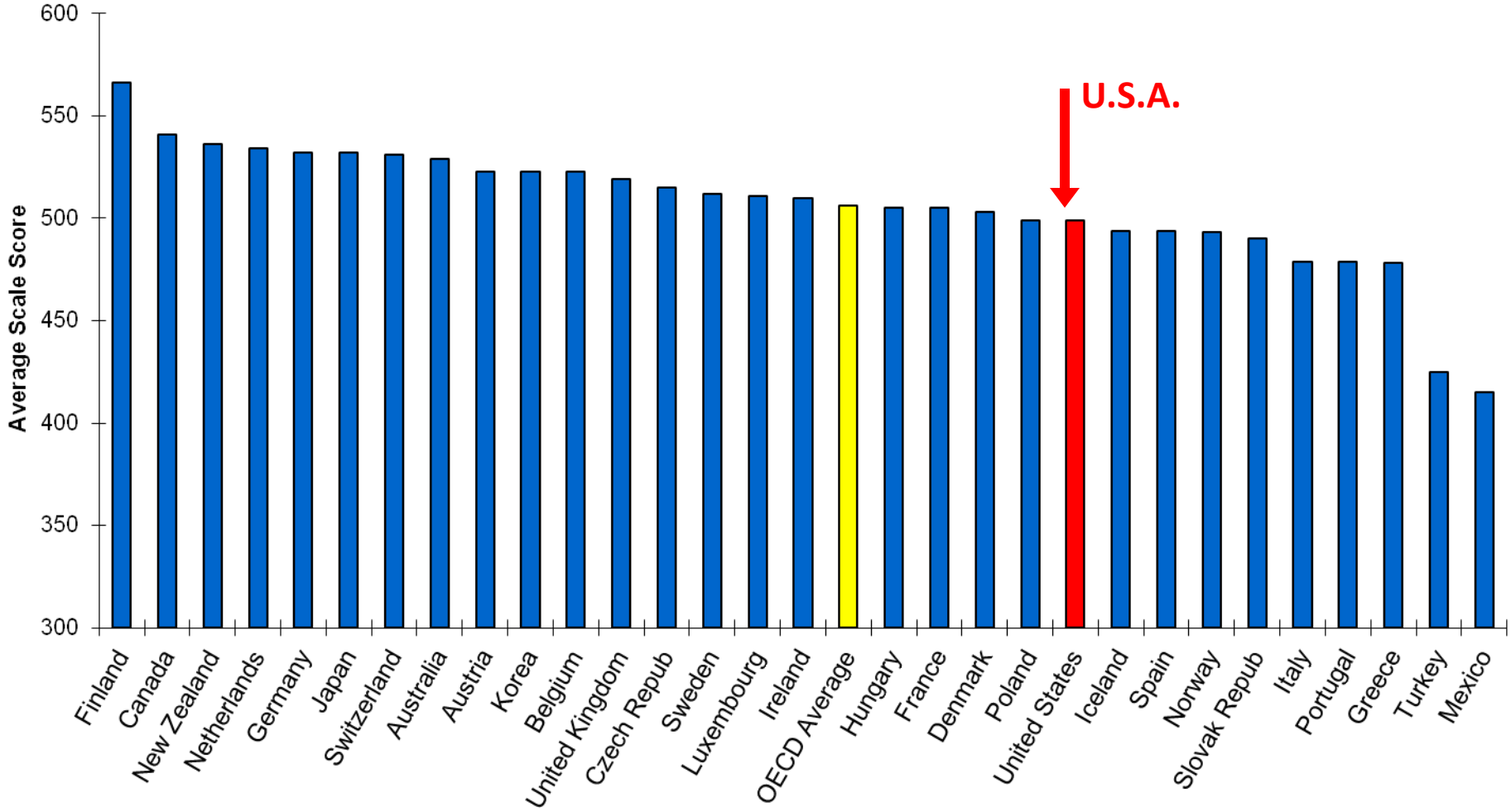
Immigrants? The U.S.A. does have a larger percentage of immigrants and children of immigrants than most OECD countries



Source: OECD, PISA 2006 Results, table 4.2c, http://www.oecd.org/

But ranks 21st out of 30 OECD countries when only taking into account native student* scores

PISA 2006 Science

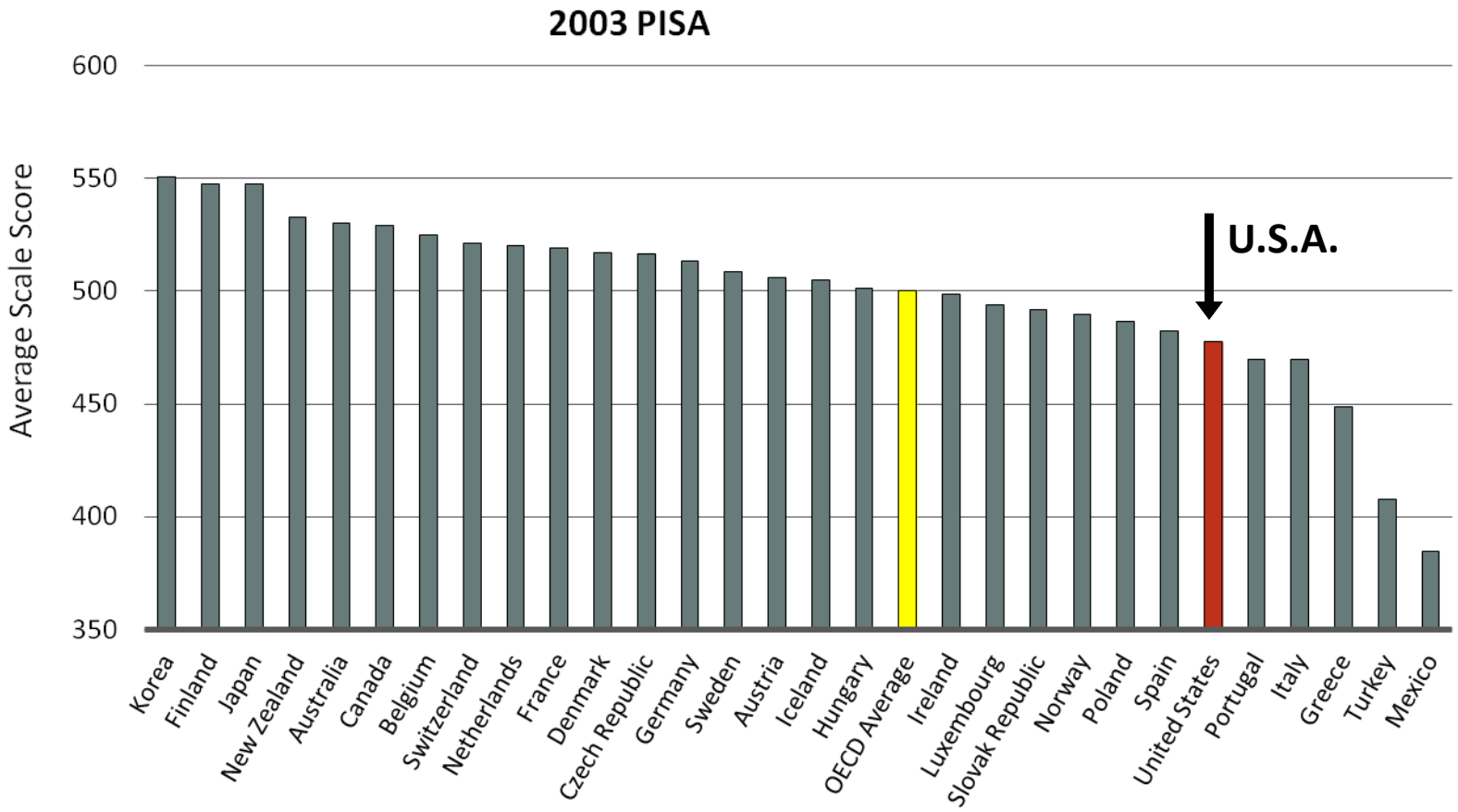


*Students born in the country of assessment with at least one parent born in the same country

Source: OECD, PISA 2006 Results, table 4.2c, http://www.oecd.org/

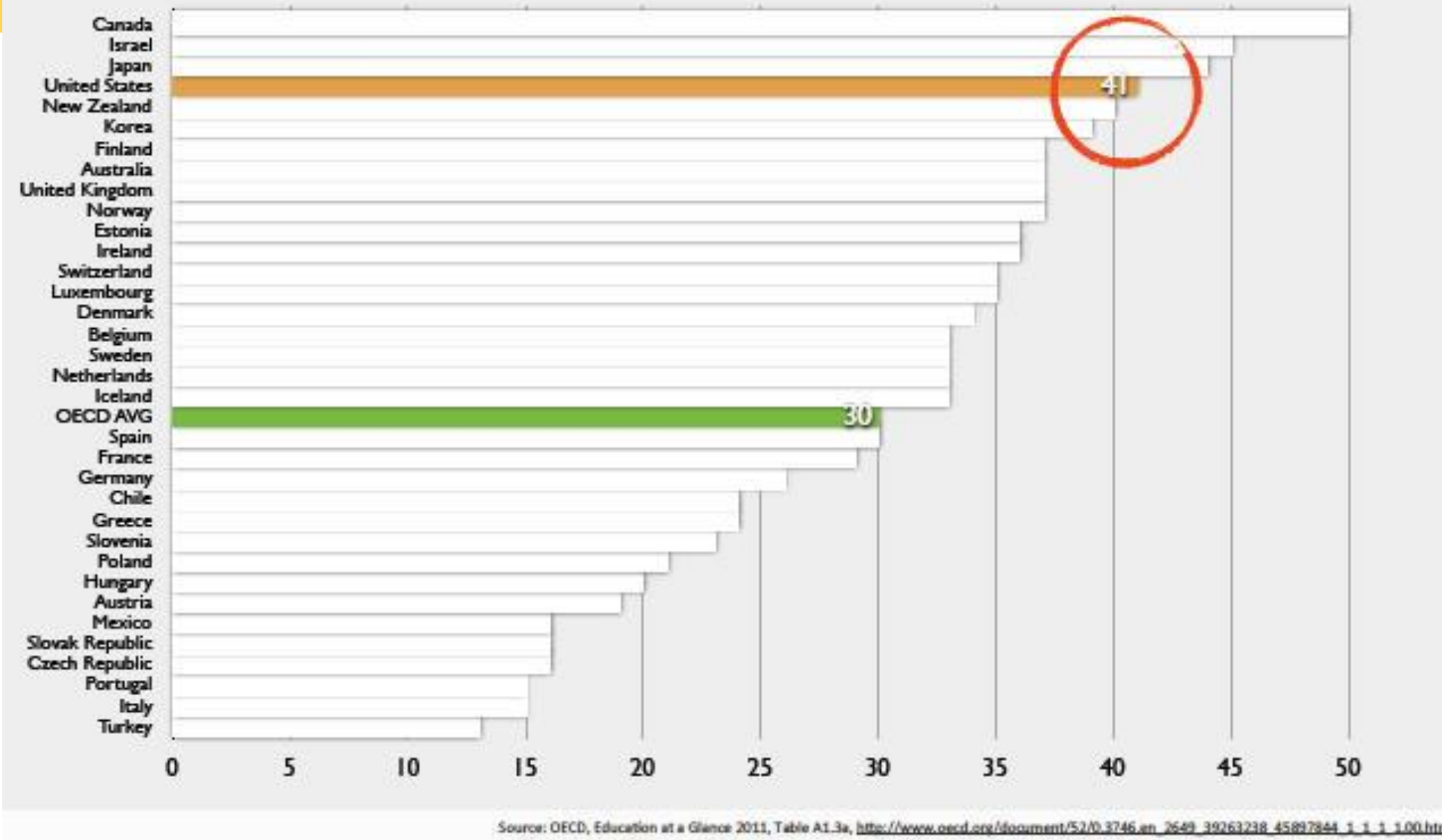
Even in problem-solving, something we consider an American strength…

U.S.A. Ranks 24th Out of 29 OECD Countries in Problem-Solving



Source: PISA 2003 Results, OECD

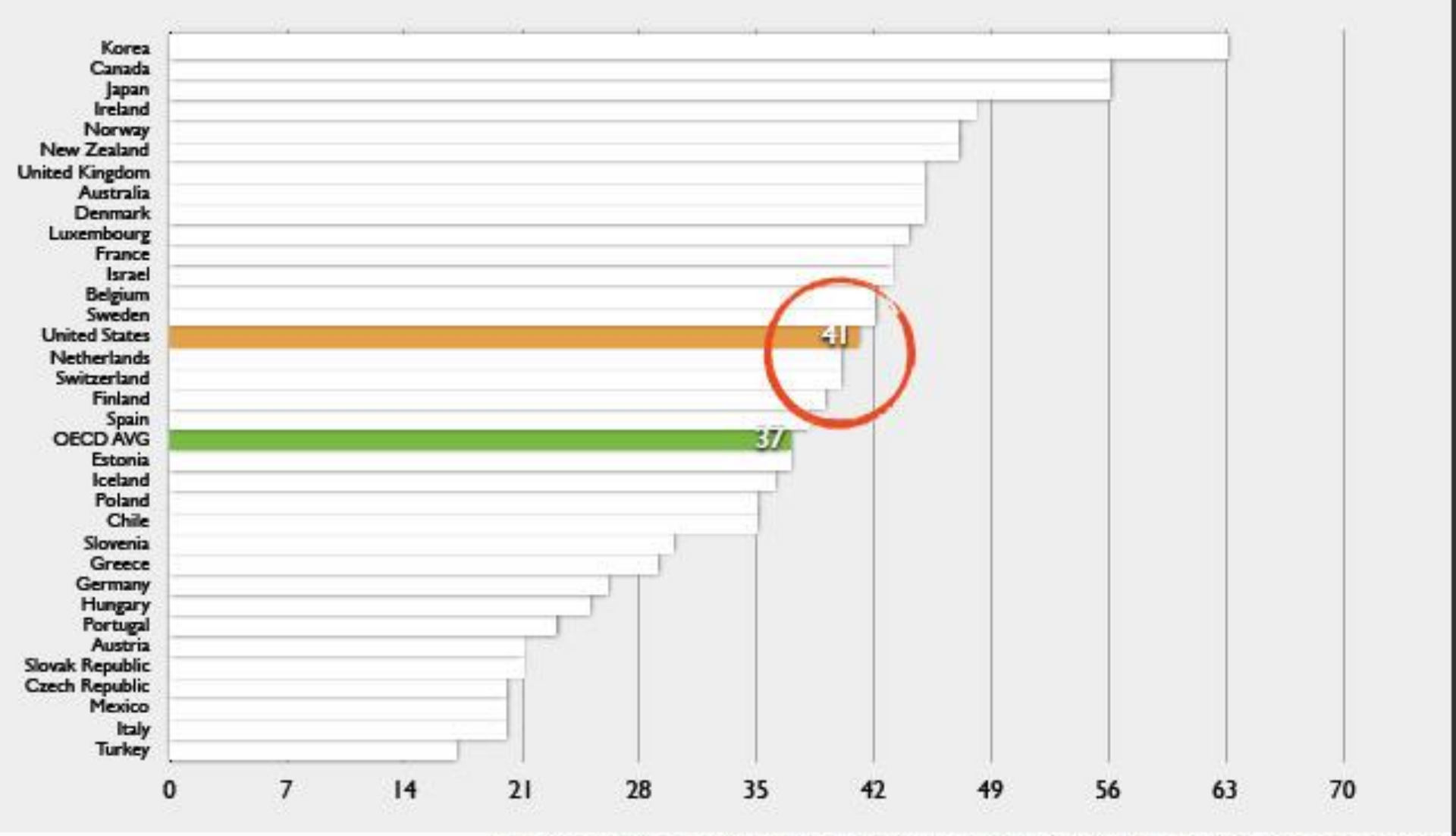
We used to make up for at least some of this by sending more of our students on to college.



Source: OECD, Education at a Glance 2011, Table A1.3a, http://www.oecd.org/document/52/0,3746,en_2649_39263238_45897844_1_1_1_1,00.html

We're still relatively strong in educational attainment

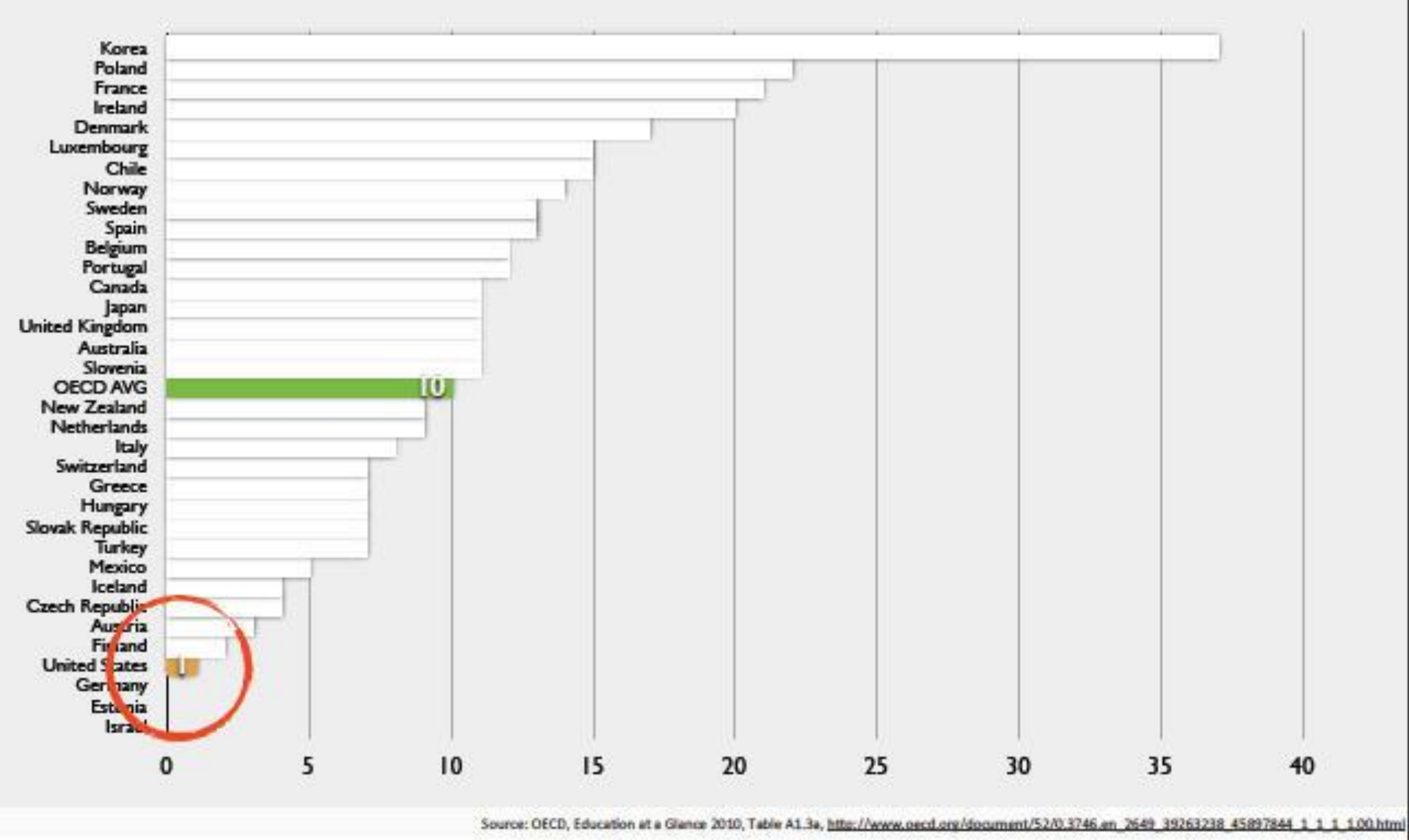
Percentage of Adults Ages 25-64 with Associate's Degree or Higher



Source: OECD, Education at a Glance 2011, Table A1.3a, http://www.oecd.org/document/52/0,3746,en_2649_39263238_45897844_1_1_1_1,00.html

Our world standing is weaker for younger workers

Percentage of Adults Ages 25-34 with Associate's Degree or Higher



Source: OECD, Education at a Glance 2010, Table A1.3a, http://www.oecd.org/document/52/0,3746,en_2649_39263238_45897844_1_1_1_1,00.html

We're near the bottom in intergenerational progress

Difference in % of Adults with Associate's or Higher: Ages 25-34 vs. 55-64

Only place we rank high?

Inequality.

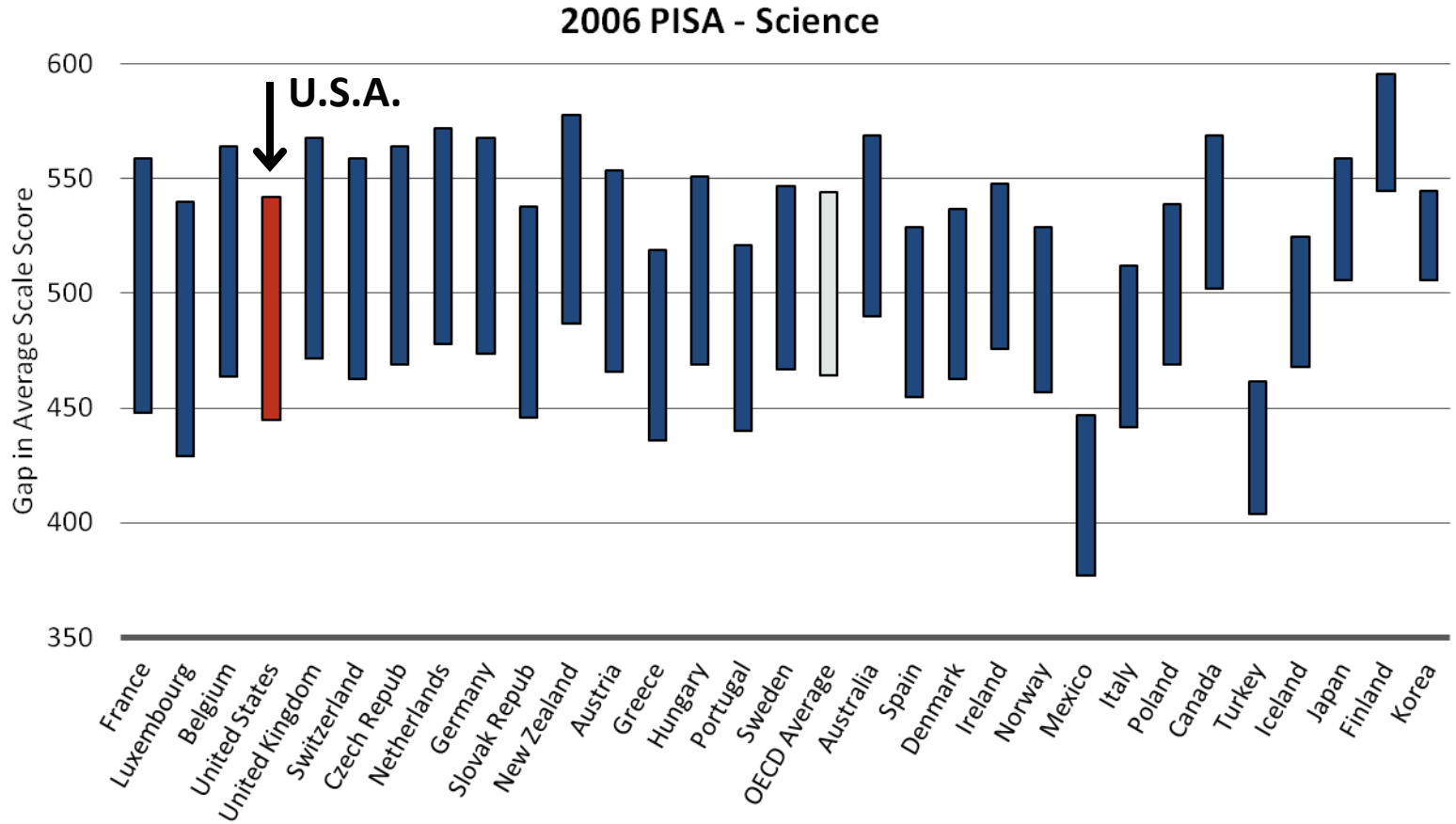
PISA 2003: Gaps in Performance Of U.S.15 Year-Olds Are Among the Largest of OECD Countries

	Rank in Performance Gaps Between Highest and Lowest Achieving Students *
Mathematical Literacy	**8th**
Problem Solving	**6th**

***Of 29 OECD countries, based on scores of students at the 5th and 95th percentiles.**

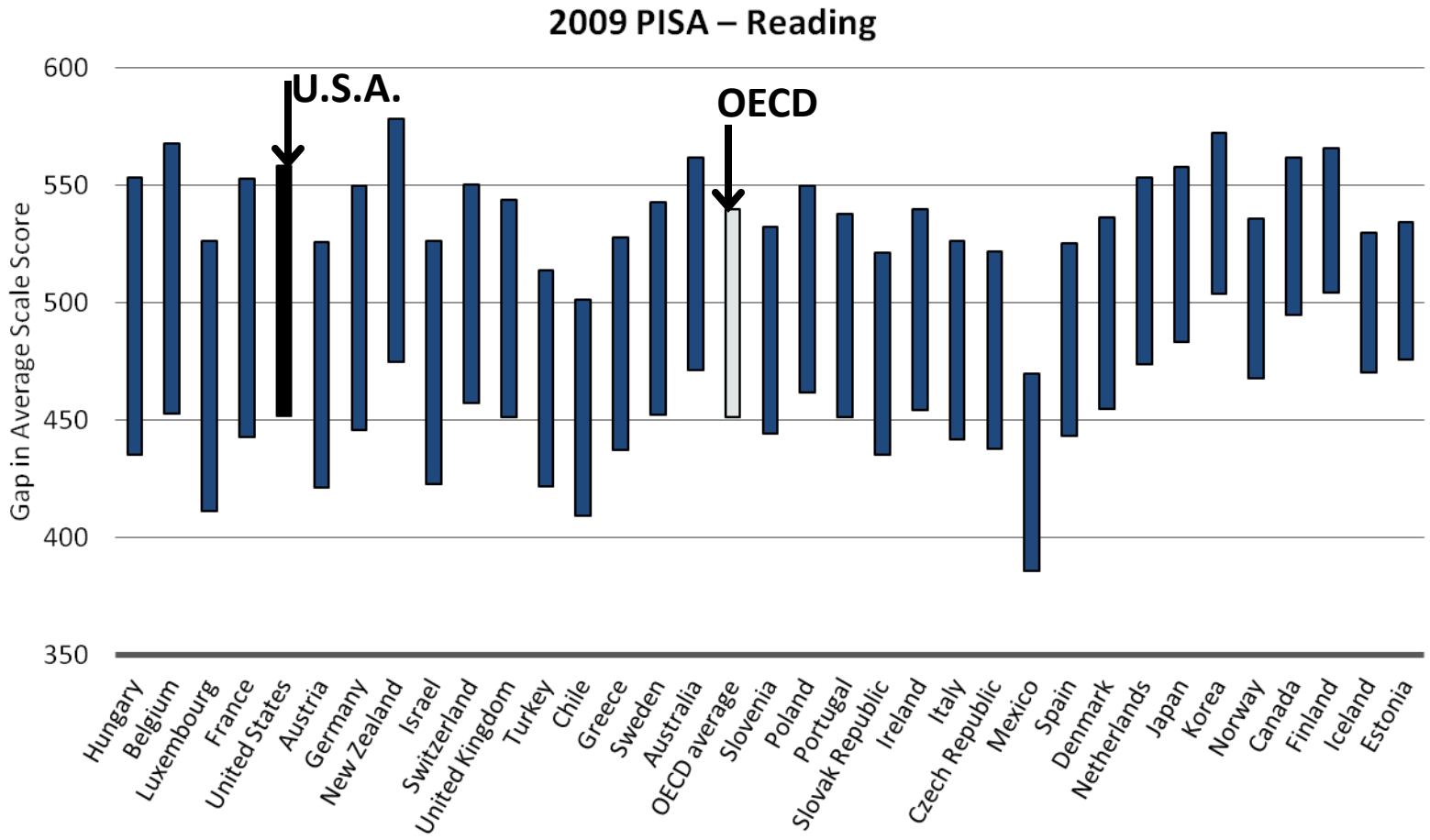
Source: Organization for Economic Cooperation and Development (OECD), PISA 2003 Results, data available at http://www.oecd.org/

Among OECD Countries, U.S.A. has the 4th Largest Gap Between High-SES and Low-SES Students



Source: PISA 2006 Results, OECD, table 4.8b

Among OECD Countries, U.S.A. has the 5th Largest Gap Between High-SES and Low-SES Students



Source: PISA 2009 Results, OECD, Table II.3.1

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	**–$773** per student
High Minority vs. Low Minority Districts	**–$1,122** per student

Source: Education Trust analyses based on U.S. Department of Education and U.S. Census Bureau data for the 2005-06 school year.

New York Inequities in State and Local Revenue Per Student

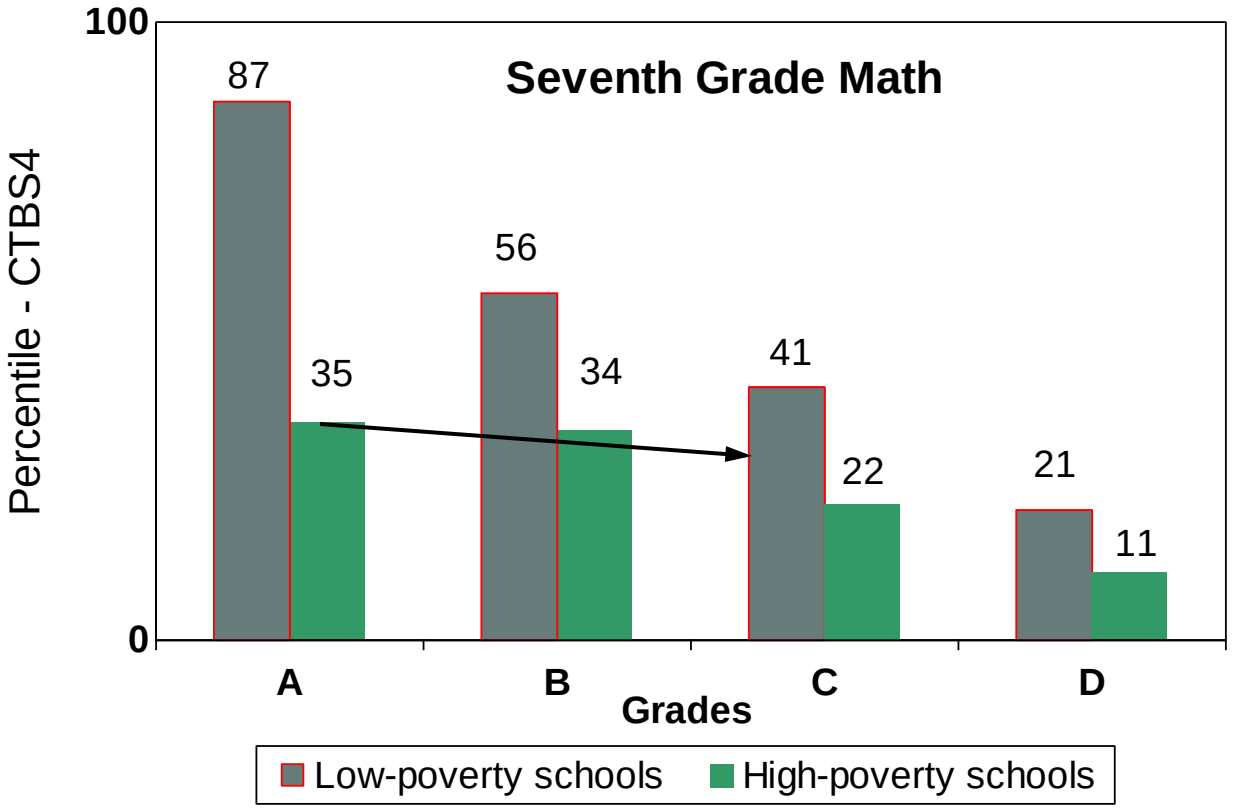
	Gap
High Poverty vs. Low Poverty Districts	**–$3,068** per student (#1)
High Minority vs. Low Minority Districts	**–$2,902** per student (#1)

Source: Education Trust analyses based on U.S. Department of Education and U.S. Census Bureau data for the 2005-06 school year.

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…

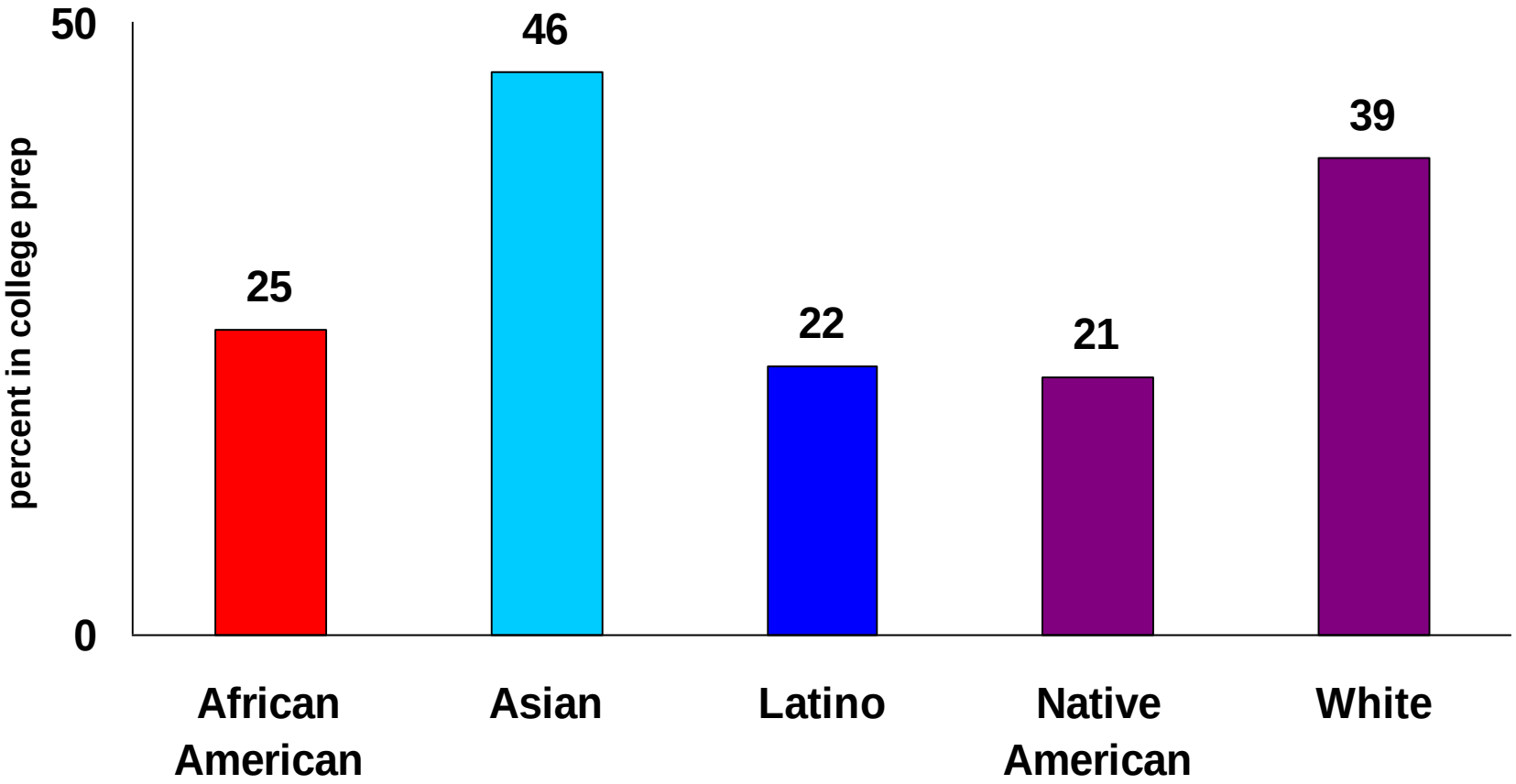
Students in Poor Schools Receive 'A's for Work That Would Earn 'Cs' in Affluent Schools



Source: Prospects (ABT Associates, 1993), in "Prospects: Final Report on Student Outcomes", PES, DOE, 1997.

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

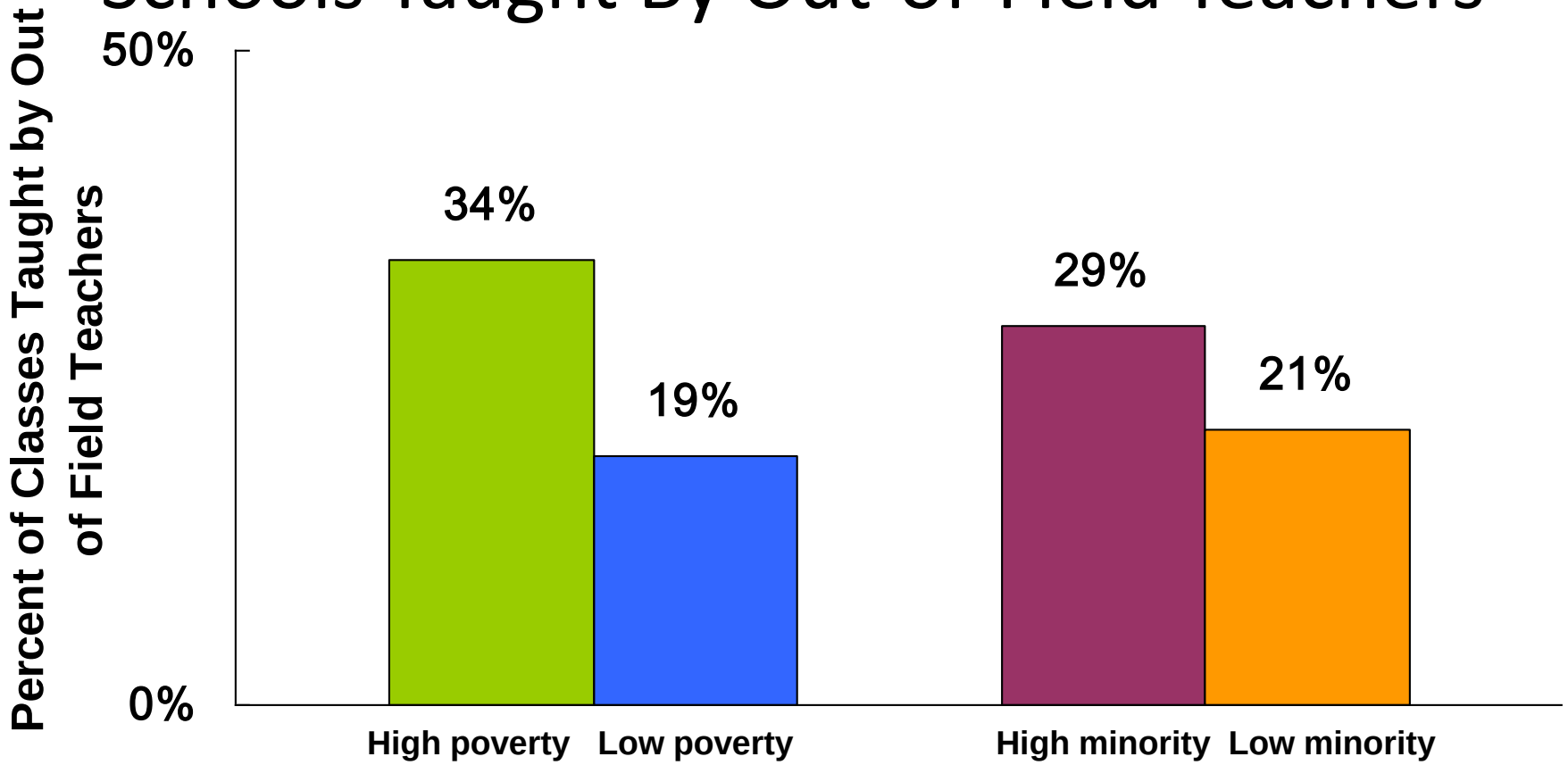


Full College Prep track is defined as at least: 4 years of English, 3 years of math, 2 years of natural science, 2 years of social science and 2 years of foreign language

Source: Jay P. Greene, Public High School Graduation and College Readiness Rates in the United States, Manhattan Institute, September 2003. Table 8. 2001 high school graduates with college-prep curriculum.

And choices we make about *who* teaches whom…

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



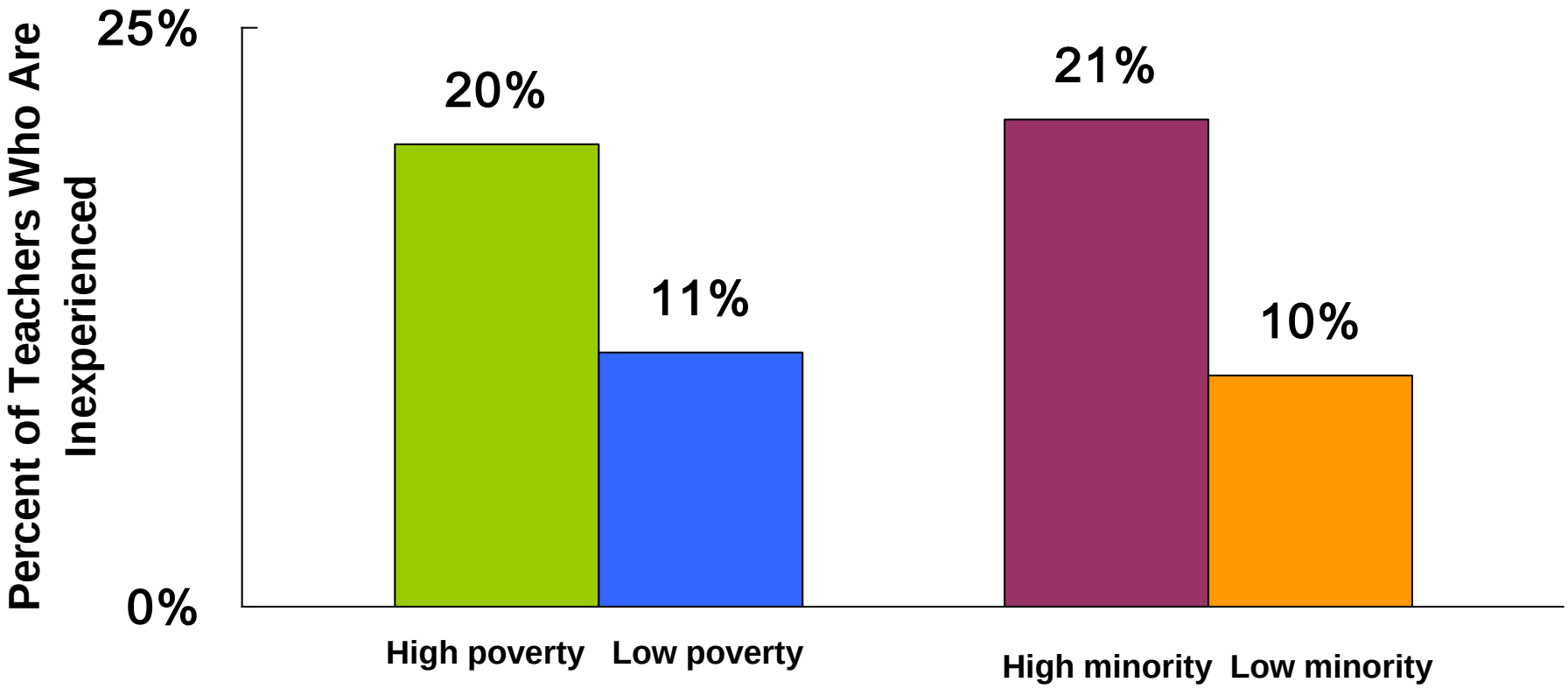
Note: High Poverty school-50% or more of the students are eligible for free/reduced price lunch. Low-poverty school -15% or fewer of the students are eligible for free/reduced price lunch.

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

***Teachers lacking a college major or minor in the field. Data for secondary-level core academic classes.**

Source: Richard M. Ingersoll, University of Pennsylvania. Original analysis for the Ed Trust of 1999-2000 Schools and Staffing Survey.

Poor and Minority Students Get More Inexperienced* Teachers

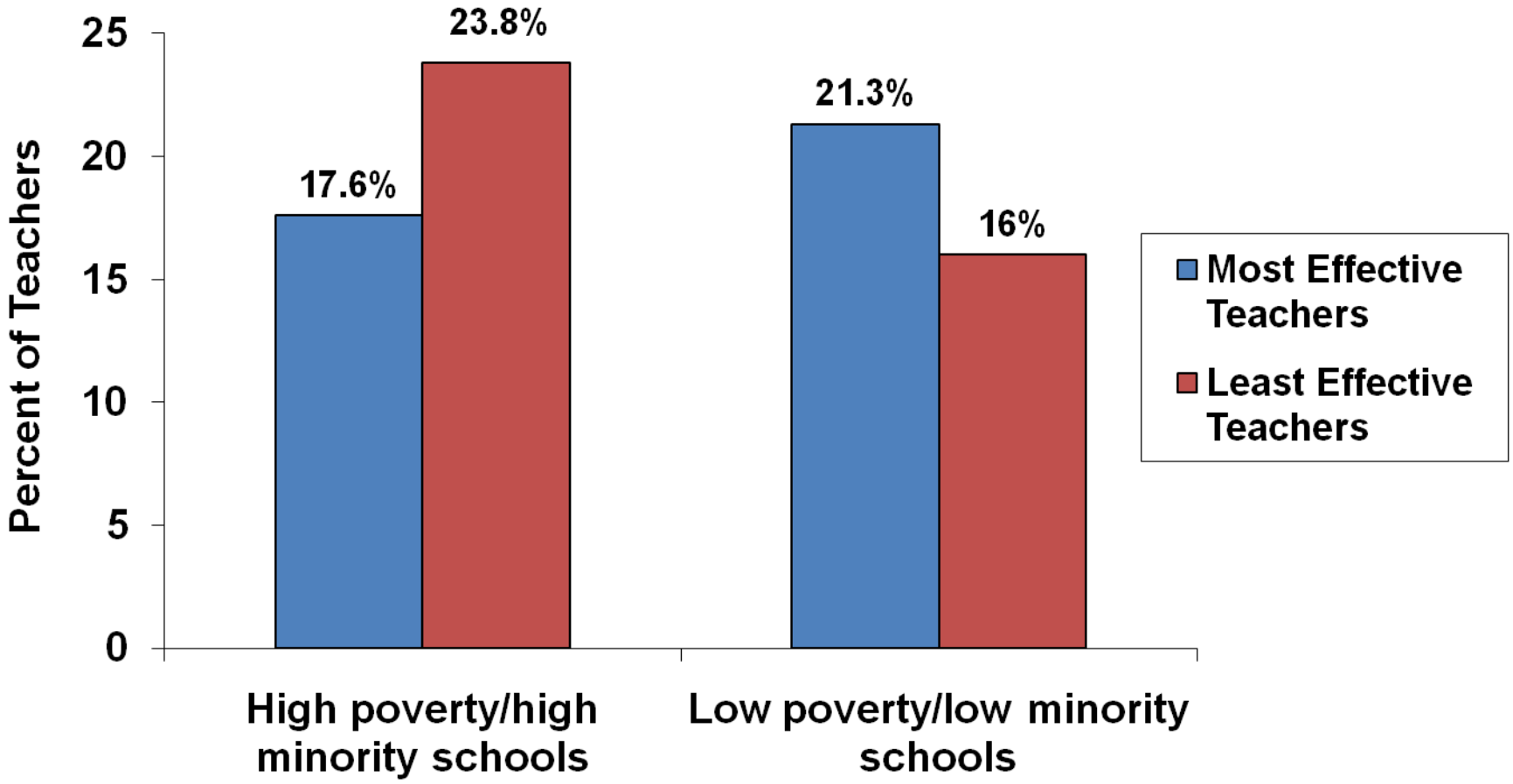


***Teachers with 3 or fewer years of experience.**

Note: High poverty refers to the top quartile of schools with students eligible for free/reduced price lunch. Low poverty-bottom 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

Source: National Center for Education Statistics, "Monitoring Quality: An Indicators Report," December 2000.

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



Note: High Poverty/High minority means at least 75% qualify for FRPL and at least 75% are minority.

Source: Tennessee Department of Education 2007. "Tennessee's Most Effective Teachers: Are they assigned to the schools that need them most?" http://tennessee.gov/education/nclb/doc/TeacherEffectiveness2007_03.pdf

Los Angeles: LOW-INCOME STUDENTS LESS LIKELY TO HAVE HIGH VALUE-ADDED TEACHERS

ELA

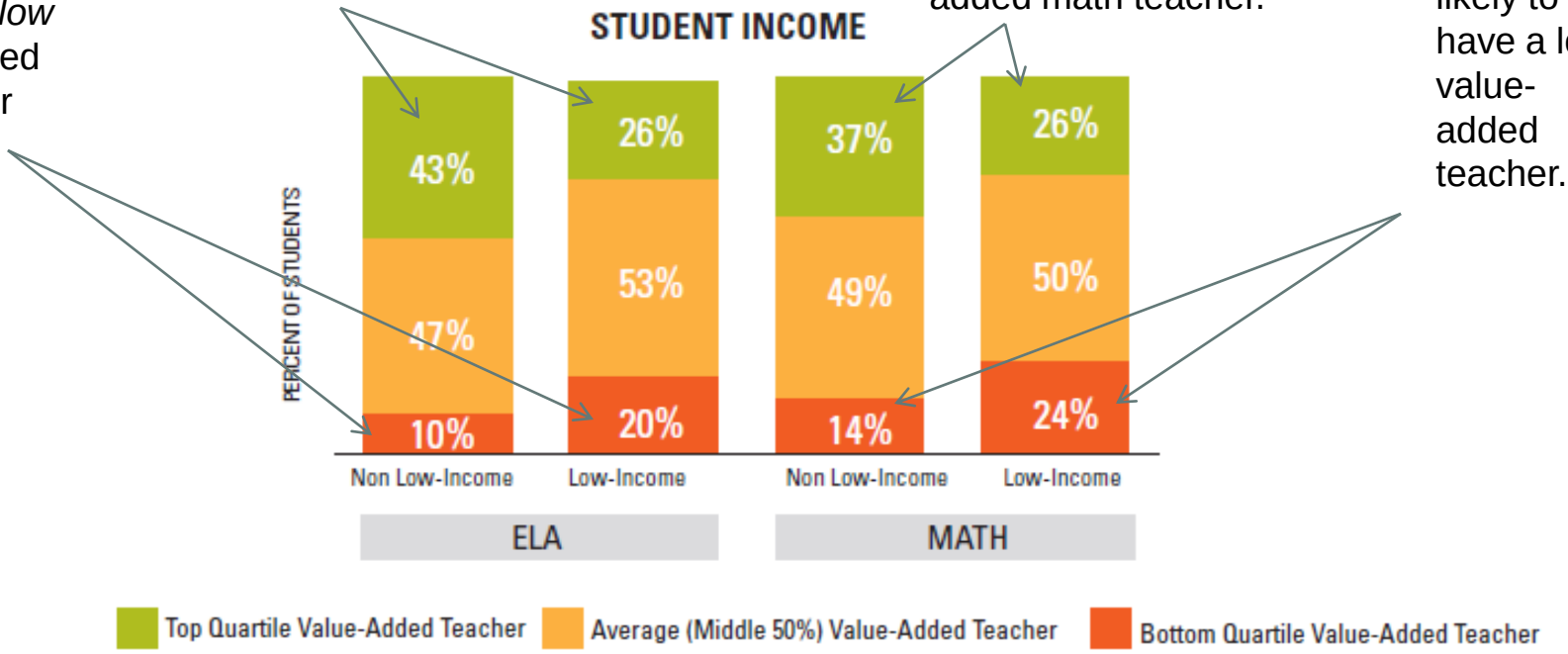
A low-income student is *more than twice as likely to have a low* value-added teacher for ELA

A student from a relatively more affluent background is 62% more likely to get a high value-added ELA teacher.

MATH

In math, a student from a relatively more affluent background is 39% more likely to get a high value-added math teacher.

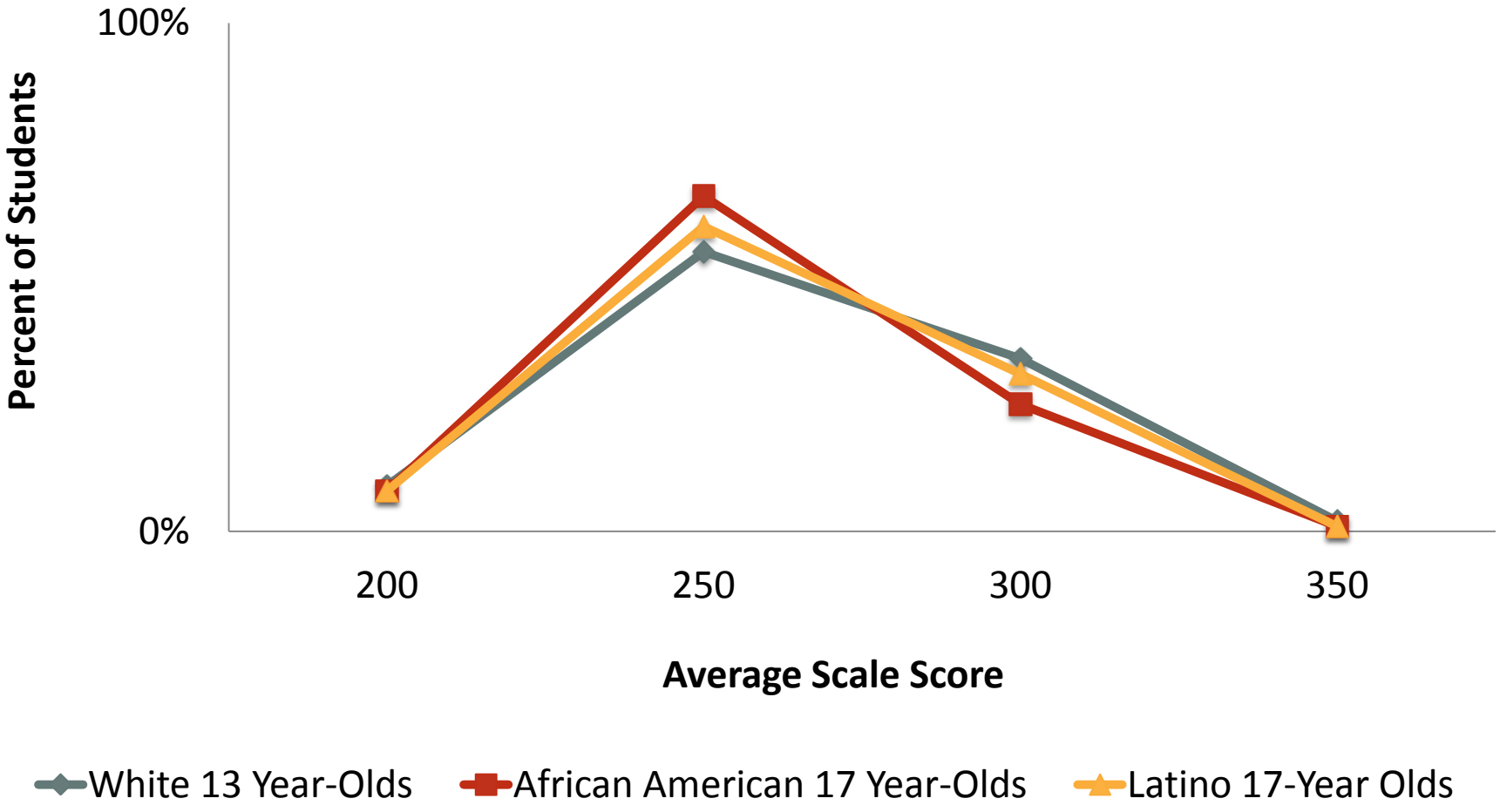
A low-income student is 66% more likely to have a low value-added teacher.



Results are devastating.

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

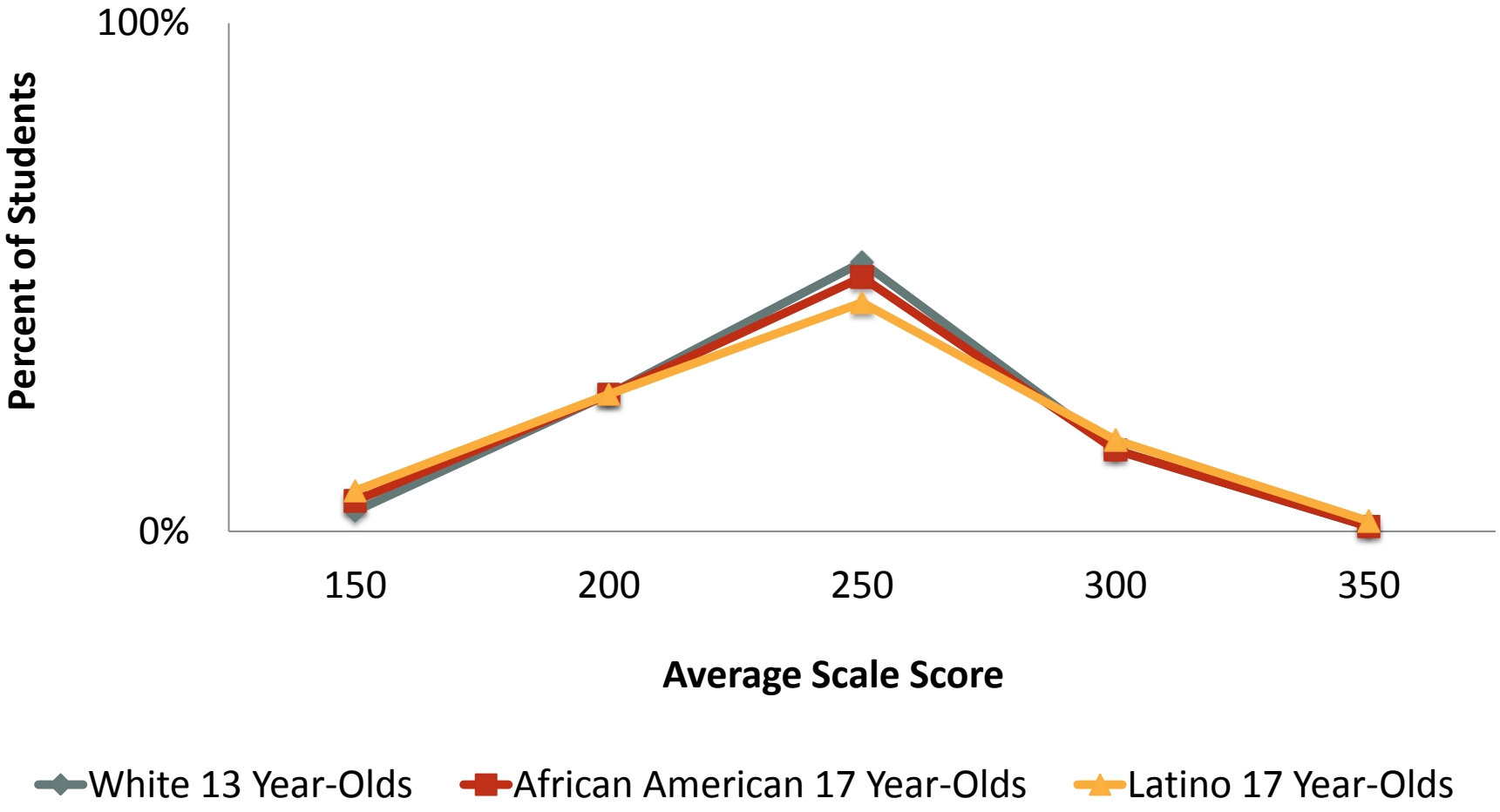
African American and Latino 17 Year-Olds Do Math at Same Levels As White 13 Year-Olds



Note: Long-Term Trends NAEP

Source: National Center for Education Statistics, NAEP 2004 Trends in Academic Progress

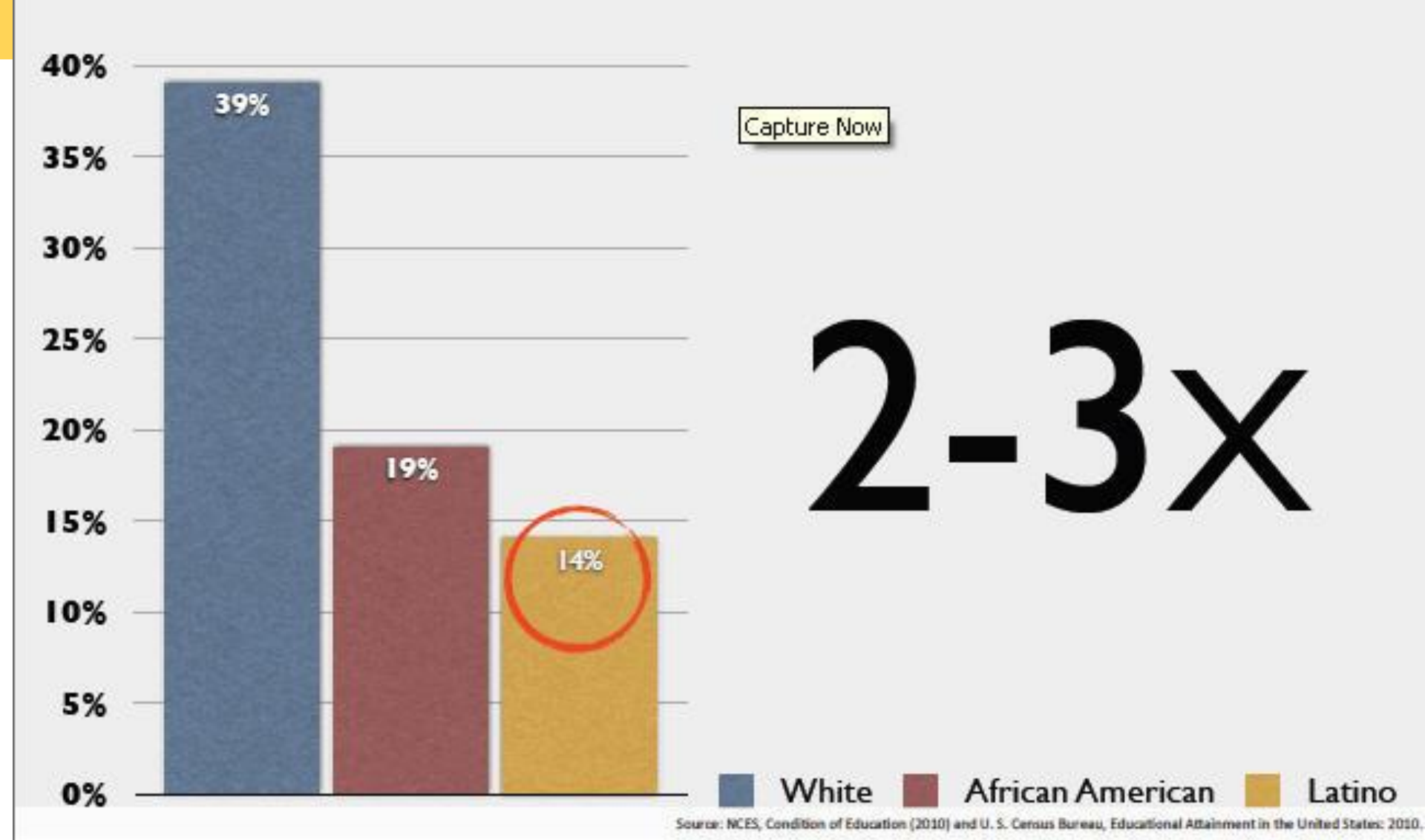
African American and Latino 17 Year-Olds Read at Same Levels As White 13 Year-Olds



Note: Long-Term Trends NAEP

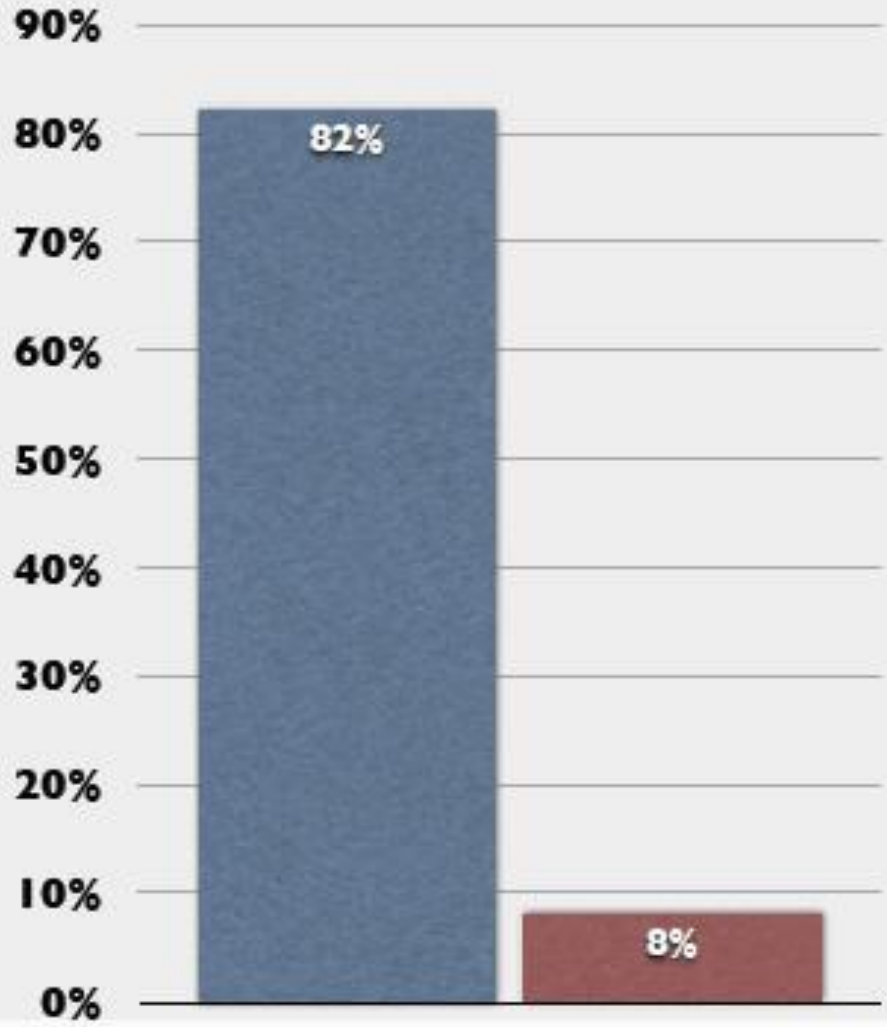
Source: National Center for Education Statistics, NAEP 2004 Trends in Academic Progress

And these are the students who remain in school through 12th grade. Add those all up and throw in college entry and graduation, and…



25-29 Year Olds with B.A. or Higher

2010



10x

Young people from highest income quartile

Young people from lowest income quartile

Source: Postsecondary Education Opportunity, "Bachelor's Degree Attainment by Age 24 by Family Income Quartiles, 1970 to 2009.

B.A. Rate by Age 24

2009