

Comparison Sources

Educational Inputs



Lessons Learned

Educational Outcomes

Educational Inputs



America: Success

- Quality of life
- Economic productivity
- Nobel prizes

Nobel Prizes: 1901-2012

	Japan	Singapore	United States
Chemistry	7	0	62
Physics	7	0	87
Medicine	1	0	95
Economics*	0	0	49
Literature	2	0	11
Peace	1	0	21
TOTALS	18	0	325

Source: The Nobel Foundation, <http://nobelprize.org/>

Note: Tally is based on citizenship of the recipient at the time of the award.

* The Bank of Sweden (Sveriges Riksbank) Prize in Economic Sciences was first awarded in 1969.

Comparison Sources



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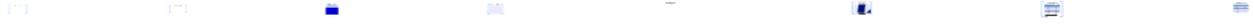
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Sources for Comparison

- Organization for Economic Co-operation and Development (OECD)
 - Programme for International Student Assessment (PISA)
- Trends in International Mathematics and Science Study (TIMSS)

International Comparisons





Educational Inputs



How Long Do Students Attend School? Days in the Academic Year

Country	Days in an Academic Year
Canada	Average: 188
Finland	187
Singapore	200
Shanghai	180
South Korea	204
United States	180

How Long Do Students Attend Schools? Hours in the Day

Country	Minutes in a School Day
Canada	304
Finland	240
Shanghai	390
Singapore	330
South Korea	264
United States	402

How Much Do We Spend?

Country	Annual Expenditures Per Pupil
Canada	8,045
Finland	7,216
Shanghai	N/A
Singapore	N/A
South Korea	6,663
United States	10,259

TEACHER SELECTIVITY

NATION	KEY SELECTION CHARACTERISTICS
Canada	Undergrad + 2 nd degree (+1-2 years)
Finland	10% undergrad admitted; must have Master's degree to teach
Shanghai	High societal regard, competitive income = attract and retain teacher candidates
Singapore	Top 1/3 HS class recruited; final candidates 4-year paid education
South Korea	Anyone can apply; only top 30% obtain teaching positions
United States	Bachelors degree; not selective Only 40% of teacher prep program institute a minimum GPA

TEACHER SALARIES

NATION	Ratio: Primary Tch Salary after 15 Years to GDP per capita	Ratio: Secondary Tch Salary after 15 Year to GDP per capita
Canada	--	--
Finland	1.07	1.26
Shanghai	1.39	1.75
Singapore	1.67	1.67
South Korea	2.01	2.01
United States	0.97	1.01

Source: OECD. (2010). PISA 2009 results: What makes a school successful? Resources, policies and practices (Volume IV). Available at <http://dx.doi.org/10.1787/9789264091559-en>.

IMMIGRANT POPULATION

NATION	PERCENT IMMIGRANT POPULATION
Canada	18.9
Finland	3.0
Shanghai	--
Singapore	42.6
South Korea	1.2
United States	12.9

Source: United Nations. (2006). International Migration 2006. Retrieved online from http://www.un.org/esa/population/publications/2006Migration_Chart/Migration2006.pdf



Educational Outcomes

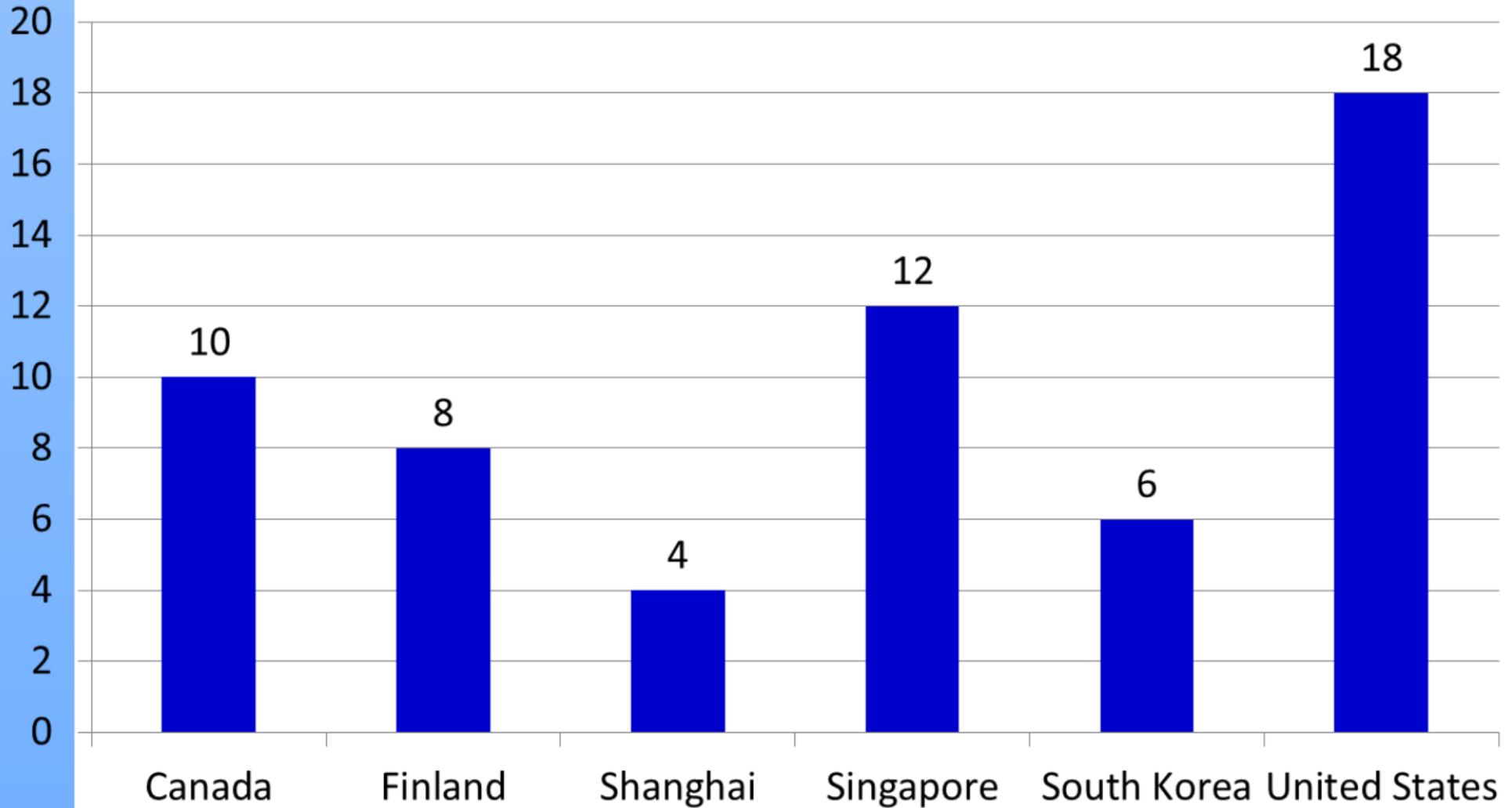
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HIGH & LOW ACHIEVING STUDENTS - READING

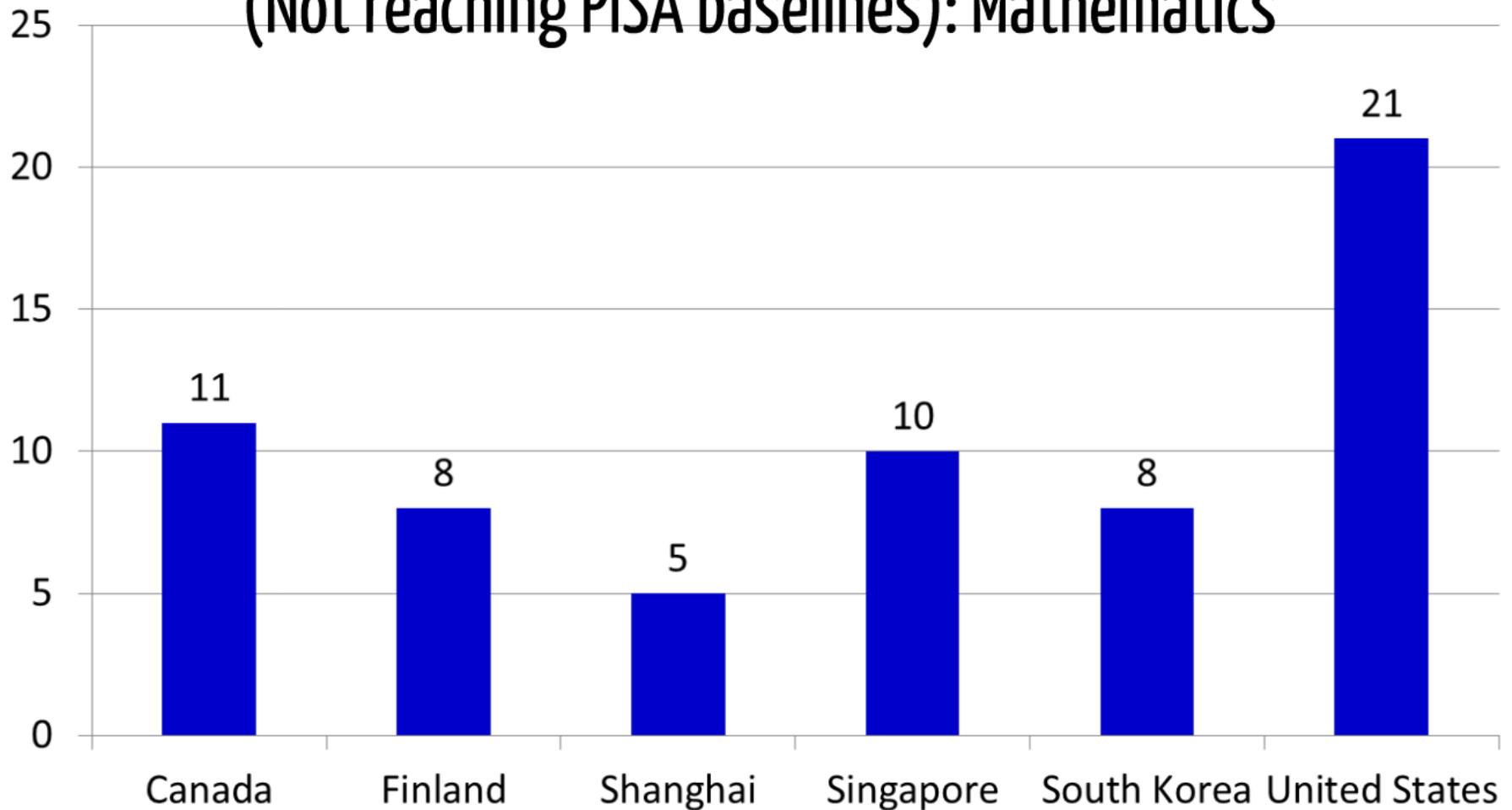
NATION	Percentage of Country's Students Not Reaching PISA Baseline (level 2)	Percentage of Country's Students in PISA Top Performing Groups (level 5 & 6)
Canada	10%	13%
Finland	8%	15%
Shanghai	4%	19%
Singapore	12%	16%
South Korea	6%	13%
United States	18%	10%

Source: OECD. (2010). PISA 2009 results: What students know and can do—Student performance in reading, mathematics and science (Volume I). Available at <http://dx.doi.org/10.1787/9789264091450-en>.

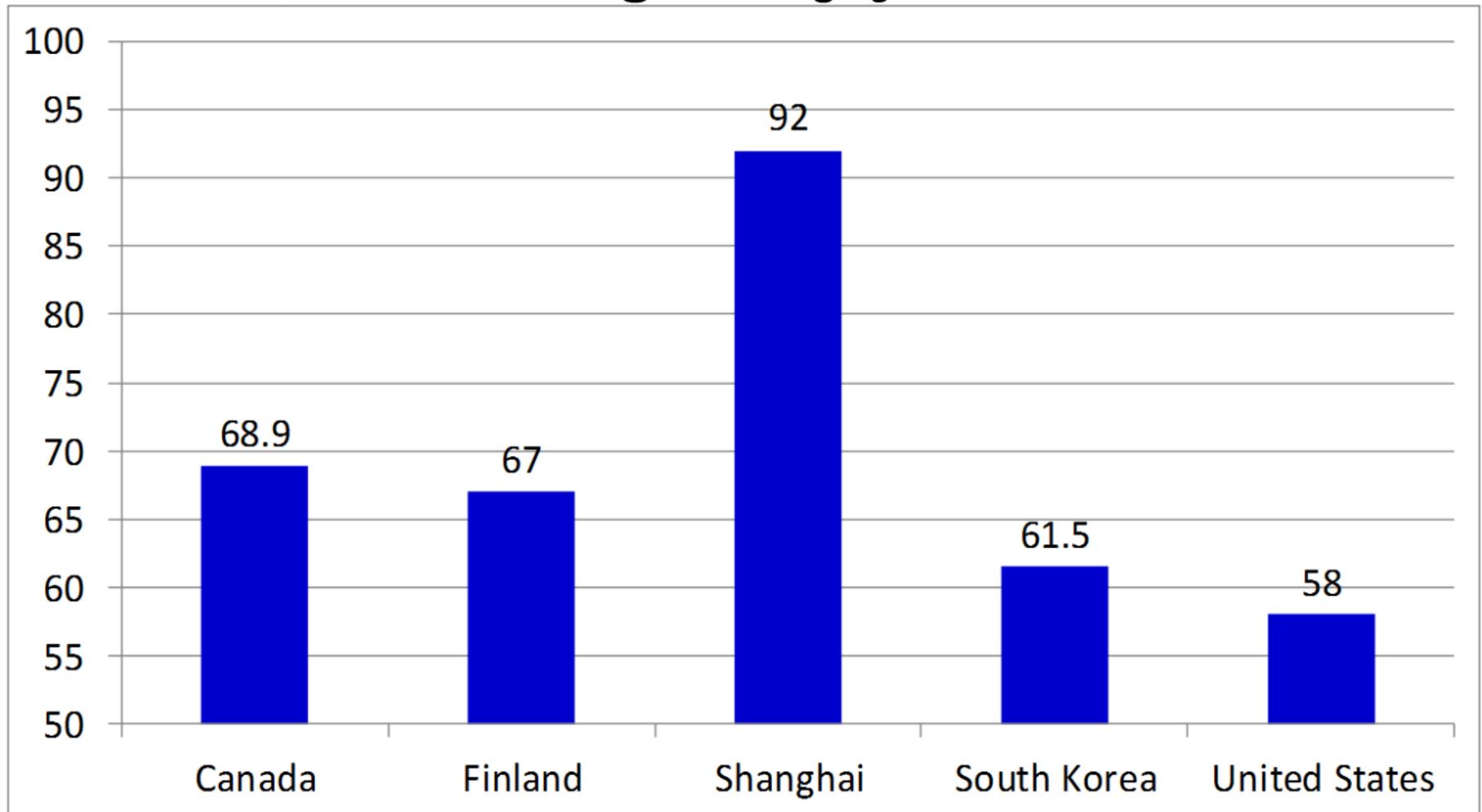
Share of At-Risk Students on PISA (Not reaching PISA baselines): Reading



Share of At-Risk Students on PISA (Not reaching PISA baselines): Mathematics



Percentage of Students Who Report Reading for Enjoyment



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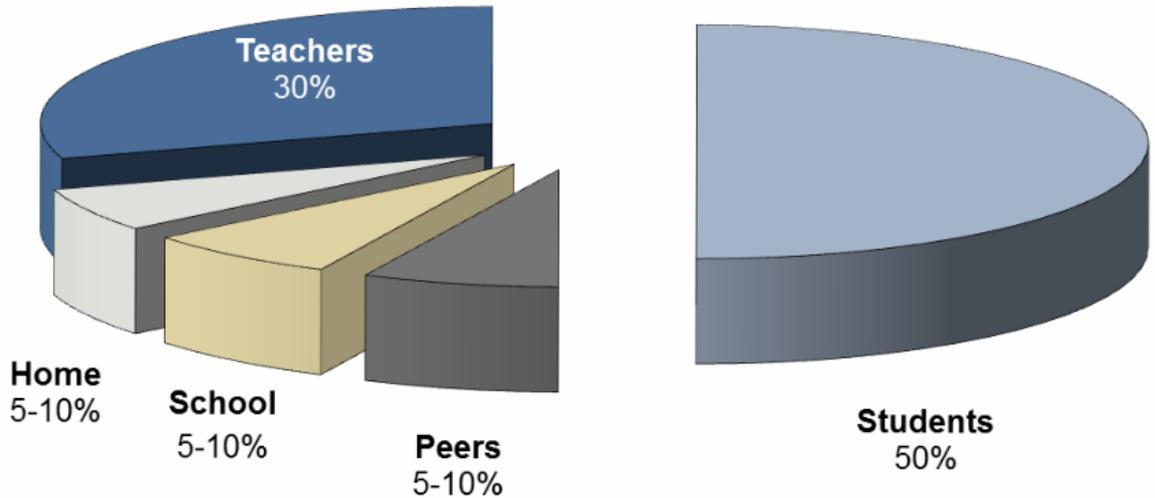
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Lessons Learned

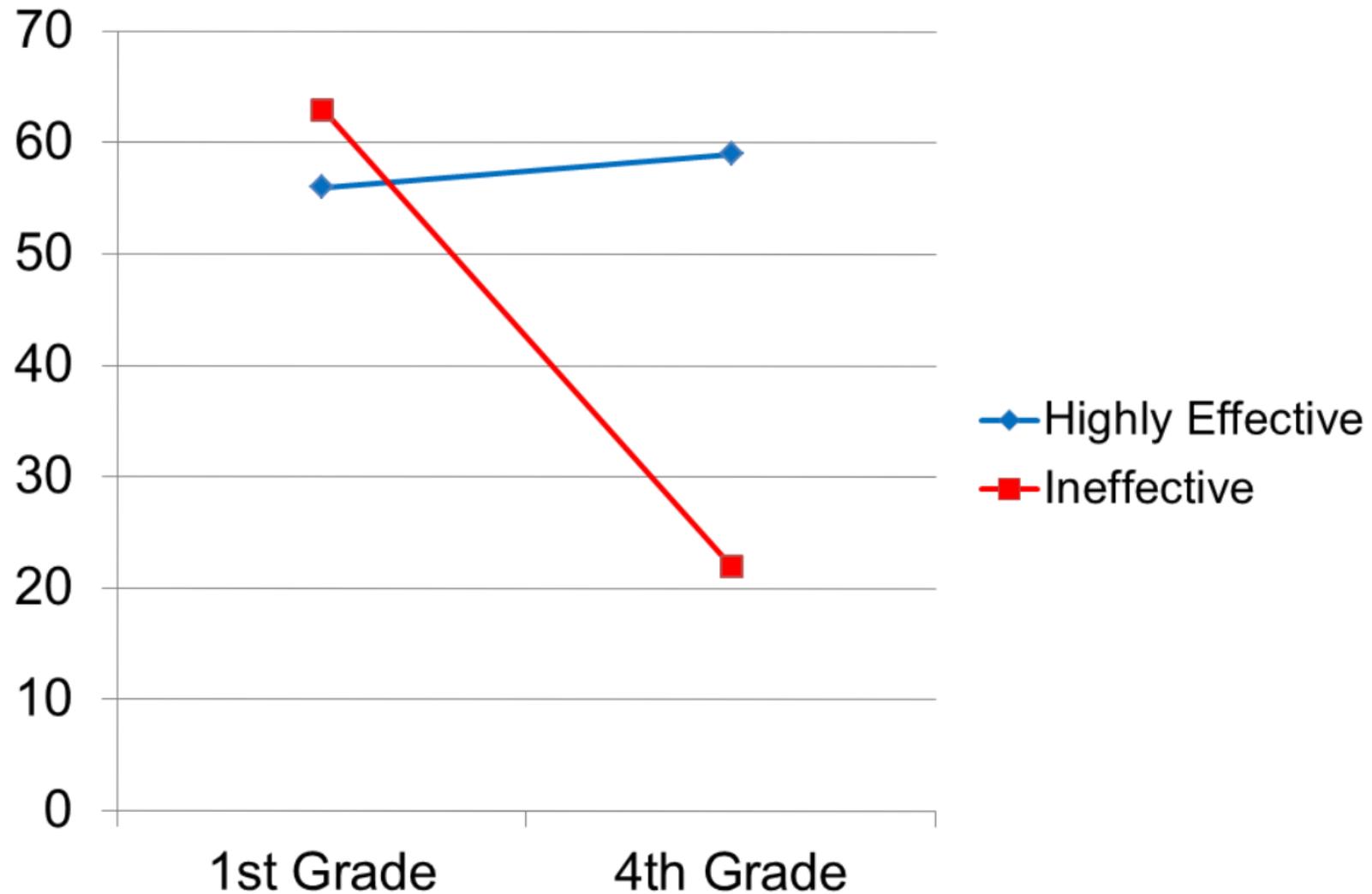
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Quality Teachers: Influences on Student Achievement Explained Variance



Dallas Research: Teacher Quality

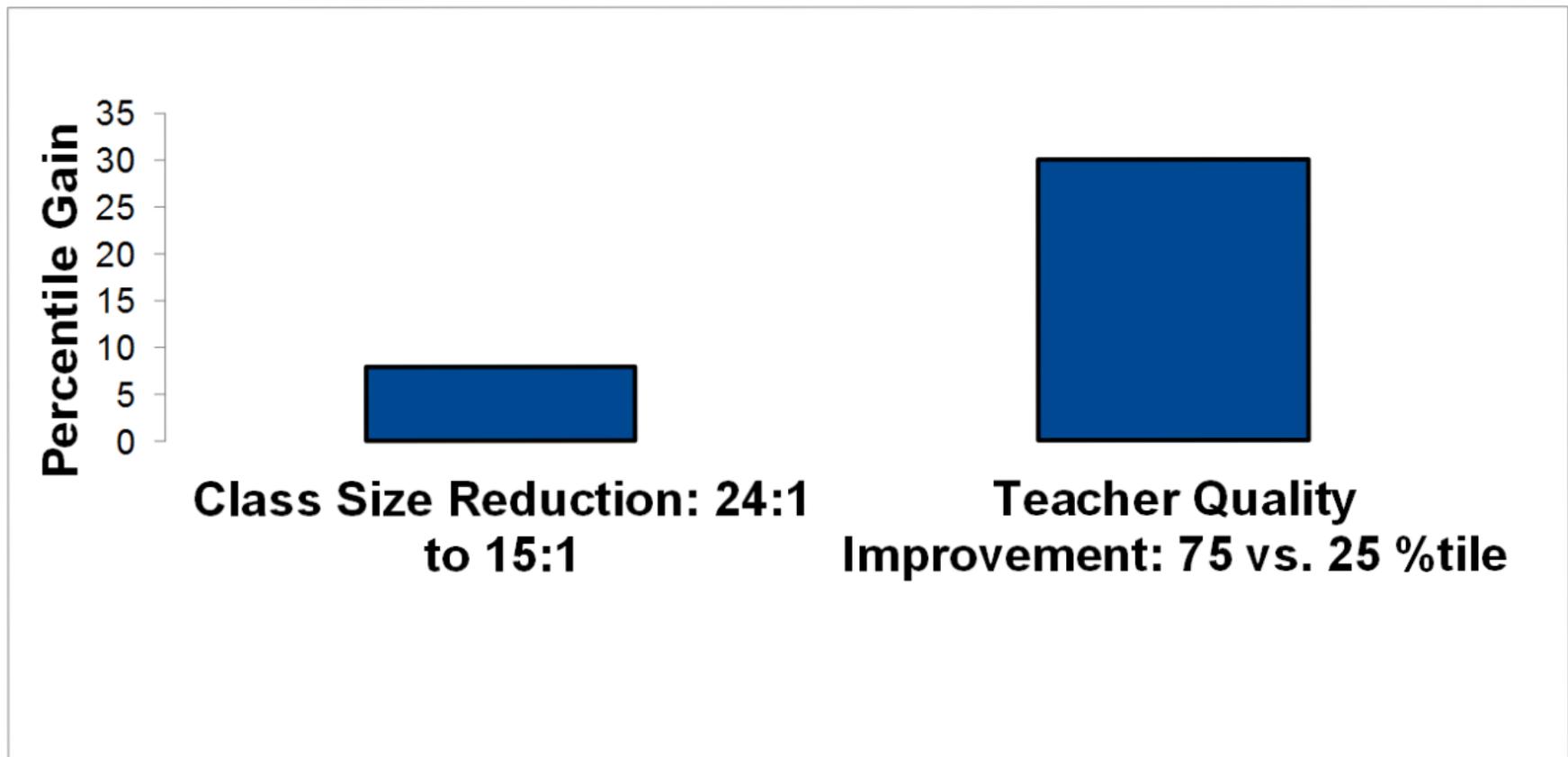
4th Grade Reading Achievement



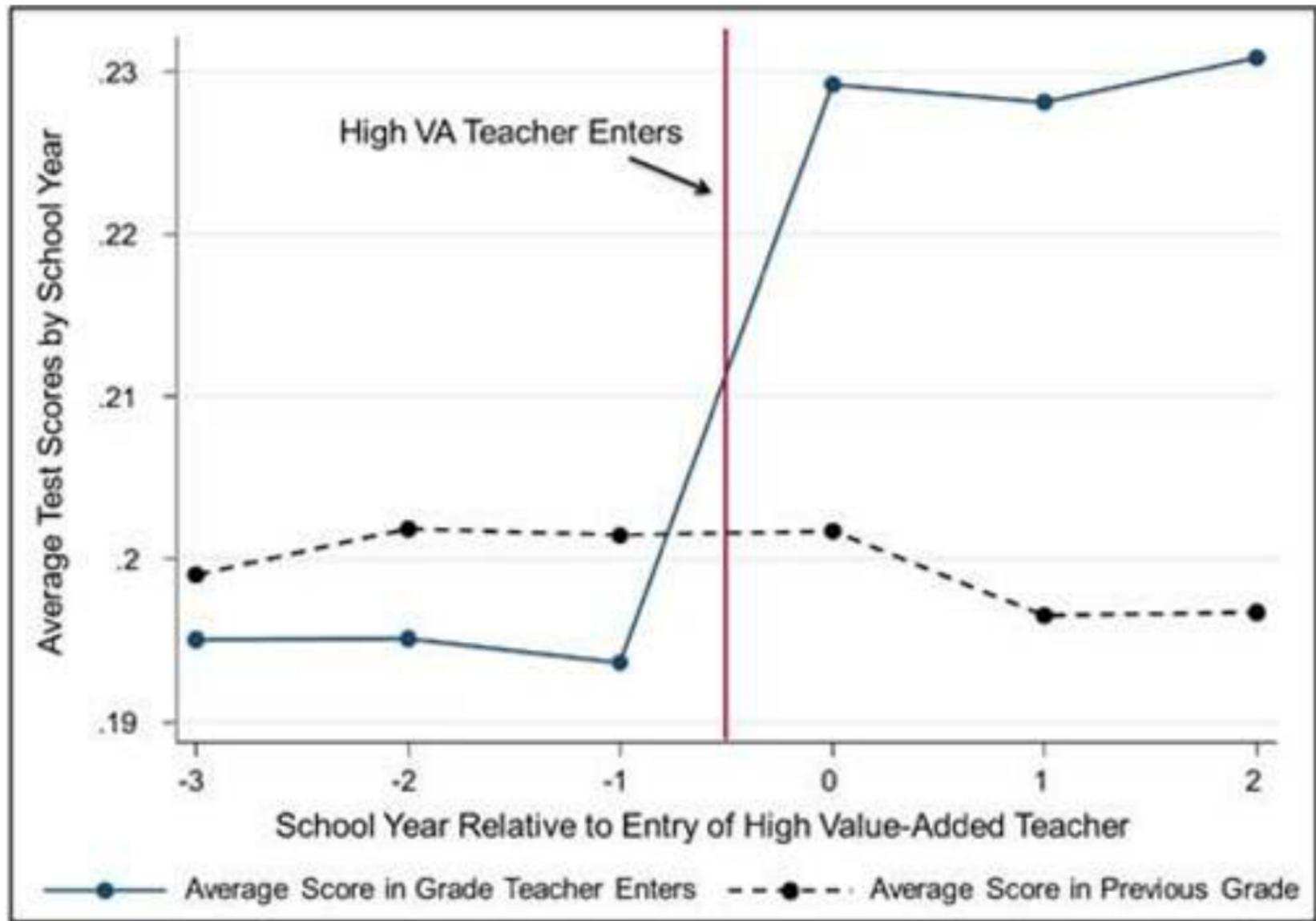
Dallas, Texas data: 2800-3200 students per cohort

Comparison of 3 "highly effective" & 3 "ineffective" teachers (Jordan, Mendro, & Weerasinghe, 1997)

What Makes a Difference? Student Achievement Gains



Value of Adding a Highly Effective Teacher



Value of High VA Teacher

Their students:

- more likely to attend college
- less likely to have children as teenagers
- earn more \$ (+\$52,000)
- live in better neighborhoods
- save more for retirement

(Chetty, Friedman, & Rockoff, 2011)

Countries Who Turned Around

- Singapore early 1970s: less than $\frac{1}{2}$ of students reached 4th grade
- Finland in 1960s: only 1 in 10 adults completed more than 9 years basic education
- The difference? Government policy began to identify and nurture quality teachers.

“Americanize” American Schools

Top-performing schools around the world: emphasizing “American” skills like creativity and problem-solving; meanwhile, the United States has been emphasizing more discrete knowledge and testing

“Teach Less, Learn More.”

-Singapore

Educational inputs

