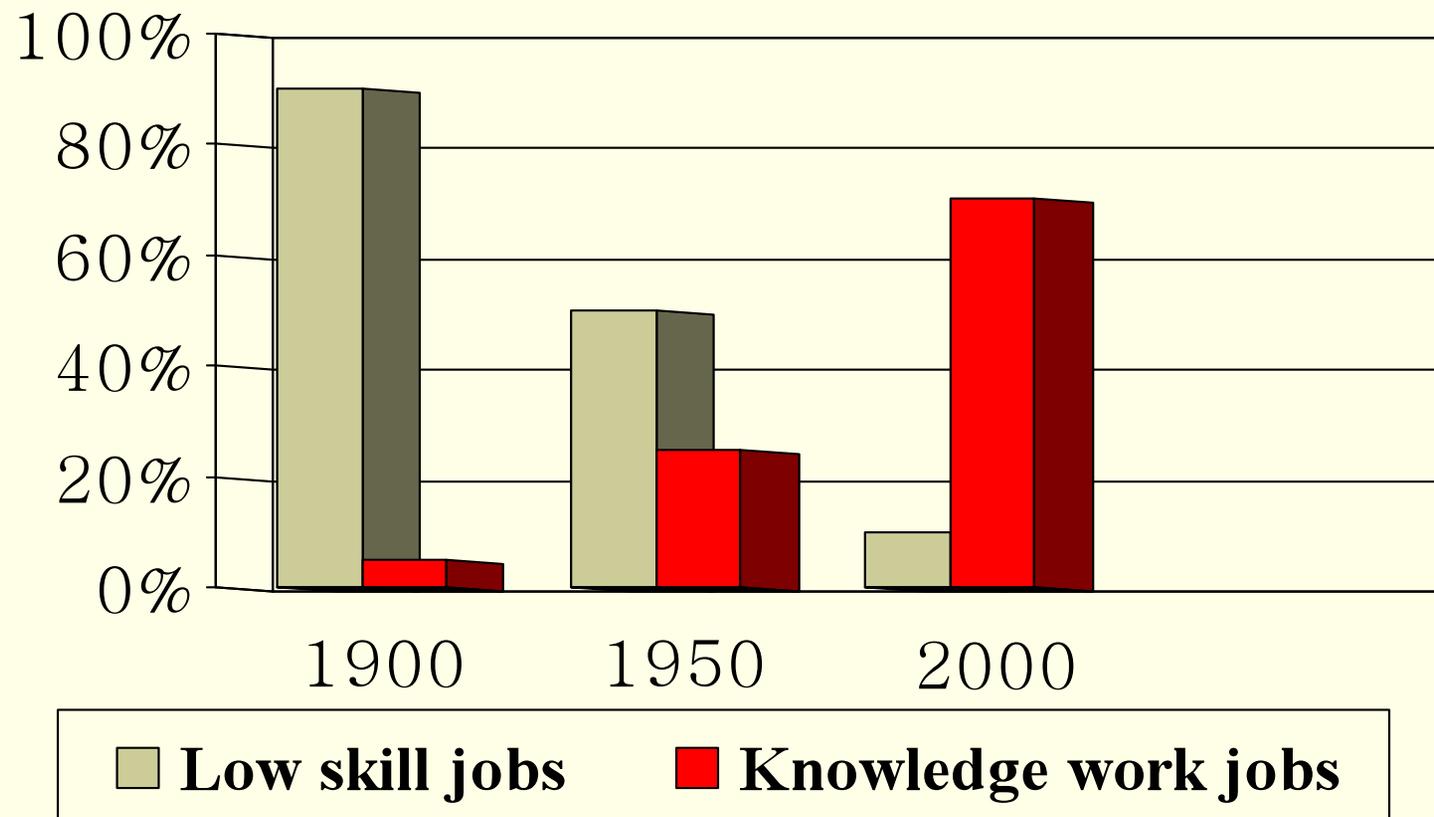


# Supporting World Class Teaching in California



# Changes in Societies are Creating Pressures for School Change

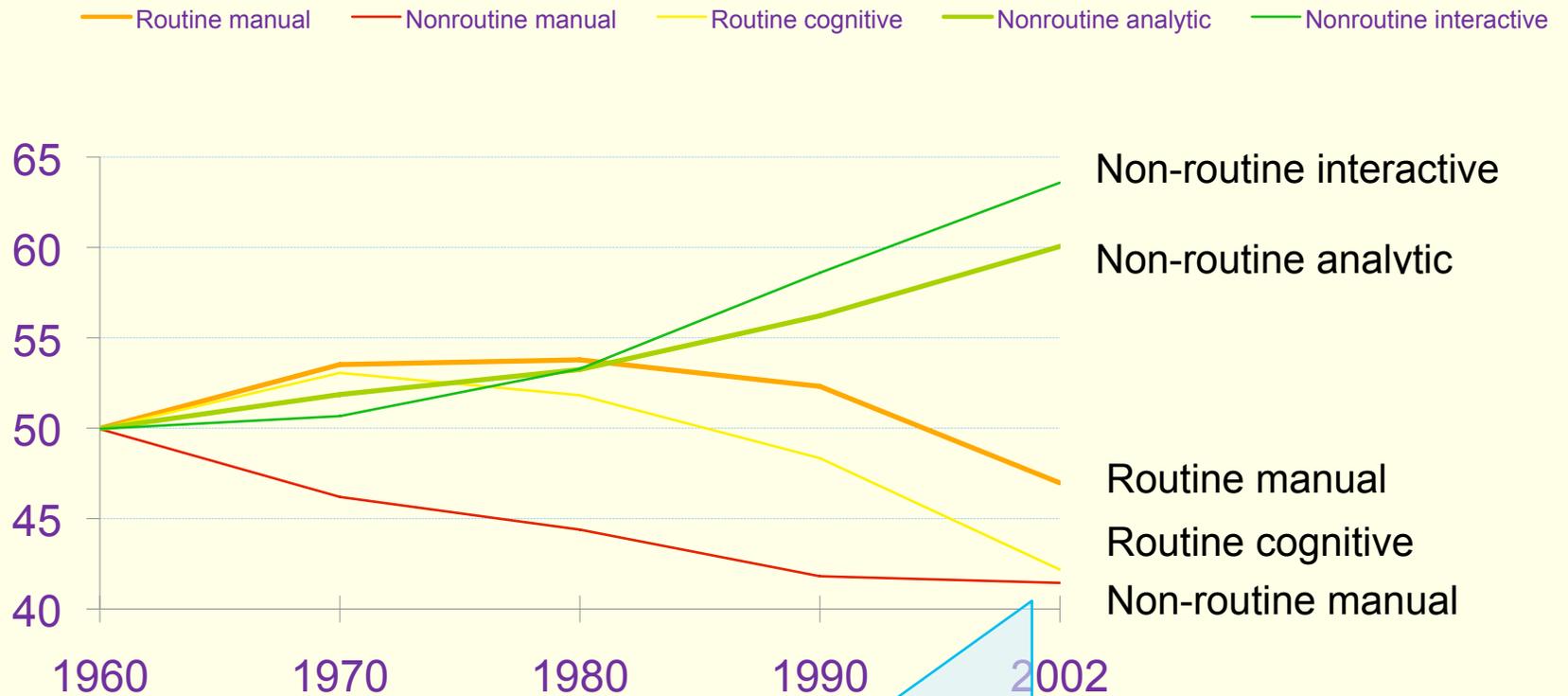
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# How the demand for skills has changed

Economy-wide measures of routine and non-routine task input (U.S.)

Mean task input as percentiles of the 1960 task distribution



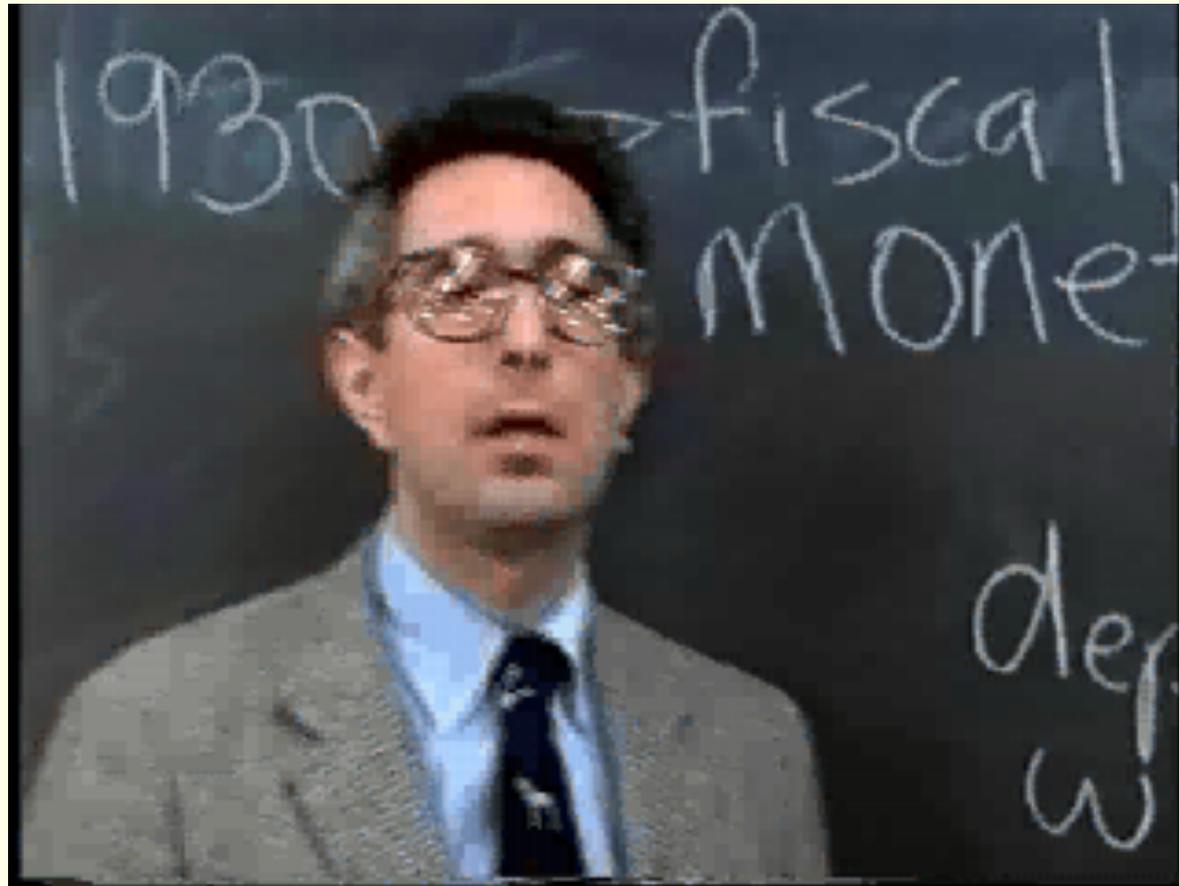
(Levy and Murnane)

## The dilemma of schools:

The skills that are easiest to teach and test are also the ones that are easiest to digitize, automate, and outsource

# 20<sup>th</sup> Century Teaching Cannot Meet 21<sup>st</sup> Century Demands

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# PISA 2009 Results



## Reading

**Korea**  
**Finland**  
**Singapore**  
Canada  
New Zealand  
Japan  
Australia

**US is #14 / 40**

## Mathematics

**Singapore**  
**Korea**  
**Finland**  
Lichtenstein  
Switzerland  
Japan  
Canada

**US is #31 / 40**

## Science

**Finland**  
**Singapore**  
**Japan**  
Korea  
New Zealand  
Canada  
Estonia

**US is #27 / 40**

# What are the Highest-Achieving Nations Doing?

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- Societal supports for children's welfare
- Equitable resources with greater investments in high-need schools and students
- Substantial investments in initial teacher education and ongoing support
- Schools designed to support teacher and student learning
- Equitable access to a rich, thinking curriculum
- Performance assessments focused on higher order skills

# Teaching in Finland



- Top choice profession
- 2 year master's degree
- Free to candidates, plus a stipend
- Research-oriented
- Teacher Training Schools
  - Specially staffed
  - Clinical curriculum
- Collaborative practice
- Hybrid roles

# Teaching in Singapore

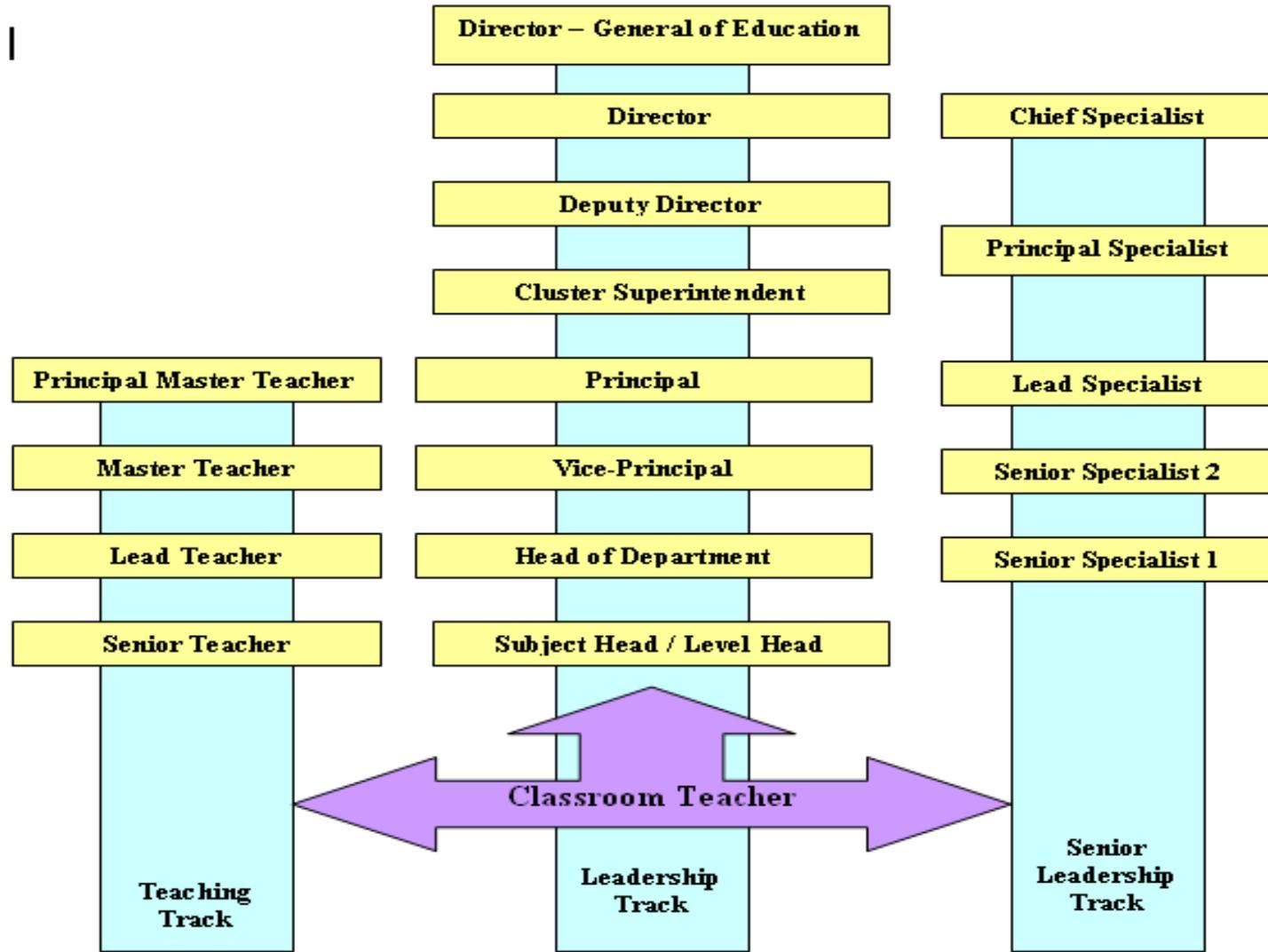


“Just as a country is as good as its people, so its citizens are only as good as their teachers.”

Prime Minister Lee Hsien Loong,  
Teachers Day Rally, 2006

- Fully funded MA degree plus stipend
- High salaries
- Intensive mentoring
- Collaboration time 20 hours / week
- PD -100 hours/year
- Action research and lesson study
- Career ladders

# Career Tracks in Education



# Evaluation and Career Development

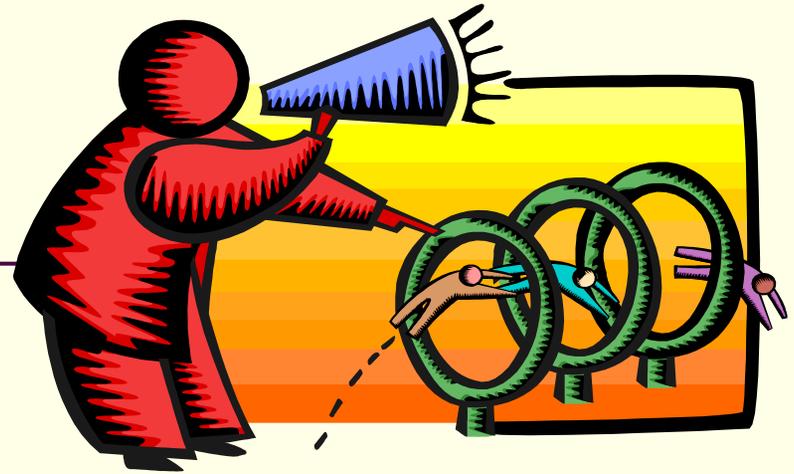
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- Focus on whole child development
- Observation and feedback on practice by expert teachers and principals
- Examination of curriculum and student work
- Emphasis on collaboration and contributions to whole-school improvement
- Development of talent
- Support for sharing of expertise



# Different Theories of Change

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- Theory X:

The key problem is motivation. People respond only to rewards and sanctions (“carrots and sticks”). Incentives are the major element of reform.

- Theory Y:

The key problem is learning. People want to be competent. They respond to information about how to succeed in doing their work. Investments in knowledge and capacity are the major elements of reform.

# Incentives Alone Do Not Improve Outcomes

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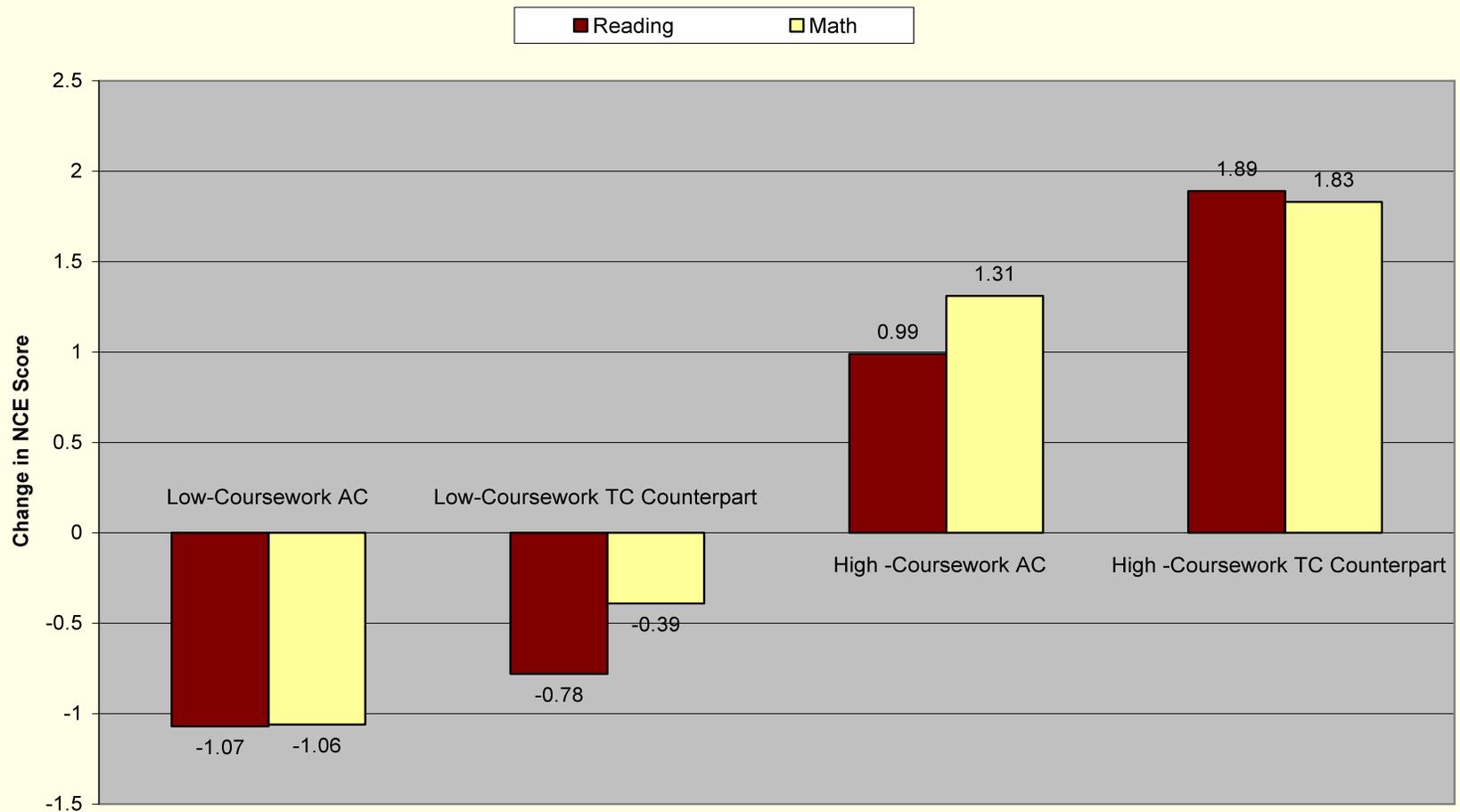
- Studies have found that annual bonus pay for individual teachers allocated competitively based on student test scores has not improved student achievement.
  - Nashville experiment (Springer, 2010)
  - New York City experiment (Fryer, 2011)
  - Portugal experiment (Martins, 2009)



# What Doesn't Work?

## Pathways that Reduce Preparation for Teaching

Fall-to-Spring Test Score Gains / Losses of Students Taught by Alternative Route and Traditional Route Teachers



Based on actual (unadjusted) fall and spring scores

# What Does Work: Investments in Teacher Knowledge and Skill

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Research in NC and NY found that student learning gains are related to:

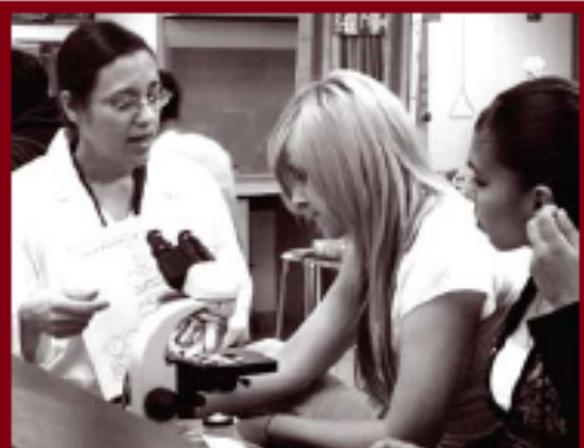
- Strong academic background
- Quality preparation prior to entry
- Certification in the field taught
- Experience (> 3 years)
- The skills measured by National Board Certification

In combination, these skills predicted more of the difference in student learning gains than race & parent education combined (Clotfelter, Ladd, & Vigdor, 2008).

Policies should strengthen & equalize these features.

# What Does Work: The Effects of Well-Designed Professional Development

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**"It's all about co-planning, co-teaching and analyzing, and having time out of the regular teaching day to do these analyses."**

**— A Sacramento District Official  
on New Tech High**

*A review of experimental studies found that high-quality professional development programs of about 50 hours on average over 6 to 12 months increased student achievement by 21 percentile points. (Yoon et al., 2007)*

*PD of <14 hours had no effect on student learning.*

# Professional Learning Opportunities that Impact Practice are:

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- ✓ Focused on learning specific curriculum content
- ✓ Organized around real problems of practice
- ✓ Connected to teachers' work with children
- ✓ Linked to analysis of teaching and student learning
- ✓ Intensive, sustained and continuous over time
  - ✓ Supported by coaching, modeling, observation, and feedback
  - ✓ Connected to teachers' collaborative work in professional learning communities
  - ✓ Integrated into school and classroom planning around curriculum, instruction, and assessment



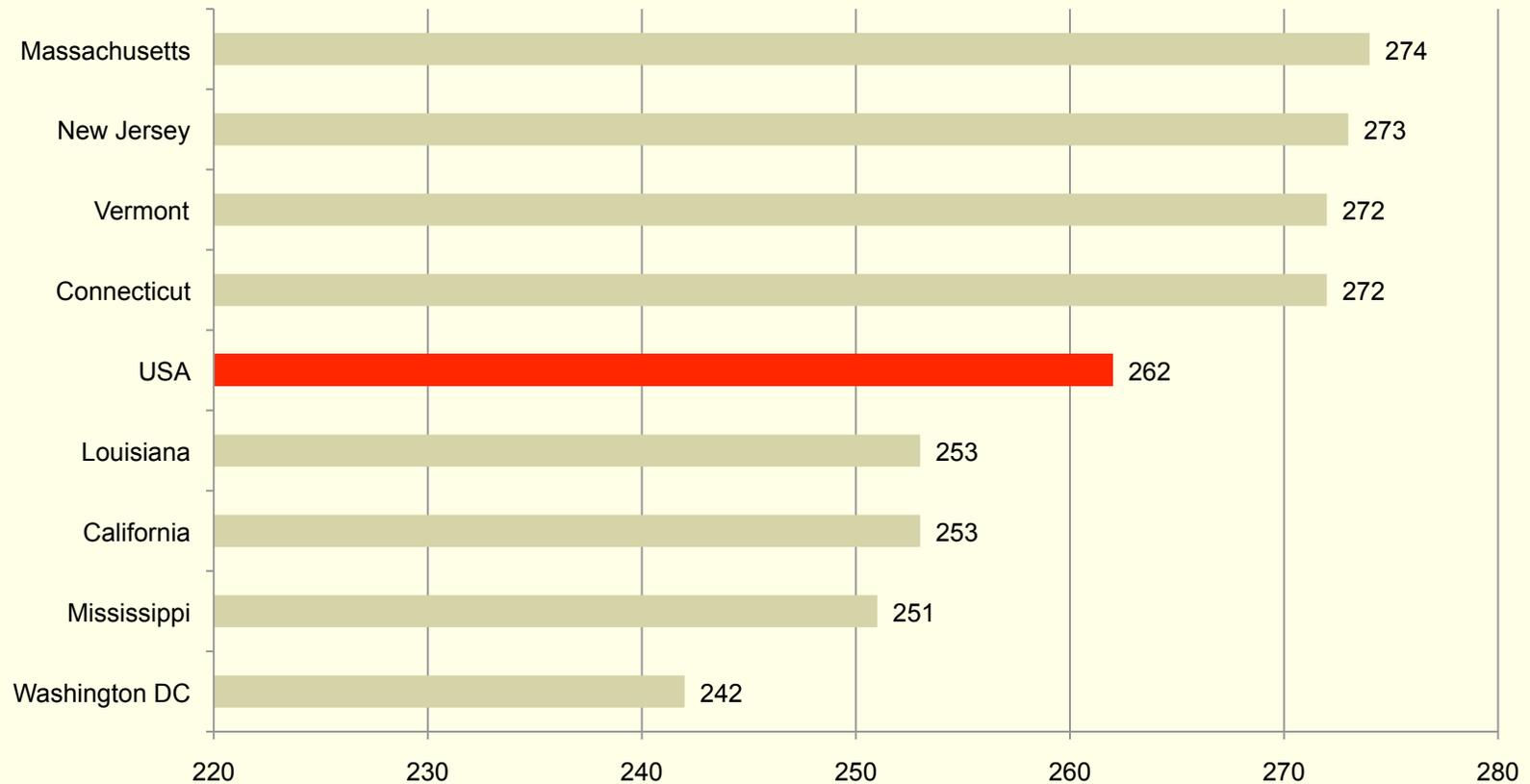
# But few US Teachers Get these Opportunities

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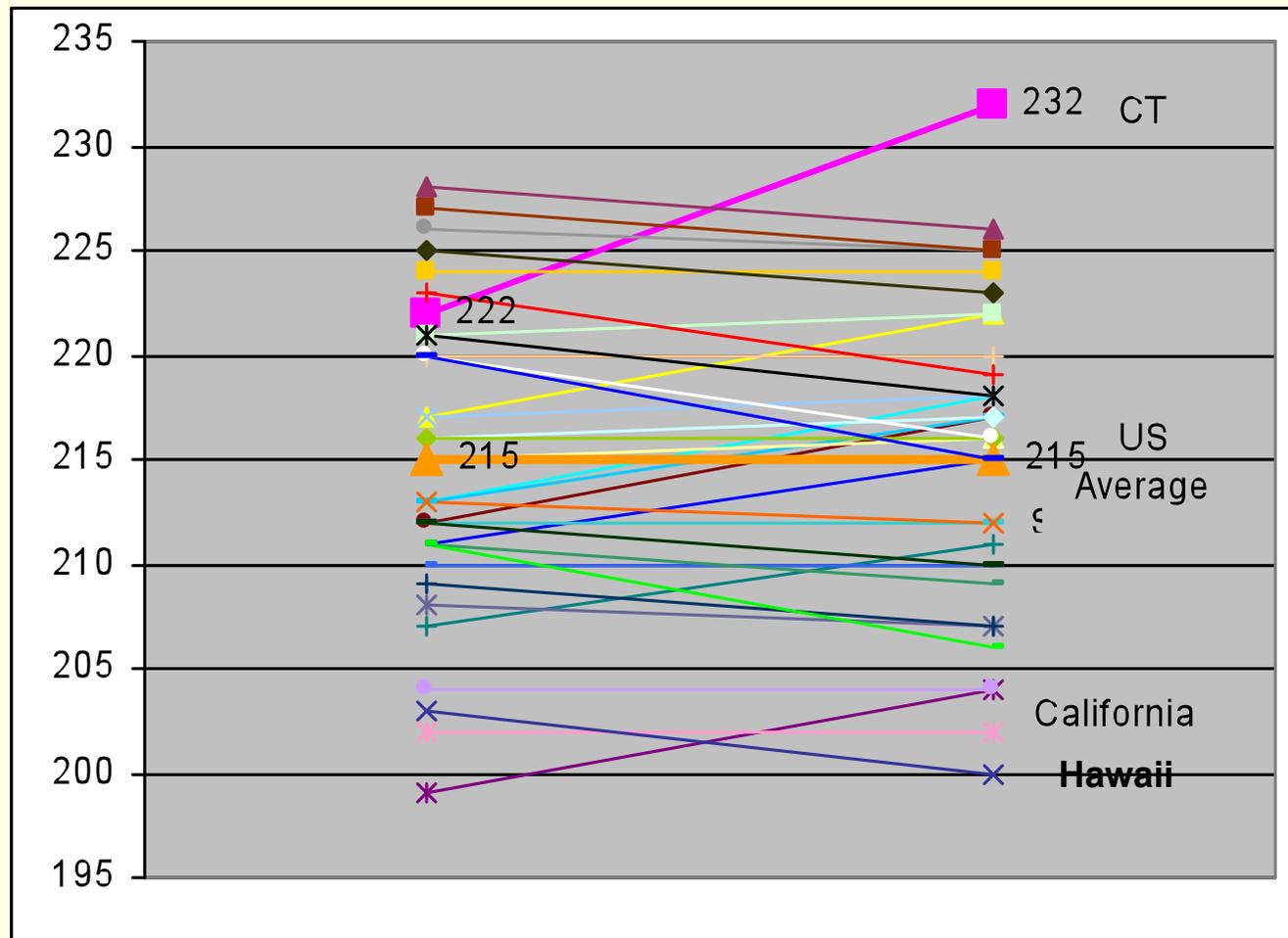
- Teacher preparation is highly variable
- Effective professional development is still rare
- Most US teachers (>90%) participate in 1 to 2 day workshops and conferences.
- Well under half get sustained PD, get mentoring or coaching, or observe other classrooms.
- Only 15% of U.S. teachers reported a great deal of cooperative effort among staff members in 2008.

# What Policies Drive Achievement Differences?

8th grade reading scores, NAEP



# Student Achievement In Reading, 1994-1998



# CT Reforms Leading to High Achievement in the 1990s

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- Raised & equalized teacher salaries
- Raised standards for teaching and teacher education
- Offered service scholarships to attract and prepare high-need teachers
- Required mentoring focused on a clinical performance assessment
- Invested in high-quality professional development (Reading Recovery, National Writing Project, mathematics networks)
- Revised assessments to focus on higher-order skills
- Pursued steady policies for > 15 years

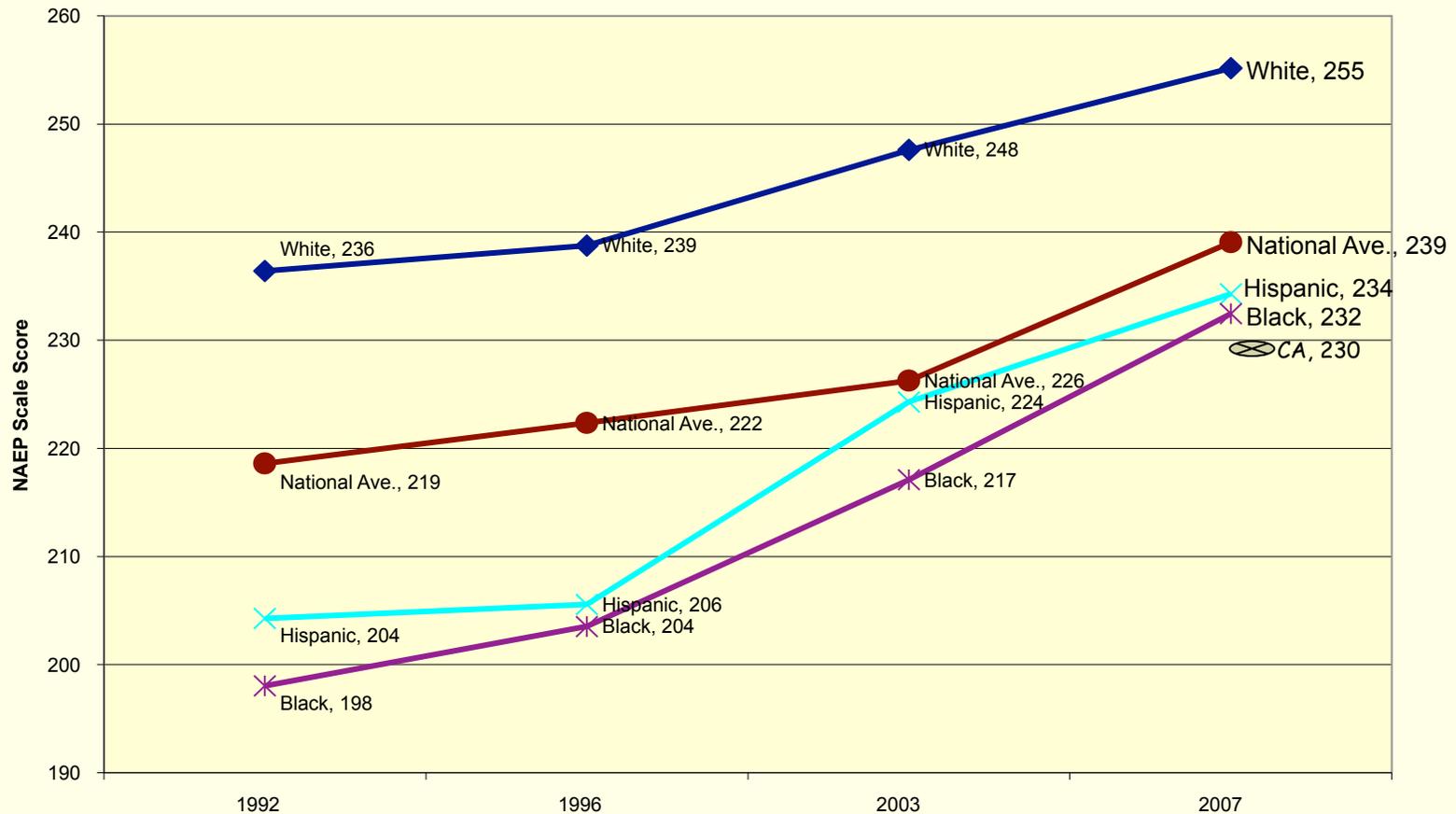
## More recent reforms in New Jersey have enabled it to become...

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- One of the top states in the nation on NAEP reading, math and science, and #1 in writing
- The only top-achieving state serving large proportions of low-income students of color – 45% of NJ students are “minority” and more than 1/3 are low-income
- Among the states experiencing the largest reduction in the achievement gap

# What Happens When States Make Smart and Equitable Investments?

## New Jersey Math Achievement Trends 4th Grade NAEP



Source: National Assessment of Educational Progress, NAEP Data Trends

# What Should California Do?

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- End Waste
  - Reduce Attrition (\$500 million)
  - Improve effectiveness and reduce dropouts (\$15 billion if dropouts were cut in half)
- Redirect funding from prisons to education
  - Prison enrollments have quadrupled
  - Most inmates are high school dropouts and functionally illiterate
  - Spending now outpaces public higher ed. and has reached nearly \$50,000 per inmate

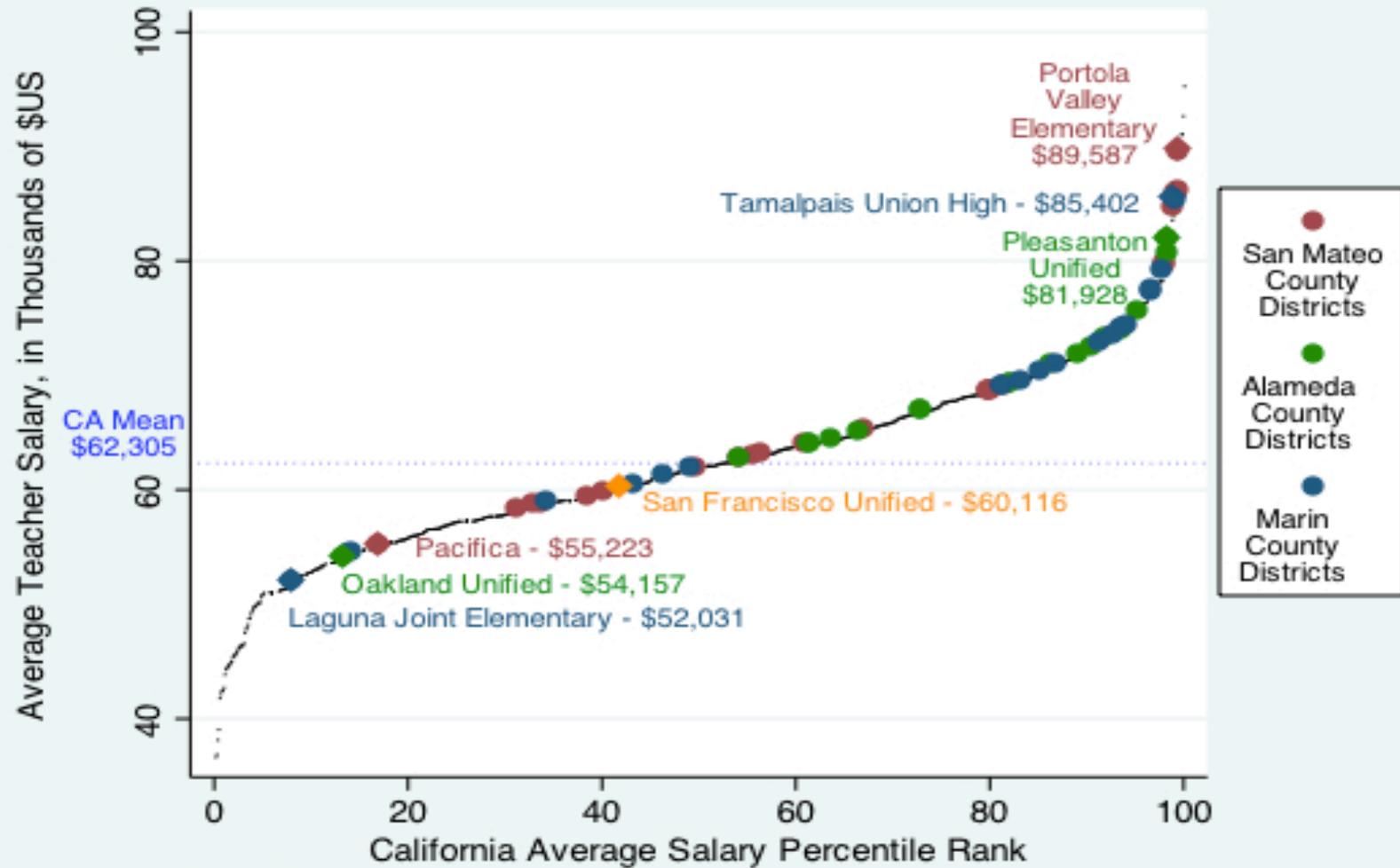
# Look at the Whole System

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# Better Equalize Funding and Salaries

(CA Average Teacher Salaries in the Bay Area)



Source: California Education Data Partnership, 2006.

# Build on, Refine, Reclaim, and Scale up California's Proven Successes

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**Make strong preparation affordable to attract a talented, diverse teaching force**

- Governor's Teaching Fellowships
- Support for public higher education

**Make all preparation programs excellent**

- Stronger expectations for program quality
- Residencies in high-need communities
- Teacher Performance Assessments

**Ensure effective mentoring for new teachers**

- Reboot and leverage the best of BTSA

# Build on, Refine, Reclaim, and Scale up California's Proven Successes

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## Rebuild a strong infrastructure for learning

- Subject matter projects
- California School Leadership Academy
- STEM initiatives

## Create strong, useful teacher evaluation

- Standards-based examination of practice
- Multiple sources of student learning evidence
- Regular feedback & links to PD
- Peer assistance and review
- Timely, accurate decisions

# Support Instructional Leadership

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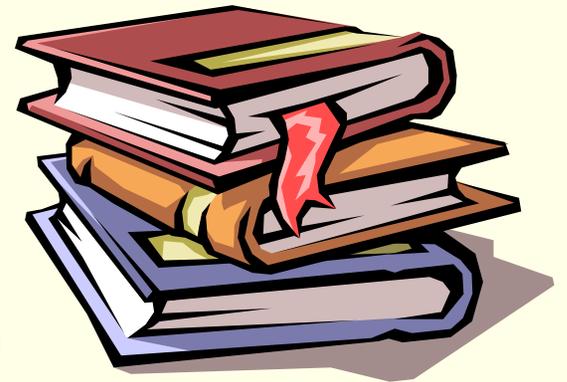
Great principals – and teacher leaders -- spend their time:

- building a professional learning community
- fostering teacher professional development
- providing instructional feedback to teachers
- working with teachers to improve teaching practices
- using data to monitor school progress, identify problems and propose solutions
- redesigning school organizations
- facilitating student learning beyond the test

## A goal for California for the 21<sup>st</sup> Century:

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- “Those who can, do. Those who understand, teach.”



- “Those who can, teach.

Those who can't go into a less significant line of work.”