QUALITY TEACHING:
WHAT IS IT AND
HOW CAN IT BE MEASURED?

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Our Agenda

- What is quality teaching?
- Why does quality teaching matter for educational justice?
- What does a system that provides quality teachers for all students look like?
- What are key policies to create such a system?

What Effective Teaching is Not

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What Do Effective Teachers Do?

Effective Teachers…

- Engage students in active learning
- Create intellectually ambitious tasks
- Use a variety of teaching strategies
- Assess student learning continuously and adapt teaching to student needs
- Create effective scaffolds and supports
- Provide clear standards, constant feedback, and opportunities for revising work
- Develop and effectively manage a collaborative classroom in which all students have membership.

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Teacher Qualifications Have Large Effects

Research finds that student learning gains are related to:

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

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

Policies should strengthen & equalize these features.

The Teaching Gap Creates Most of the Achievement Gap

- The least experienced and prepared teachers teach the least advantaged students
- High attrition rates for less-prepared and supported teachers create a revolving door and wasted resources for professional development and reform in less advantaged schools
- Each teacher replacement costs $15,000 - $20,000
- Students taught by underqualified teachers have significantly lower achievement in reading and mathematics.
- These effects are magnified in poorly staffed schools.
- Other reforms cannot work when the teaching force is underprepared and unstable.

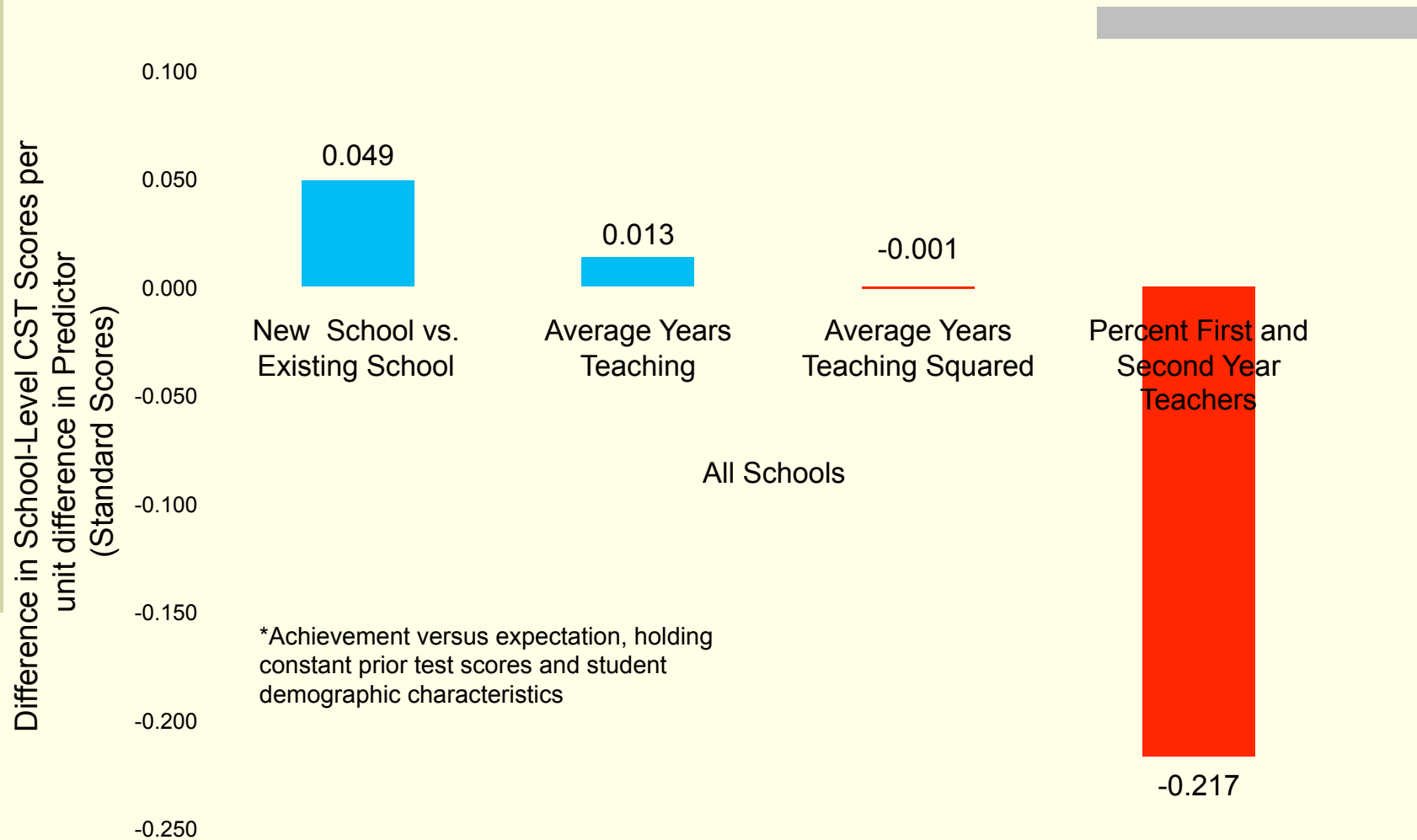# Underprepared Teachers Decrease Student Achievement

**Fall-to-Spring Test Score Gains / Losses of Students Taught by
Alternative Route and Traditional Route Teachers**
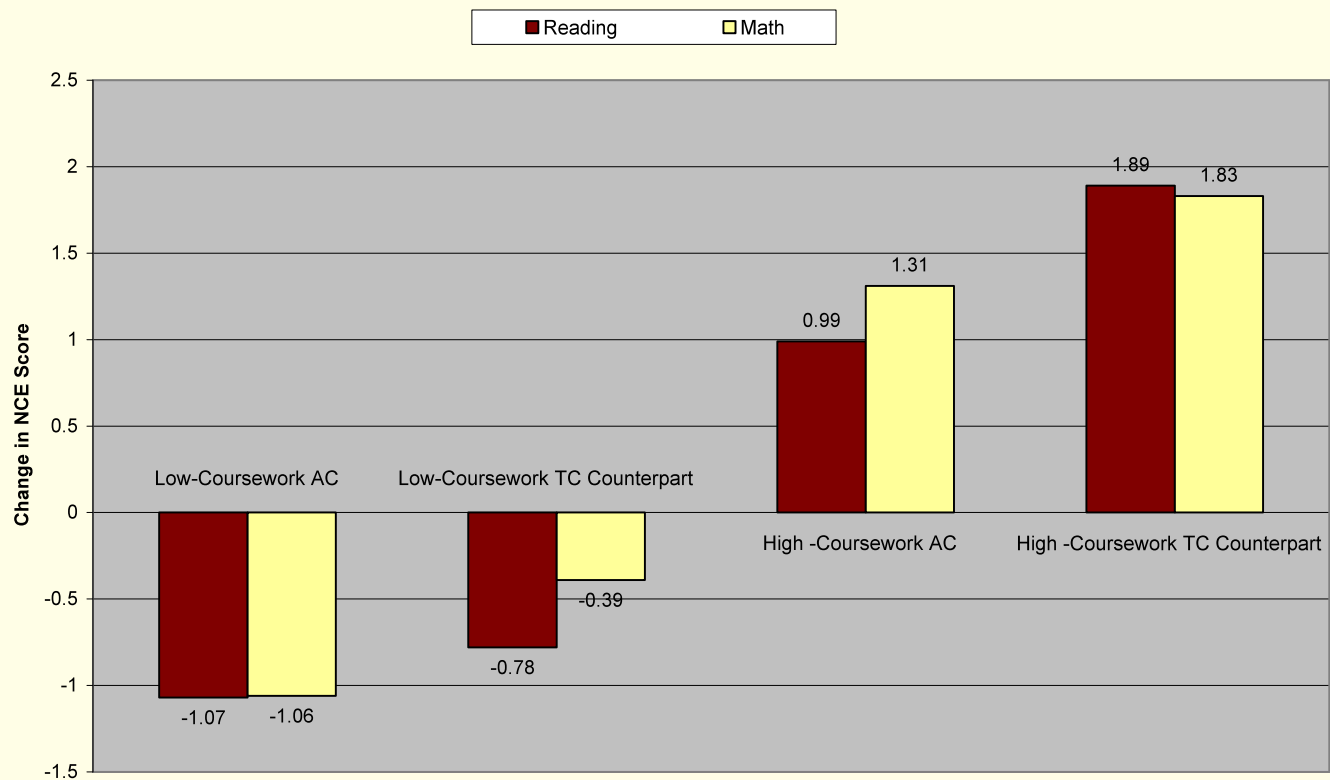
Based on actual (unadjusted) fall and spring scores

Staffing Strongly Influences School Productivity

(ELA Productivity* (2003-07) Associated with Teacher and School Characteristics)

Difference in School-Level CST Scores per unit difference in Predictor (Standard Scores)

0.100

0.050

0.000

-0.050

-0.100

-0.150

-0.200

-0.250

0.049
New School vs. Existing School

0.013
Average Years Teaching

-0.001
Average Years Teaching Squared

Percent First and Second Year Teachers
-0.217

All Schools

*Achievement versus expectation, holding constant prior test scores and student demographic characteristics

# What are High-Achieving and Steeply-Improving Nations Doing?

- Universal preschool and health care
- Equitable funding with investments in high-need schools and students
- A lean curriculum & performance assessments focused on higher order skills
- Large investments in initial teacher education and ongoing support

Professional Learning Opportunities in High-Achieving Nations Abroad

High-achieving nations in Europe and Asia:

- Ensure extensive (3-4 year) initial preparation that includes clinical training in model schools
- Provide beginners with intensive mentoring.
- Offer extensive, sustained learning opportunities embedded in practice:
  - Teachers have 15-25 hours a week for collaboration plus 100 hours a year for professional learning
  - Most engage regularly in Lesson Study, Action Research, and Peer Observation and Coaching to evaluate and improve practice.

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What Kind of Policies Can Help?

"Today you're going to learn the meaning of 'irony'."
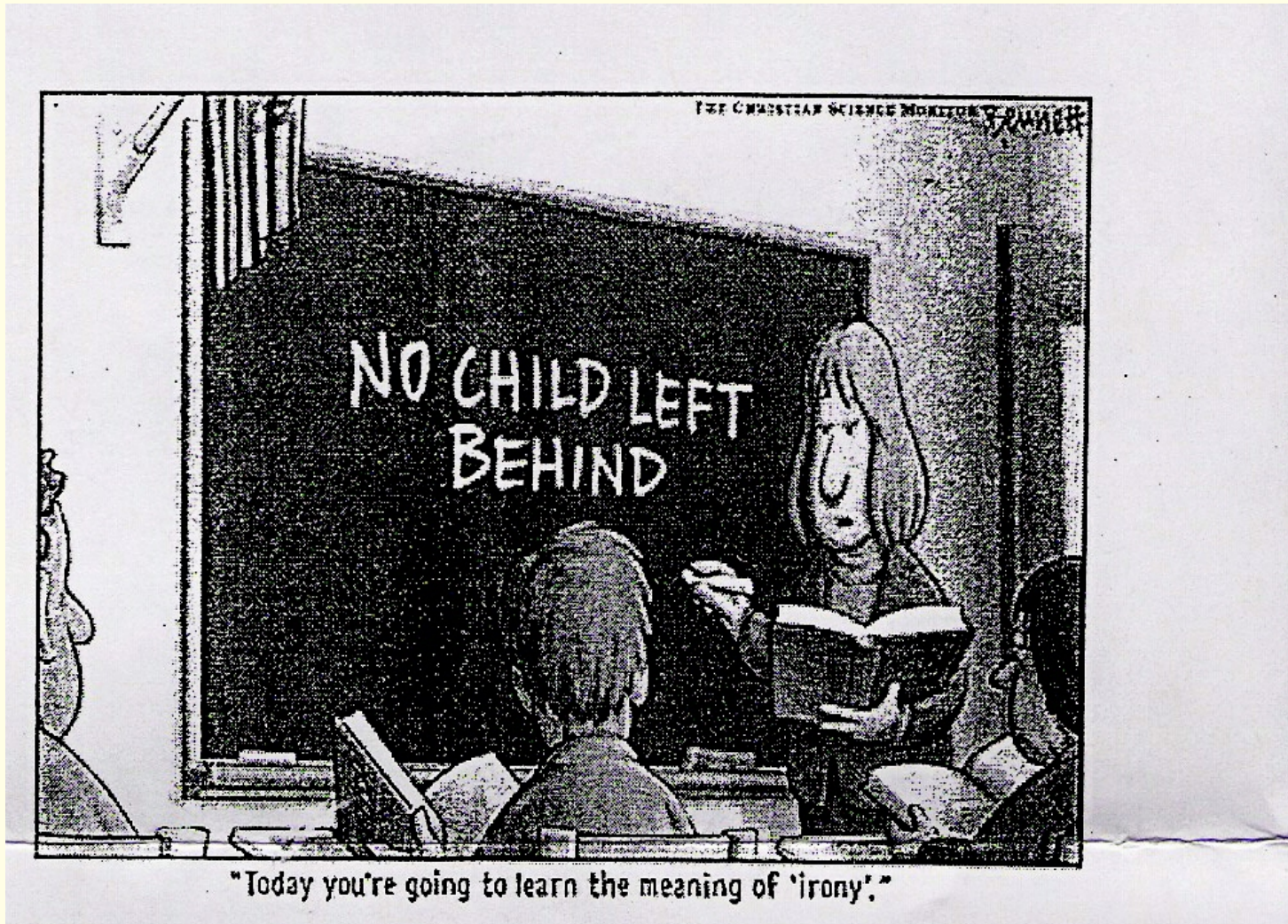
Changes Needed: An Extreme Makeover for Educator Evaluation

- Create shared, clear, meaningful standards
- Examine performance with standards-based measures that look at practice, teacher decision making, and student work
- Develop expertise for evaluation and support
- Plan for evaluation, feedback, and follow up coaching and professional development
- Develop structures to support strong professional decisions
- Embed evaluation in a performance-based system of licensing and career advancement
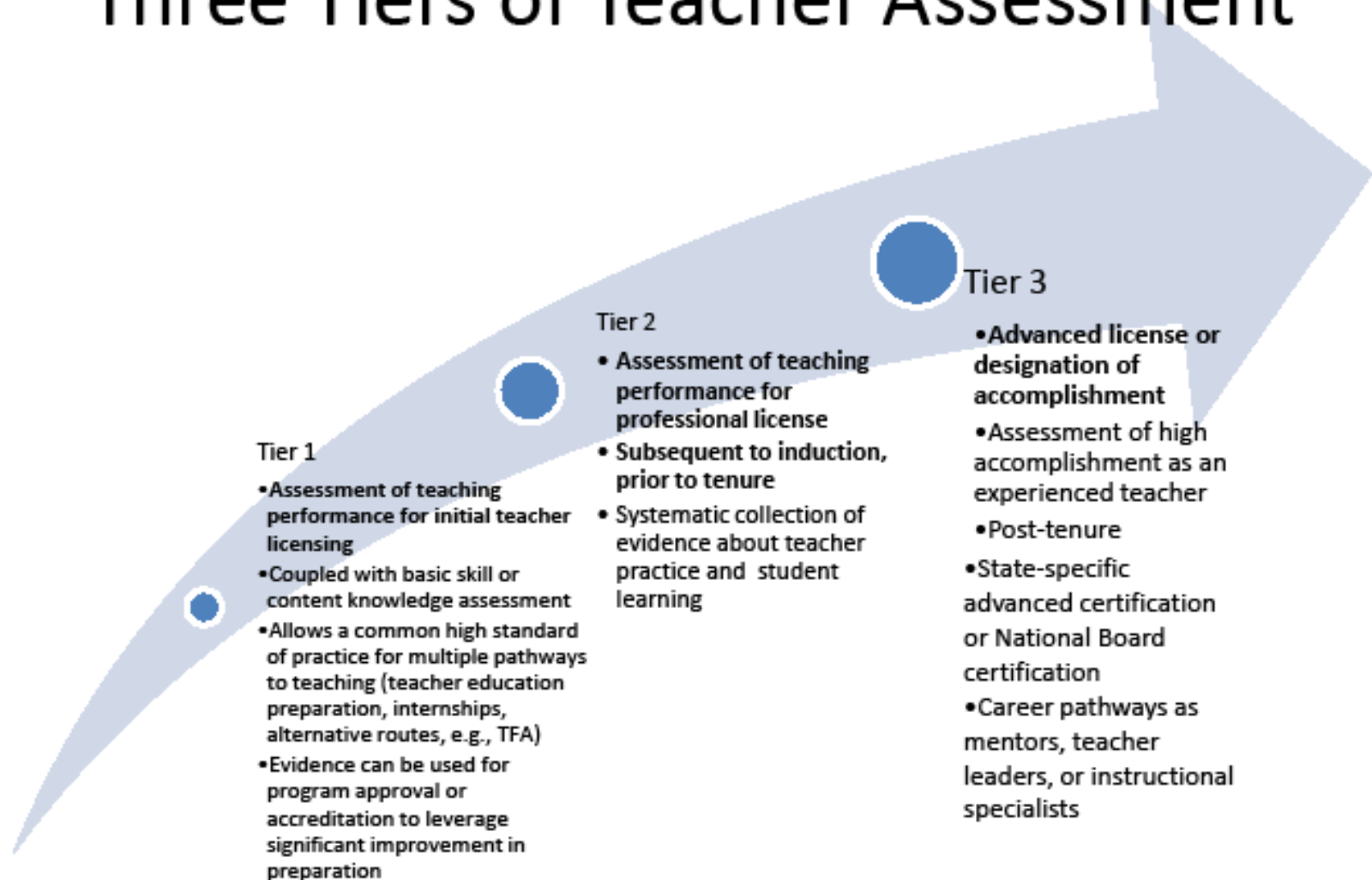
1) Start with Standards and Build a Unified System

- Build on Professional Teaching Standards aligned to Student Standards

- Create Standards-Based Approaches to state licensure assessment and advanced certification

- Use the same standards to shape teacher evaluation tool(s) for local evaluation

- Infuse the ability to evaluate and support teachers based on standards into the standards for principal preparation, licensure, and evaluation

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2) Use Performance Assessments to Guide Teacher Preparation & Licensing

- Teacher Performance Assessments examine

  -- Planning for a unit of instruction

  -- Instruction and rationale

  -- Assessment and student learning

  -- Reflection on teaching

  -- Development of academic language

- Trained scorers use analytic rubrics

- Calibration and auditing of scores

- Assessments reliably predict effectiveness

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Three Tiers of Teacher Assessment

Tier 1

- Assessment of teaching performance for initial teacher licensing
- Coupled with basic skill or content knowledge assessment
- Allows a common high standard of practice for multiple pathways to teaching (teacher education preparation, internships, alternative routes, e.g., TFA)
- Evidence can be used for program approval or accreditation to leverage significant improvement in preparation

Tier 2

- Assessment of teaching performance for professional license
- Subsequent to induction, prior to tenure
- Systematic collection of evidence about teacher practice and student learning

Tier 3

- Advanced license or designation of accomplishment
- Assessment of high accomplishment as an experienced teacher
- Post-tenure
- State-specific advanced certification or National Board certification
- Career pathways as mentors, teacher leaders, or instructional specialists

What Performance Assessments May Offer

- A means to predict teacher effectiveness
- Stable evidence to augment student achievement data which are

  -- unavailable for most teachers

  -- volatile across years, courses, models

  -- based on narrow tests that don't measure growth validly for most students

- A lever for improving teacher learning and program quality (preparation, induction, and PD)

Predictive Validity of Performance Assessments

- Mentor evaluations (Rockoff & Speroni)
- National Board Certification

  -- Effect sizes of .04 -.20 (pass/fail)

- Connecticut BEST portfolio

  -- Effect size of .46 (4 point scale)

- California PACT assessment

  -- Effect size of .15 (44 point scale)

  20 percentile point difference in adjusted student achievement for highest and lowest-scoring teacher

3) Build Annual Evaluation Tools Based on the Same Standards

Combine Evidence of <u>Practice, Performance, and Outcomes</u> in an Integrated Evaluation System that looks at

- Teaching practice in relation to standards, curriculum goals, and student needs

- Contributions to colleagues and the school, and

- Student learning in relation to teaching practices, curriculum goals, and student needs.

- Accomplishment of individual and group goals

Standards-Based Evaluation Tool

Evaluation Criteria	Ratings for each observation					Notes and Data Sources	Summary
	1st	2nd	3rd	4th	5th		

I. Standard for Engaging and Supporting All Students In Learning

A. Connecting students' prior knowledge, life experience, and interests with learning goals.

A. Using a variety of instructional strategies and resources to respond to students' diverse needs.

A. Facilitating learning experiences that promote autonomy, interaction and choice.

A. Promoting self-directed, reflective learning for all students.

A. Engaging students in problem solving, critical thinking and other activities that make subject matter meaningful

Summative rating for Standard I

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Performance Levels

1) **Insufficient Evidence (Novice):** evidence too limited to make an evaluation or evidence suggests unawareness of this standard.

2) **Beginning (Apprentice):** aware of the standard and understands its importance.

3) **Developing Proficiency (Independent Practitioner):** understands and begins to implement the standard for most students.

4) **Proficient (Effective Practitioner):** understands and consistently implements the standard for nearly all students.

5) **Skillful (Expert Practitioner):** understands and consistently implements the standard for all students in a creative and effective way.

| Novice | Apprentice | Independent Practitioner | Effective Practitioner | Expert Practitioner |
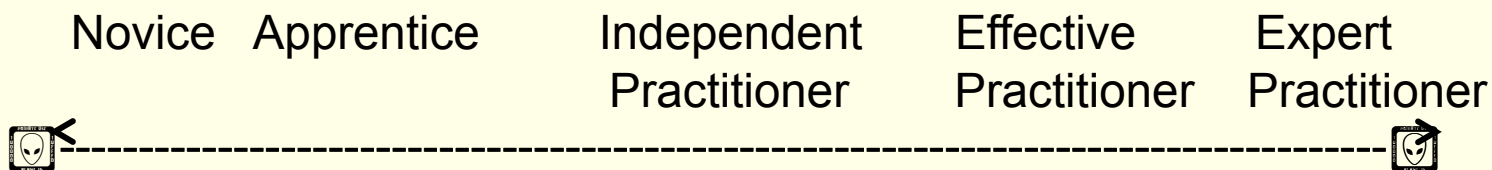
4) Use Multiple Data Sources to Reflect Practice and Learning

- <u>Standards-based observation</u> (in person or video) by experts trained in evaluation and, ideally, the content area

- <u>Examination of curriculum plans, assignments, and student work samples</u>

- <u>Evidence of practices that support student learning</u> both in and outside of the classroom (including work with parents & colleagues; may draw on student feedback)

- <u>Evidence of student learning</u> measured in a variety of ways (e.g. work samples, learning progressions, pre- and post-measures tied to curriculum, exhibitions of mastery, as well as annual tests)

5) Use Value-Added Measures With Caution

Studies find that teachers' value-added "effectiveness" is highly variable & influenced by:

- The effectiveness of their peers

- Class size and amount of time spent with students

- Tutoring and out-of-school learning

- Student characteristics and attendance

- The measure of achievement used and its appropriateness for the content and students taught

Researchers Have Voiced Concerns

"…VAM estimates of teacher effectiveness should not be used to make operational decisions because such estimates are far too unstable to be considered fair or reliable."

-- National Research Council Board on Testing and Assessment

" The research base is currently insufficient to support the use of VAM for high-stakes decisions about individual teachers or schools.
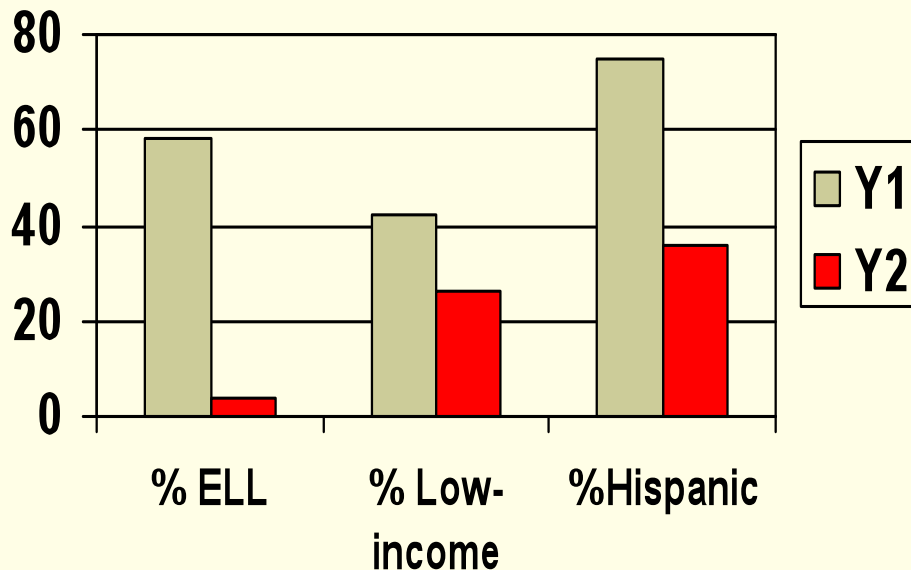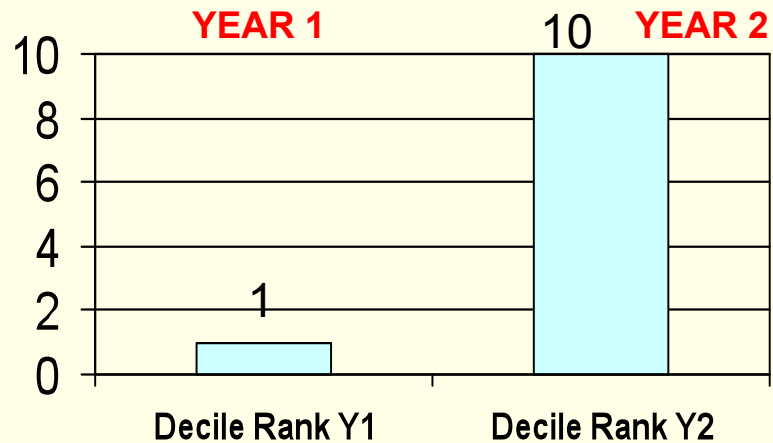
-- <u>Evaluating Value-Added Models for Teacher Accountability</u>, RAND Corporation

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Value-Added Measures of Teacher Effects are Not Highly Stable

	By at least 1 decile	By at least 2 deciles	By at least 3 deciles
Across statistical models*	56-80%	12-33%	0-14%
Across courses*	85-100%	54-92%	39-54%
Across years*	74-93%	45-63%	19-41%

*Depending on the model

A Teacher's Measured "Effectiveness" Can Vary Widely Depending on these Factors

YEAR 1 **YEAR 2**

Decile Rank Y1: 1
Decile Rank Y2: 10

Bottom chart (% ELL, % Low-income, %Hispanic) with legend Y1, Y2

- Same high school
- Same course (English I)
- Not a beginning teacher
- Model controls for:
  - Prior achievement
  - Demographics
  - School fixed effects

Overreliance on VAM Measures Could Hurt the Most Vulnerable Students

" Using test scores to evaluate teachers unfairly disadvantages teachers of the neediest students … This could lead to the inappropriate dismissal of teachers of low-income and minority students, as well as of students with special educational needs. The success of such teachers is not accurately captured by relative value-added metrics, and the use of VAM to evaluate such teachers could exacerbate disincentives to teach students with high levels of need."
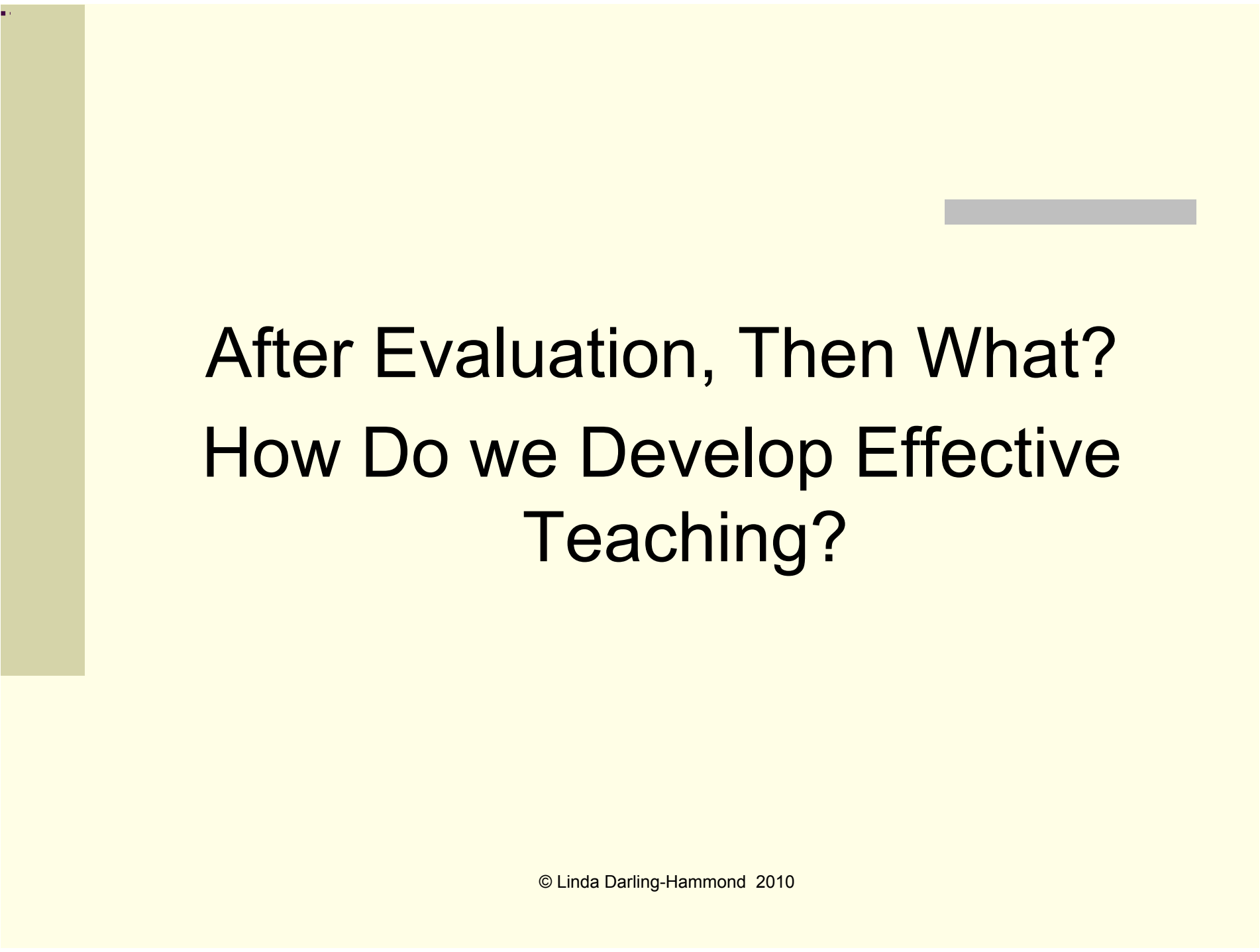
-- Problems with the Use of Student Test Scores to Evaluate Teachers
   Scholars Convened by the Economic Policy Institute, 2010

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6) Develop Evaluation Expertise and Systems

■ Train evaluators

■ Release and fund expert mentors to offer assistance

-- to beginners

-- to teachers who need additional coaching

■ Create evaluation panels and processes for making decisions about tenure and continuation in cases of intervention (e.g. Peer Assistance and Review systems)

7) Integrate Systems

- Link the implementation of common core standards to educator support and evaluation

- Train and assess prospective and current principals for teacher evaluation and support

- Introduce performance-based licensure for leaders based on understanding teaching

- Use professional development policies and compensation to support assessment

- Involve senior teachers, mentors, principals, and teacher educators as assessors

After Evaluation, Then What? How Do we Develop Effective Teaching?

8) Expand High-Quality Pathways to Teaching

- **Evaluate all preparation and induction programs** based on results of
  - -- teacher performance assessments (TPA)
  - -- graduates' contributions to student learning
  - -- retention rates in teaching
- **Use results in program approval / accreditation decisions**
- **Study features of successful programs** & create incentives for other programs to adopt these features
- **Expand successful programs and eliminate those that don't improve**

9) Deepen Professional Learning

Create a strong infrastructure for professional learning that is:

- Responsive to teacher and principal needs
- Sustained and readily available
- Grounded in curriculum content
- Supportive of diverse learners
- Supported by coaching
- Connected to collaborative work in professional learning communities
- Integrated into school and classroom planning around curriculum, instruction, and assessment

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What Research Tells Us

Well-designed professional development can improve practice and increase student achievement.

> *A review of high-quality experimental studies found that among programs offering extended PD (49 hours on average over 6 to 12 months), student achievement increased by 21 percentile points.* (Yoon et al., 2007)

One-shot workshops do not have positive effects.

The Status of Professional Development in the United States

- Effective professional development is better understood but still relatively rare in the U.S.

- Most 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.

Professional Learning Opportunities in High-Achieving Nations Abroad

High-achieving nations in Europe and Asia:

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- Offer extensive, sustained learning opportunities embedded in practice:
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10) Address the Factors that Influence Effectiveness

■ **Teacher knowledge, skills, dispositions, and behaviors** that support the learning process.

Hanushek et al. estimate the individual teacher effects component of measured student achievement is about 7%-10% of the total.

■ **Student availability for learning** – Prior learning opportunities, health, supportive home context, attendance, developed abilities

■ **Resources for learning** – Curriculum quality, materials, class sizes, specialist supports, etc.

■ **Coherence and continuity** – The extent to which content & skills are well organized and reinforced across grades and classes

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Other Influences on Teaching Effectiveness and Retention

- Administrative supports for instruction

- Mentoring and professional development

- Curriculum and assessments that support meaningful instruction

- Collaborative planning that builds knowledge & creates coherence

- Personalization

- Availability of high-quality materials

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A Smart System Would…

1. Adopt teaching standards and measures of effectiveness for each juncture in the career
2. Build expertise for evaluation and professional support
3. Use Performance Assessments for initial licensure, professional licensure, & advanced certification

    -- scored by practicing educators / teacher educators

    -- used to evaluate and accredit programs
4. Develop annual teacher evaluation based on the same professional standards
5. Study and expand preparation and PD programs that produce stronger outcomes
6. Leverage changes in preparation, induction, and professional development based on what features produce results.
7. Equalize access to teachers who are prepared and certified based on these stronger measures.