



Center for Education Policy Research

HARVARD UNIVERSITY

Strategies to Improve Teaching in New Mexico

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Outline

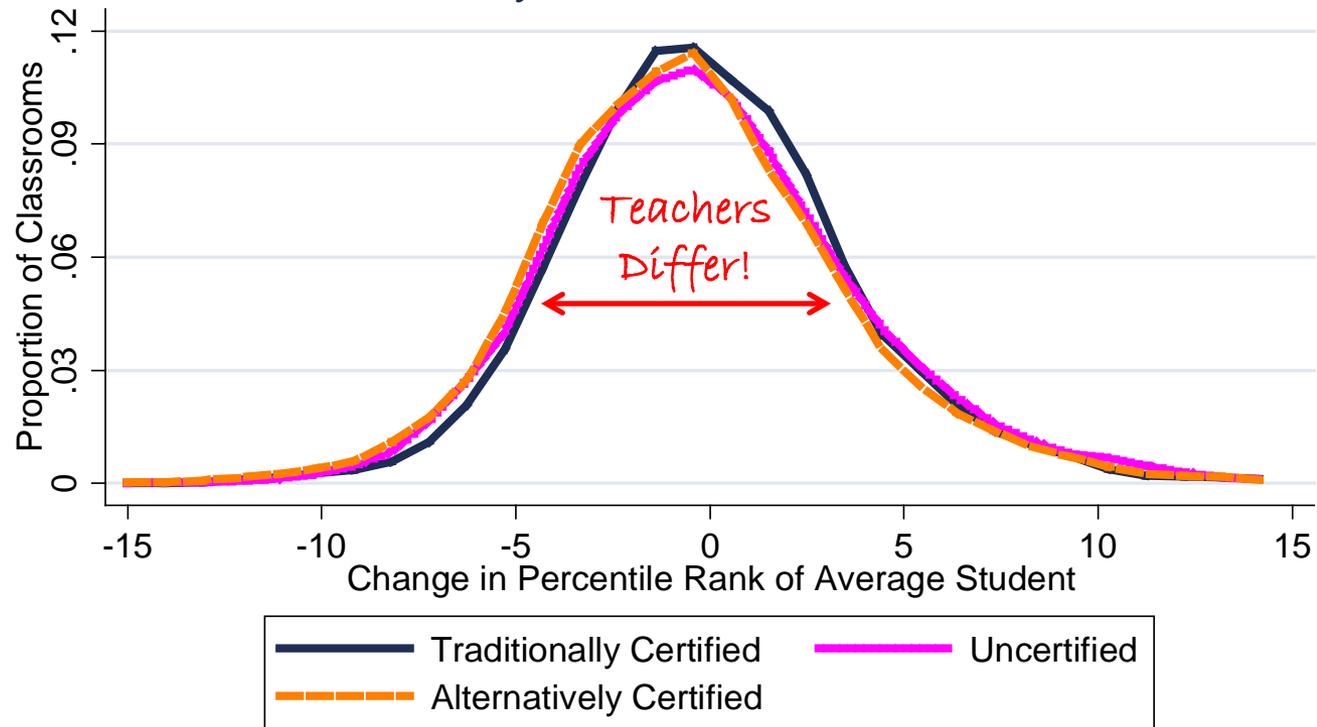
I. Overview of teacher effectiveness research.

- Traditional licenses, alternative licenses
- Licensure exams and academic selectivity
- On-the-job experience
- Tenure reviews

II. Implications for teacher preparation.



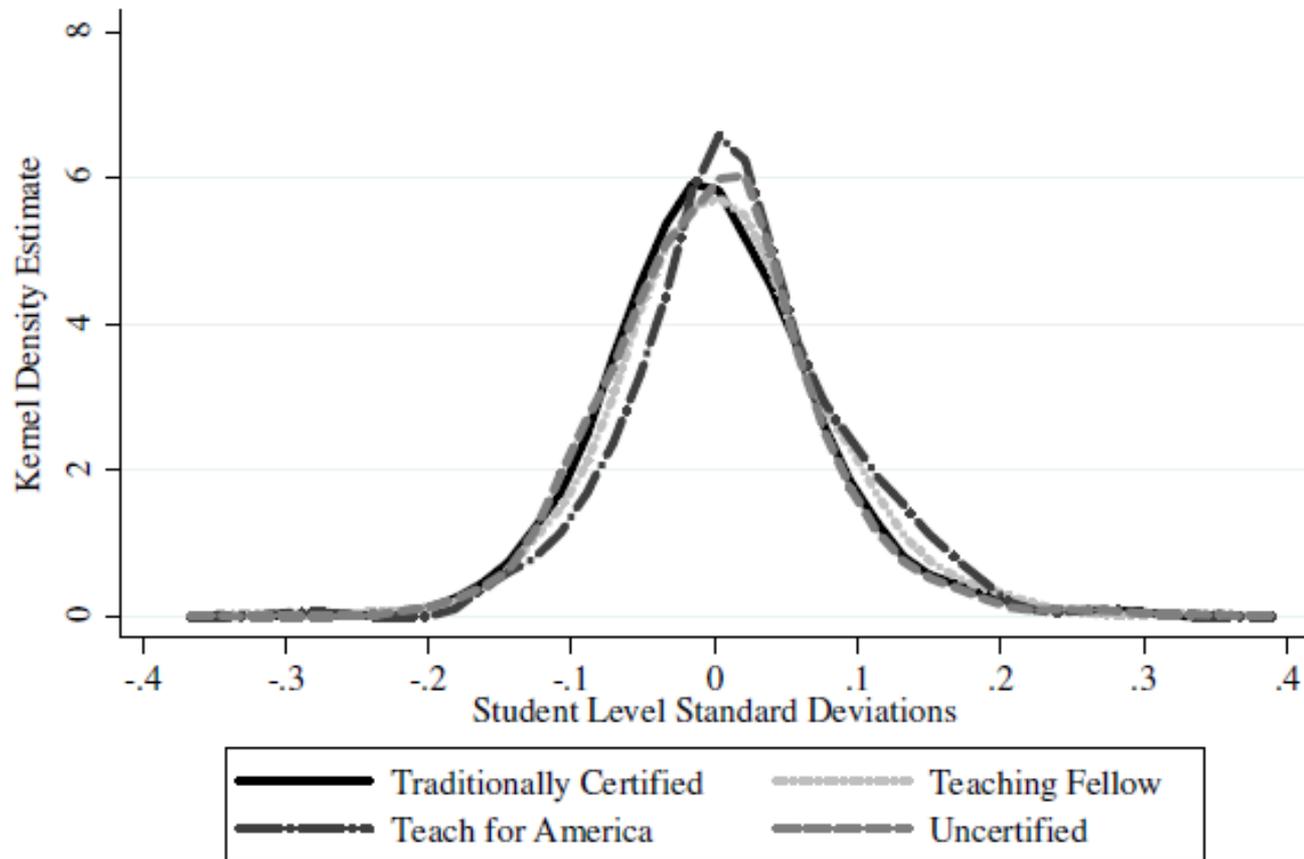
Teacher Impacts on Math Performance by Initial Certification



Note: Classroom-level impacts on average student performance, controlling for baseline scores, student demographics and program participation. LAUSD elementary teachers, grade 2 through 5.



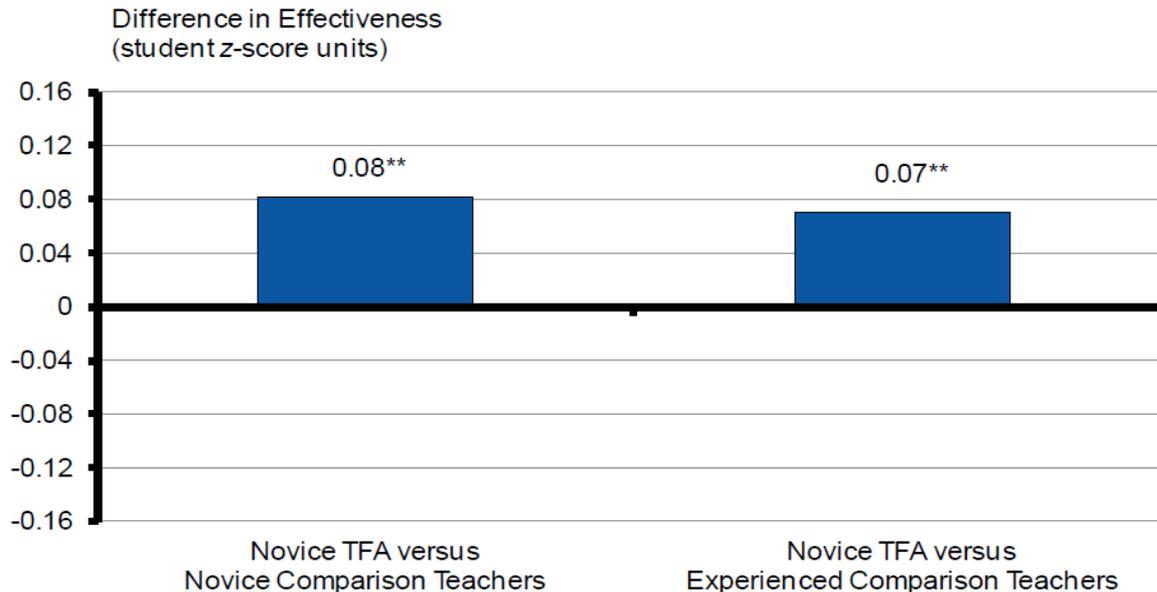
Teacher Effects in NYC by Initial Credentials



Note: Shown are estimates of teachers' impacts on average student performance, controlling for teachers' experience levels and students' baseline scores, demographics and program participation; includes teachers of grades 4-8 hired since the 1999-2000 school year.

TFA Teachers Are More Effective Than Comparisons (although the difference is not large)

Figure V.3. Differences in Effectiveness Between Novice TFA Teachers and Comparison Teachers, by Experience Level of Comparison Teacher



Sources: District administrative records and study-administered Northwest Evaluation Association (NWEA) assessments.

Note: Differences in effectiveness are adjusted for classroom match fixed effects and all covariates in Appendix Table B.1. Novice teachers are defined as teachers in their first three years of teaching. Experienced teachers are defined as teachers in their fourth or more year of teaching.

Source: Clark, Melissa A., Hanley S. Chiang, Tim Silva, Sheena McConnell, Kathy Sonnenfeld, Anastasia Erbe, and Michael Puma. (2013). "The Effectiveness of Secondary Math Teachers from Teach For America and the Teaching Fellows Programs" (NCEE 2013-4015). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

...and it is not due to easy-to-measure academic qualifications.

Academic qualification	Relationship to Student Gains in Math?
Attended selective college	No
Took more math courses in college	No
Teacher scored higher on Praxis II test of math content knowledge	No
Teacher had more days of student teaching in math	No
Teacher had more prior coursework in math pedagogy	No
Teacher was required to take more coursework while teaching	Yes (Negative)
Teaching experience	Yes (1 st to second year)

Source: Clark, Melissa A., Hanley S. Chiang, Tim Silva, Sheena McConnell, Kathy Sonnenfeld, Anastasia Erbe, and Michael Puma. (2013). "The Effectiveness of Secondary Math Teachers from Teach For America and the Teaching Fellows Programs" (NCEE 2013-4015). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.



Teachers learn on the job (during the first three years.)

Fulton County, GA

Los Angeles

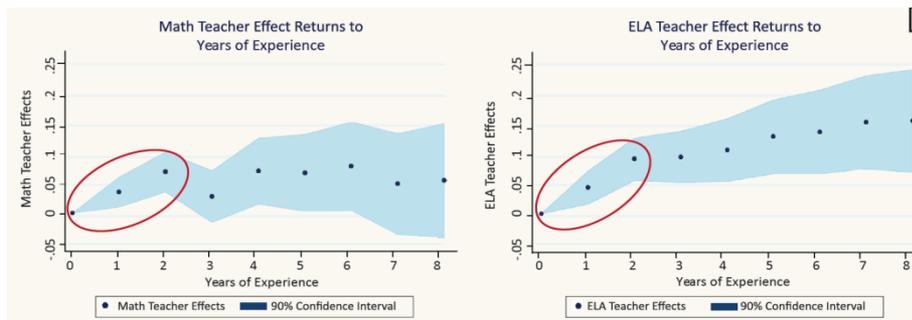
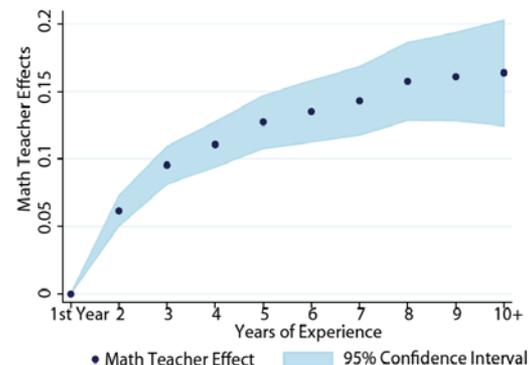
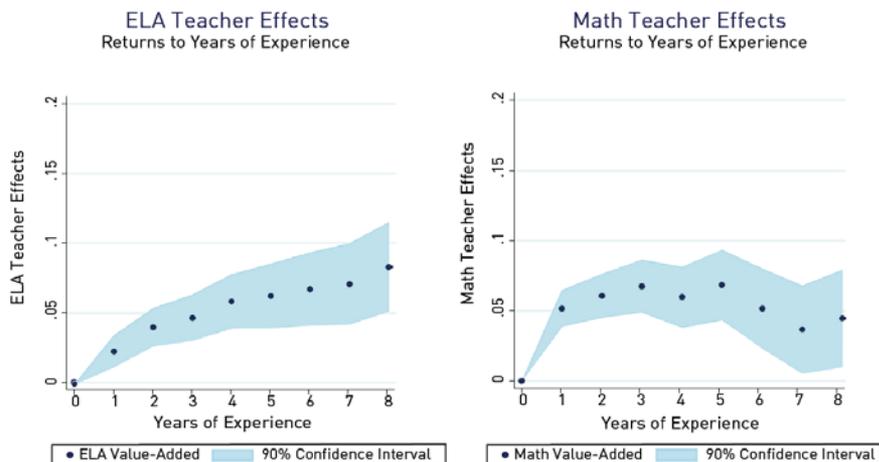


Figure 10: Math Teachers' Returns to Experience
Grades 3–8 Math Teachers, 2004–05 to 2010–11



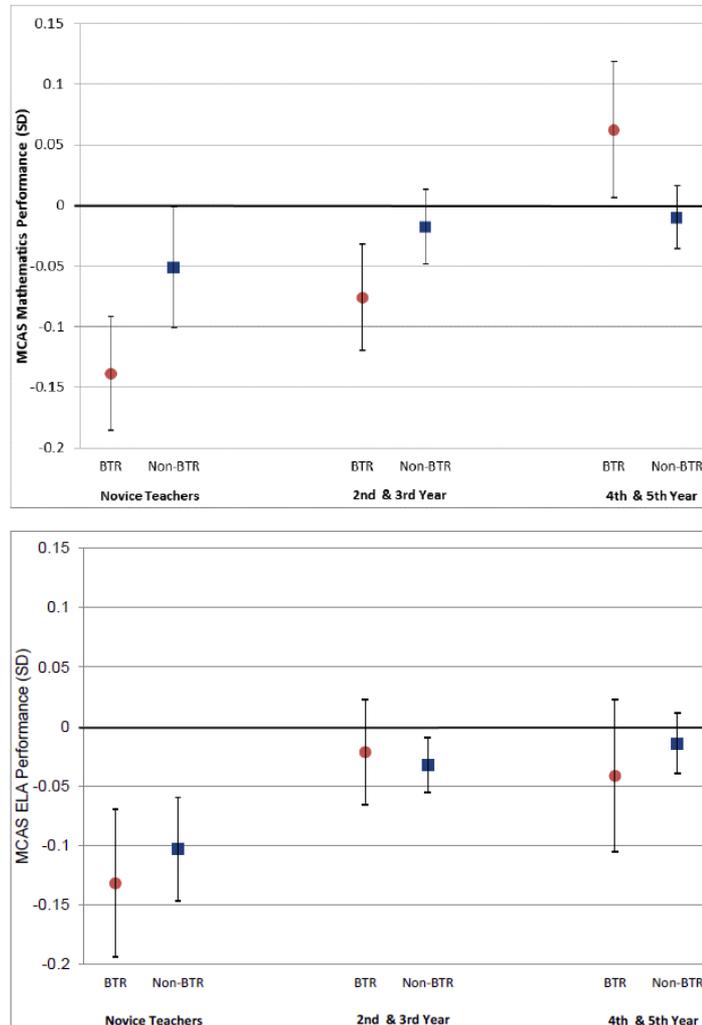
Gwinnett County, GA





Teacher Residency Programs are Expensive and Unproven

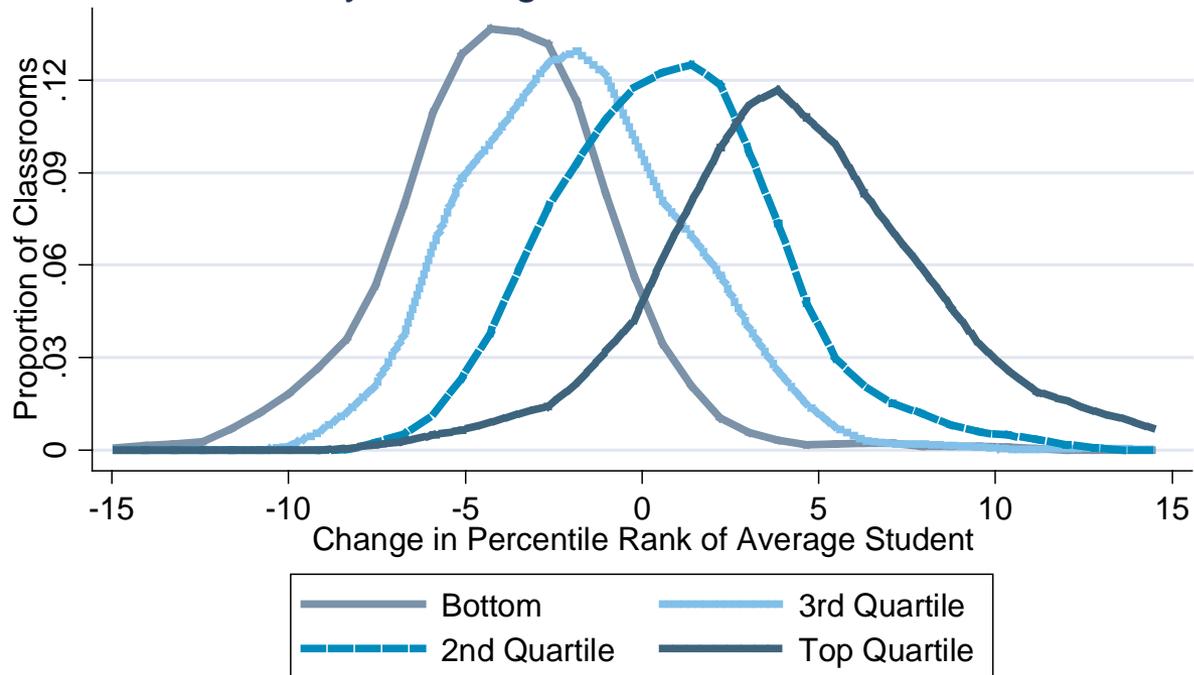
Figure 2. Average value-added for BTR and non-BTR teachers, relative to BPS teacher with 6+ years of experience, with 90% confidence bands in mathematics (top) and ELA (bottom panel).





Initial On-the-Job Performance is Predictive of Later Performance

Teacher Impacts on Math Performance in Third Year by Ranking After First Two Years

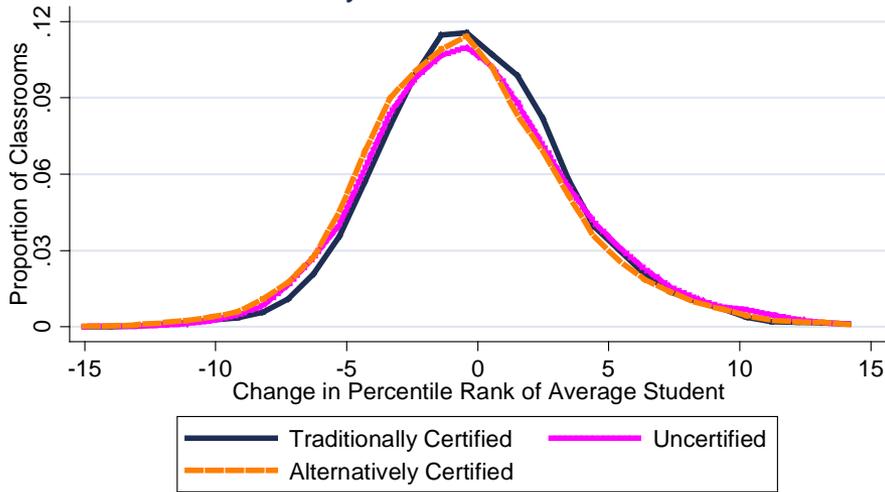


Note: Classroom-level impacts on average student performance, controlling for baseline scores, student demographics and program participation. LAUSD elementary teachers, < 4 years experience.



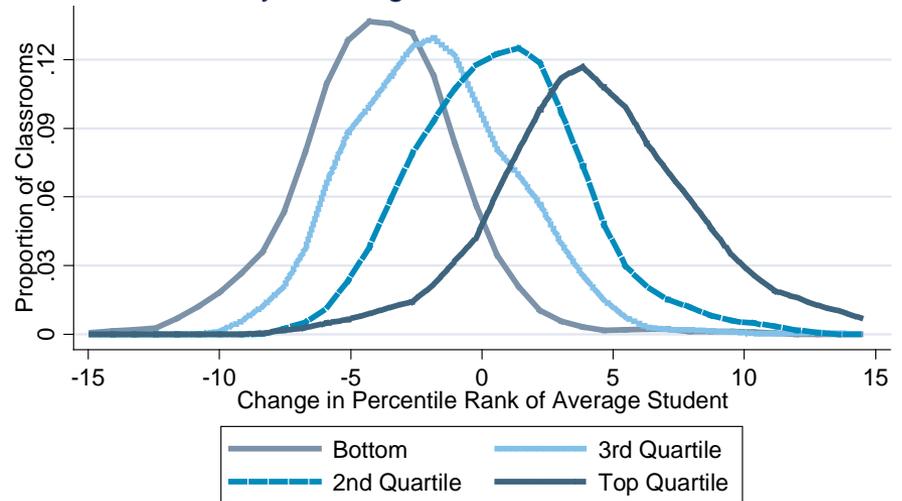
There is much more information at tenure review than in initial credential

Teacher Impacts on Math Performance
by Initial Certification



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Teacher Impacts on Math Performance in Third Year
by Ranking After First Two Years



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Implications

- High standards at tenure review offer greater payoffs than higher admission standards *or* better pre-service training.
- Clinical experience matters, but neither student teaching nor residency programs provide it effectively.
- High course-load requirements for alternative pathway teachers diminish their students' achievement.



Suggested actions

- No automatic tenure for teachers in the bottom quarter of effectiveness at the end of the probationary period.
- Require pre-service preparation programs to provide instruction and practice in classroom management and other practical instructional skills (e.g. “Teach like a Champion”)
- Require alternative certification programs to provide instruction and practice in practical skills during the summer and limit course-taking requirements during initial years of teaching.
- Require teaching candidates to submit video lessons to be rated at least once by faculty at another teacher preparation institution. (Using a common rubric.)
- Require programs to evaluate teachers’ performance and weed out ineffective candidates at the end of student teaching.
- Require annual report on the effectiveness of recent graduates of each teacher preparation institution.