

PEER-REVIEWED EFFICACY STUDY:

Learning that Lasts: Content-focused teacher professional learning from Leading Educators had a positive, durable impact on student achievement.

A peer-reviewed study published in the *Journal of Research on Educational Effectiveness* in September 2024 reveals statistically significant positive increases in student ELA and math proficiency in three multi-city regions as a result of Leading Educators' fellowship models. The increases continued for two years after programming concluded.

Despite the importance of educator professional development to student learning, we still know relatively little about the effectiveness of PD programs and the various strategies or activities that comprise them (Hill et al., 2021). This quasi-experimental study offers evidence of causality, suggesting that the findings could inform key stakeholders in the \$18 billion-a-year professional learning industry on the design, dosage, content, implementation, and impact of systemic educator professional development.

ABOUT THE INTERVENTION

During the 2015–2016 and 2016–2017 school years, Leading Educators ran a fellowship program for instructional leaders, such as department chairs, mentor teachers, instructional coaches, and assistant principals, within four¹ U.S. states. The fellowship was designed to provide educators with ongoing, collaborative professional development aligned to college and career readiness standards in schools serving high concentrations of students of color and students experiencing poverty.

Core to this work was the belief that (1) the rigor, relevance, and design of the tasks students experience and (2) the expectations, pedagogical discernment, and content knowledge of their teachers affect their opportunity to meet grade-level standards and apply their learning to their future ambitions.

¹ *Louisiana, Missouri, Tennessee, and Washington, D.C. We excluded Tennessee from analyses because outcome data (ie., student proficiency data) during the treatment year 2015–2016 was unavailable.

Over the course of two school years, the program aimed to strengthen and distribute instructional leadership within schools by developing participating instructional leaders' (i.e., fellows') beliefs, knowledge, and skills to lead ongoing pedagogical development for teacher colleagues in their schools. In the second year, the program was modified to address the Common Core shifts more specifically.

The recurring learning these fellows led within their school professional learning communities (PLCs) was **specific to mathematics and English language arts (ELA) standards**, and it aimed to shift the school's instructional culture, the fellows' instructional practices, and the instructional practices of their teacher colleagues. Programming supported fellows in deepening content knowledge while also building skills and knowledge in effective facilitation, adult learning, team culture, feedback, and observation. Ultimately, the program aimed to elevate the quality and consistency of instruction across classrooms to reduce bias and chance in students' access to grade-appropriate and relevant lessons.

ABOUT THE STUDY

"Does Teacher Professional Development Improve Student Learning? Evidence from Leading Educators' Fellowship Model" by Ariana P. Audisio, Rebecca Taylor-Perryman, Timothy B. Tasker, and Matthew P. Steinberg addressed two primary questions:

1. Did the professional development model's design lead to improvements in student performance while leaders received support and after the program ended?
2. Do the effects of the teacher fellowship model vary by school characteristics or natural variation in program implementation (e.g., program duration, the proportion of leaders trained at each school, whether leaders enrolled as teams or individuals, and whether LEA leaders participated in the fellowship)?


CONCLUSIONS

Relying on quasi-experimental methods for causal inference, the researchers found that a school's participation in Leading Educators' content-specific fellowship program **increased student proficiency rates on both math and ELA state achievement exams, both during and after the program.**

Finding 1: ELA Achievement Improved During the Program and Continued for Two Years


- For ELA, we find that student proficiency rates improved by 7.6% points two years after the first year of treatment. Marginally significant improvements of 4.5 and 7.8% points, respectively, occurred during the first year and three years after the fellowship began.
- The effect one year after the fellowship began (5.4% points) is qualitatively the same as the ELA effect during the first year of the fellowship).

- ELA effects were more significant in magnitude and more durable than math effects. *Potential explanations are provided in the full report.*

 **Takeaway:** This suggests that coherent professional learning for leaders across a system can impact student learning in the year it occurs and in the years following.


Finding 2: Math Achievement Improved During the Program and Continued for Two Years

- The post-treatment effects show positive and statistically significant improvements in math proficiency of 6.6% points 1 year after the first year of treatment and marginally significant improvements of 4.6% points 2 years later.
- The greatest change in math occurred 2 and 3 years after the first year of treatment, corresponding with the introduction of content-specific educator professional development into the fellowship program (i.e., the 2016–2017 school year).

 **Takeaway:** This suggests that content-specific instructional development leads to student learning gains.

Finding 3: Leadership Alignment Matters

- When LEA-level leaders enrolled alongside school-level leaders, the pooled treatment effects are positive and significantly larger (0.12) for ELA but not math.
- The year-specific effects show significant effects across all four years in ELA and one year after the first year of fellowship in math when LEA leaders enroll alongside school fellows.

 **Takeaway:** These results support the idea that instructional alignment between schools and LEAs matters and could be key to the sustainability of program effects.

WHAT PRIOR RESEARCH SAYS

This study contributes to a limited evidence base on professional learning with coaching and training elements. Related to coaching, a landmark meta-analysis by Kraft et al. (2018) of 60 primary reports shows that **coaching significantly improves teachers' instructional practices and their students' learning outcomes.**

Several common programmatic features were associated with improved teacher practice and student achievement: an intense and sustained duration of teacher coaching and professional development, a focus on discrete instructional skills, and active learning. The studies reviewed by Kraft et al. also uncovered some crucial differences in effects corresponding to the *type* or *focus* of the coaching being provided.

- Content-specific coaching** (e.g., coaching tailored to math instruction) is marginally more effective at improving teachers' instructional practice and student achievement than coaching focused more broadly on general pedagogical skills unrelated to a specific content area.
- Pairing coaching with other developmental strategies**, such as group training or instructional resources, improves effectiveness.

Overall, the field lacks a robust body of evidence demonstrating that a more diverse range of strategies used in educator PD programs can consistently lead to significant improvements in student learning. That makes this study a notable bright spot.

- Across all evaluations of 67 programs funded by federal Investing in Innovation (i3) grants that offered PD as a key program component, Boulay et al. (2018) found that only ten reported on an ELA or math student learning outcome, and only 6 (less than 10% of all evaluations) demonstrated evidence of at least one positive, statistically significant impact on student learning.
- Five of these six were designed to provide **content-specific training**, a finding further supporting the importance of content-specificity in the design and implementation of educator PD.

Viewed in the context of this prior research, we hope this study and future Leading Educators research shed light on factors and enables that support more skillful practice.

[Read the full report here.](#)

Leading Educators' instructional improvement work has evolved since this study into a variety of modular, curriculum-specific services designed to bridge research and practice in pursuit of systemic improvement.

To date, two studies that meet tier 1/2 ESSA research standards and several other quasi-experimental studies of partnerships with nationally-recognized school systems confirm that Leading Educators partnerships improve educator knowledge and practice, expand students' access to grade-appropriate lessons, increasingly shift the cognitive lift to students, improve student engagement and learning habits across a range of consequential indicators, and ultimately accelerate proficiency in literacy and numeracy with greater consistency and durability than other interventions.

To learn more about how Leading Educators can support your system, visit leadingeducators.org/our-work.