TN EDUCATION RESEARCH ALLIANCE

# Teacher Evaluation in Tennessee

*What We Have Learned from a Decade of Research* *July 2021*

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## Introduction

After piloting new teacher evaluation systems in the 2010-2011 academic year, the Tennessee Department of Education implemented a statewide comprehensive teacher evaluation system that took effect in 2011-2012.

In this brief, we draw on a broad body of research evaluating Tennessee's evaluation system over several years to explore whether it has led to gains in student achievement. Looking across several studies, we find evidence consistent with a theory that evaluation reform contributed to student achievement gains and that evaluation reform operated to improve student achievement through two mechanisms: teacher development and strategic teacher retention.[1]

These findings, coupled with increasingly positive responses about the efficacy of the evaluation system from teachers on the Tennessee Educator Survey, indicate that policymakers' investment in comprehensive teacher evaluation reform contributed to positive outcomes for teachers and students.

**This brief unpacks four primary findings from the body of research on evaluation reform in Tennessee:**

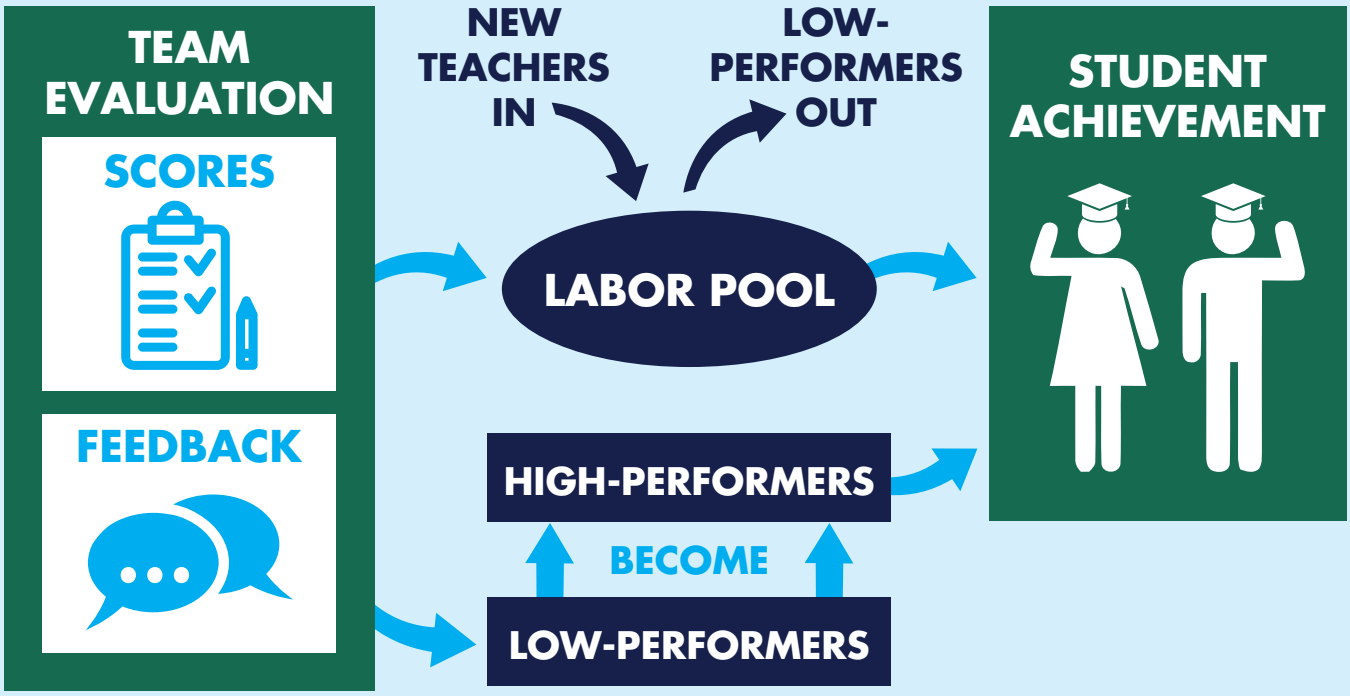
1. ***Student achievement improved more after Tennessee's evaluation reform than we would have expected otherwise.***
2. ***Teacher retention decisions became more selective with respect to teacher performance following evaluation reform.***
3. ***The rate of teachers' year-over-year improvement increased following evaluation reform.***
4. ***Tennessee's teachers increasingly perceive the evaluation system to be leading to improvements in their practice and students' achievement.***

*1 Because teacher evaluation reform took effect in all districts at once, and also because it was one of several reform efforts implemented at or around the same time in Tennessee (such as teacher tenure reform, the adoption of more rigorous standards, and the overall injection of financial resources to the public school system), there is no one research study that could credibly or precisely estimate the effect of the new evaluation system on students' academic outcomes. We cannot rule out the possibility that along with evaluation reform, these other policies played a role in the increase in student achievement during this time.*

## How can teacher evaluation improve student outcomes?

The evaluation system combines observations of teachers' classroom practices with measures based on student achievement. For most teachers, the classroom observation measures account for 50 percent of teachers' final evaluation scores, while the other 50 percent is derived from a combination of a score from the Tennessee Value-Added Assessment System (TVAAS)—a measure of student growth—and other achievement measures.

Effective teacher evaluation systems can influence student achievement through two main pathways. These systems can lead to **changes in the teacher labor pool.** Effective evaluation can provide information that makes it easier for administrators to hire and retain higher-performing teachers. Over time, efforts to hire and retain high-performing teachers—and not hire or retain less effective ones—result in a school staffed with more effective educators. Additionally, these systems can **improve instructional practices** of existing teachers. Through classroom observation and feedback, teachers and evaluators identify strengths in teacher instruction to build on and improvement areas to target with coaching and other professional learning opportunities.

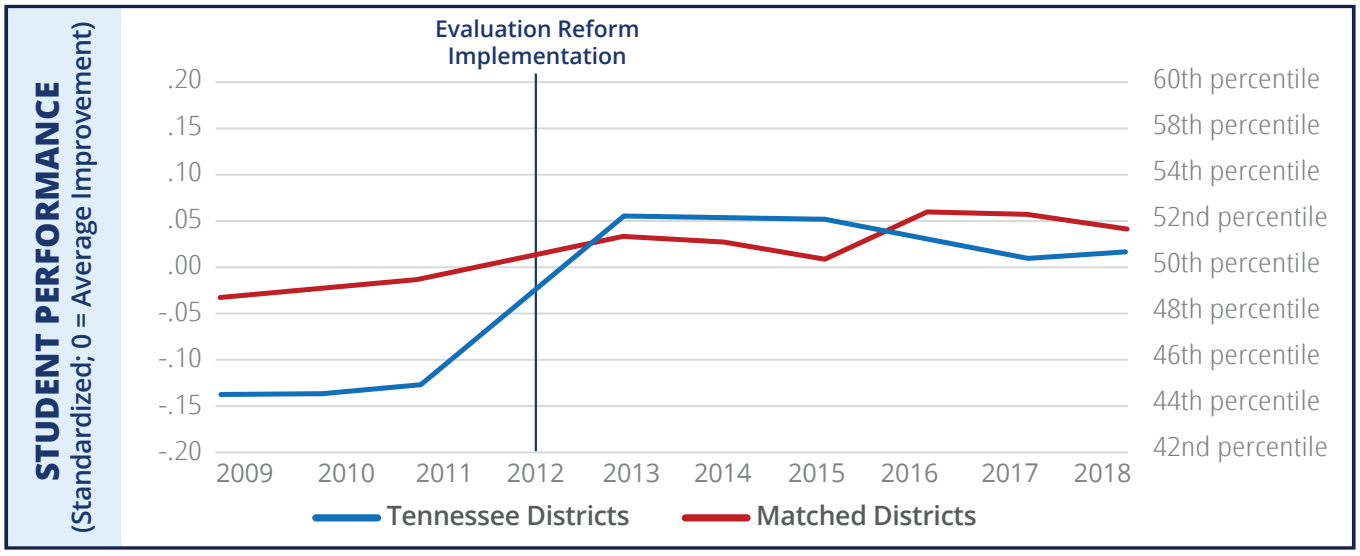


# 1 STUDENT ACHIEVEMENT IMPROVED MORE AFTER EVALUATION REFORM THAN WE WOULD HAVE EXPECTED OTHERWISE.

The first step in assessing whether Tennessee's teacher evaluation reform may have resulted in an overall increase in student achievement is to determine whether achievement in fact increased in the years following reform. For this analysis, we use a nationwide dataset of National Assessment of Educational Progress (NAEP) reading and math test results for 3rd to 8th grade students from 2009 to 2018 in every public school district in the country.[2] In addition to measuring changes in student performance in Tennessee school districts following reform, we compare these changes to changes in the same period in a matched sample[3] of similar districts in other states. This method, known as a "difference-in-differences model," gives us additional confidence that any observed growth did not result from national trends that would have influenced student achievement in Tennessee over the same time period.

Figure 1 compares Tennessee's average combined achievement in math and English language arts (ELA) with achievement in matched school districts. Prior to its teacher evaluation reform, Tennessee school districts performed approximately 0.10 standard deviations below a comparison group of similar districts in other states on standardized achievement tests, with Tennessee students performing on average at the 44th percentile compared to average achievement just under the 50th percentile in similar districts in other states. **After 2011, however, the state's performance grew much faster than the comparison group, closing the gap within two years.** Since 2013, both Tennessee students and those in the comparison group of similar districts have performed just above the national average.

**FIGURE 1: After evaluation reform, student performance in Tennessee districts increased at a much faster rate than similar districts in other states.**




*2 These data come from the Stanford Education Data Archive (SEDA) at the Center for Educator Policy Analysis (Reardon et al., 2016).*

*3 The matched sample is created using coarsened exact matching (CEM) by district-by-grade-by-subject and is based on pre-reform student achievement, enrollment size, student demographics, and a set of socio-economic indicators from U.S. Census data. In other words, we compare each district in Tennessee only to districts outside the state with similar prior achievement levels, enrollment size, and population characteristics. We also conducted similar analyses comparing Tennessee border counties only to counties just on the other side of borders with other states, which should otherwise be very similar on many dimensions. Patterns in the results were similar to those we discuss in the brief.*

Foremost among the limitations of connecting student achievement specifically to evaluation reform, Tennessee's evaluation changes were part of a broader set of policies established under the state's winning response to the federal government's Race to the Top (RTTT) competition. Major RTTT-related policy changes included the adoption of more rigorous standards, the reform of the educator tenure system, and the injection of additional financial resources into public schools. The remarkable changes in achievement could have been the result of these other policies or the combined package of RTTT reforms rather than evaluation reform alone.

As a partial means of addressing this limitation, we restrict our comparison sample to districts in states that also adopted more rigorous standards, allowing us to account for performance gains from the adoption of common standards. The results of this exercise (not shown) produced a pattern very similar to the main results, suggesting that standards adoption alone does not account for the gains observed post evaluation-reform.

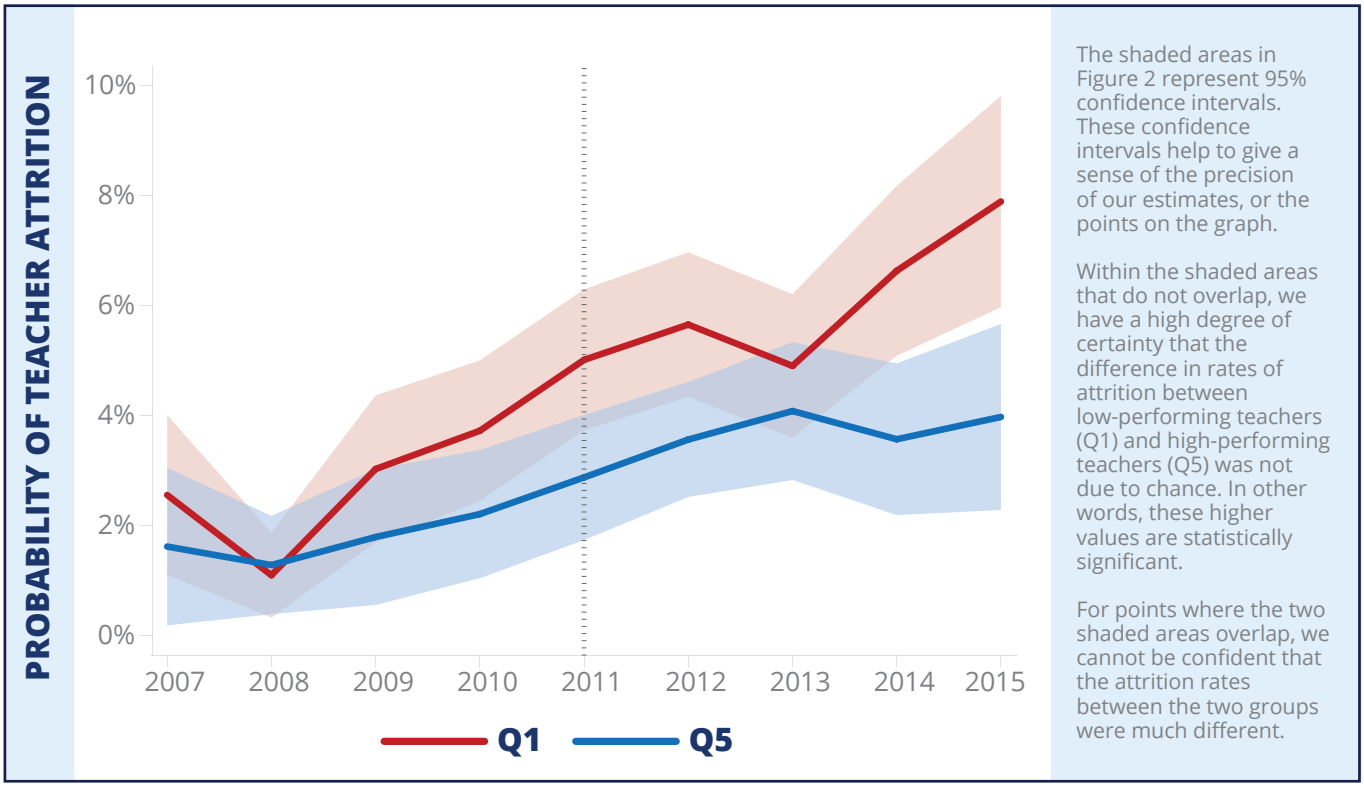
Although this evidence is not conclusive in establishing that evaluation changes are the driver of Tennessee's student performance gains, it becomes more compelling when viewed alongside the broader body of evaluation research produced by TERA researchers. As reviewed in the following sections, this research is consistent with the idea that evaluation reform impacted schools along two pathways: changes to the teacher labor pool and effects on teacher improvement. Evidence on these pathways provides support for the conclusion that evaluation reform in Tennessee worked as intended and played an important role in the acceleration of student achievement.

# 2 TEACHER RETENTION DECISIONS BECAME MORE SELECTIVE WITH RESPECT TO PERFORMANCE FOLLOWING EVALUATION REFORM.

The first pathway through which educator evaluation reform could have impacted student achievement is through changing the teacher labor pool. Such changes would occur if teachers' summative evaluation ratings led to more strategic personnel decisions, both by teachers' supervisors and by teachers themselves.

Consistent with such strategic decision-making, Rodriguez, Swain, and Springer (2019) find that the attrition of low-performing teachers increased relative to that of high-performing teachers after the implementation of evaluation reform. Figure 2 below demonstrates this point and shows the attrition among math teachers in the lowest (Q1) and the highest (Q5) quintiles of teacher performance. The attrition of these two groups were statistically similar and increased at similar rates until the reform went into effect. Beginning in 2014, teachers in the lowest quintile (Q1) started to leave the profession at significantly higher rates than those in the highest quintile (Q5).

**FIGURE 2: Lower-performing teachers were more likely to exit Tennessee public schools after evaluation reform**

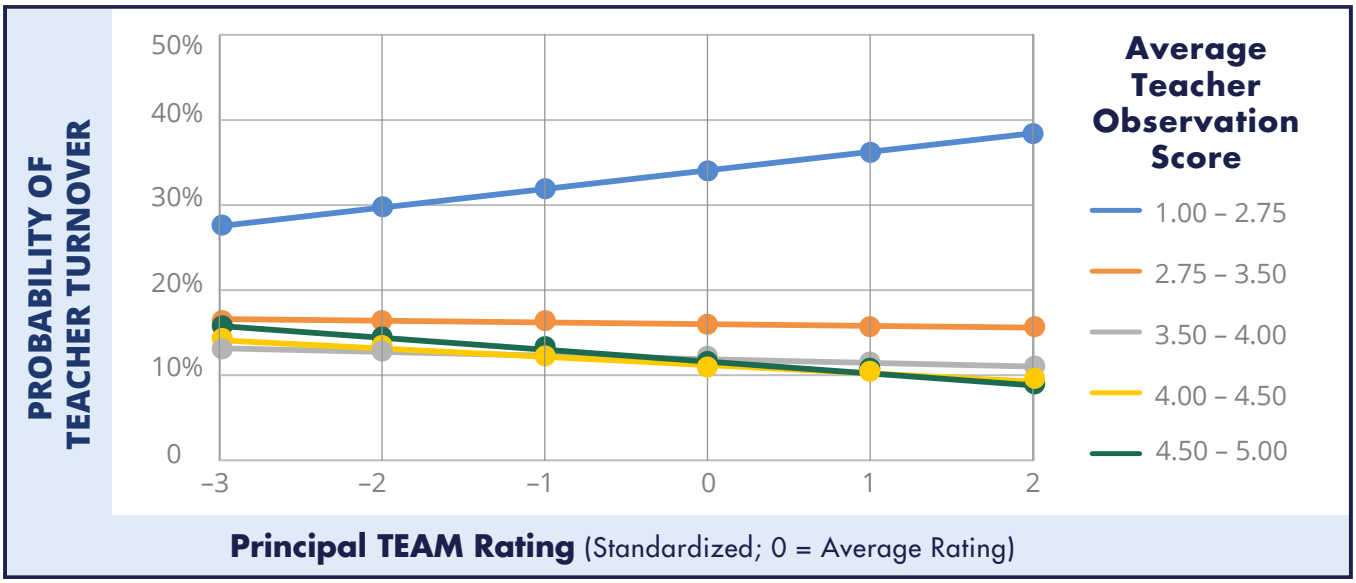



*Source: Adapted from Rodriguez, Swain, and Springer (2019)*

We could tie these shifts more directly to evaluation reform if we knew that administrators are using effectiveness measures to make better hiring and retention decisions. Other TERA research suggests that, in fact, they are. Grissom and Bartanen (2019) show that, in the years since the new evaluation system was implemented, low-performing teachers in Tennessee (as measured by observation ratings) have been more likely to turn over, especially under more effective principals. Most of this turnover among low-performers was exits from teaching. In contrast, higher-performing teachers with more effective principals were more likely to stay in their schools than high-performing teachers in schools led by lower-rated principals.

Figure 3 demonstrates this pattern. Teachers with an average observation score between 1.00 and 2.75 (the lowest range) are most likely to turn over, with the probability increasing as their principal's TEAM rating increases. Conversely, teachers with average observation scores in the highest range (4.50 to 5.00) are less likely to leave when their principals have higher ratings.

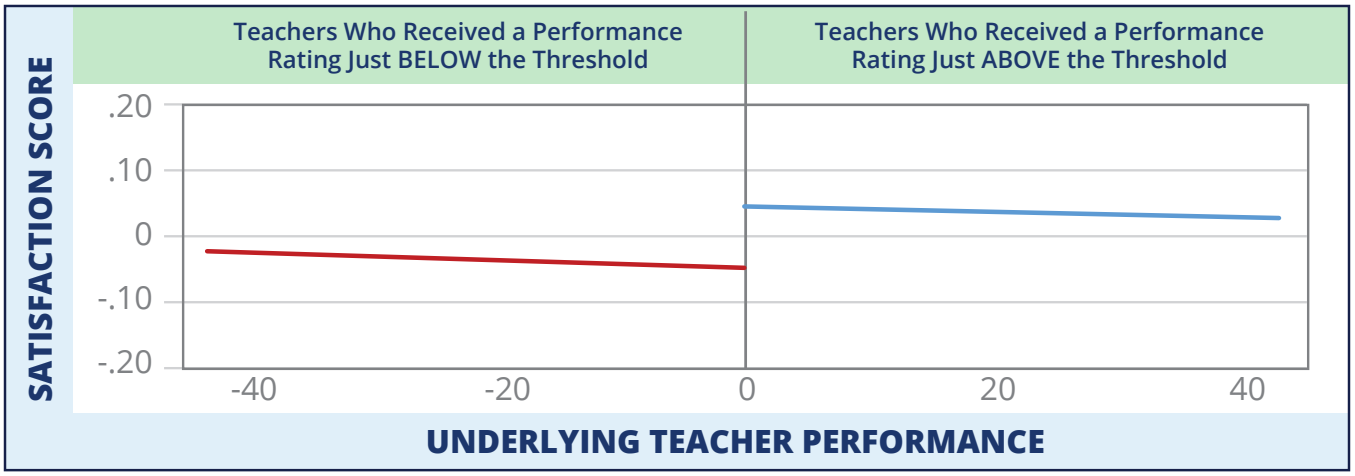
**FIGURE 3: When schools are led by more effective principals, weaker teachers are more likely to cycle out, while stronger teachers are more likely to stay.**




*Source: Adapted from Grissom and Bartanen (2019)*

The evaluation system could provide encouragement to effective teachers to stay in the profession if it reinforces strong performance with high ratings. Consistent with this possibility, research by Koedel, Li, Springer, and Tan (2017) indeed shows that high evaluation ratings lead to greater teacher satisfaction. To reach this conclusion, the authors compare the satisfaction of Tennessee teachers whose underlying performance measure is just above the threshold for a higher rating with those just *below* the threshold. For example, as Figure 4 demonstrates, they compare teachers who just barely got a 5 to otherwise similar teachers who just barely missed getting a 5 and received a 4 instead. The findings imply that the higher-scoring group reported higher job satisfaction, suggesting that receiving the more positive feedback makes teachers feel more positively about their work. In fact, they find that a higher rating will move a teacher at the 50th percentile in the distribution of job satisfaction to approximately the 55th percentile. To the extent that satisfaction influences teachers' exit decisions, evaluation ratings may help preserve the quality of the labor pool by providing affirmation to the state's most effective teachers.

**FIGURE 4: Teachers who receive higher evaluation ratings report greater job satisfaction than teachers who receive lower ratings.**



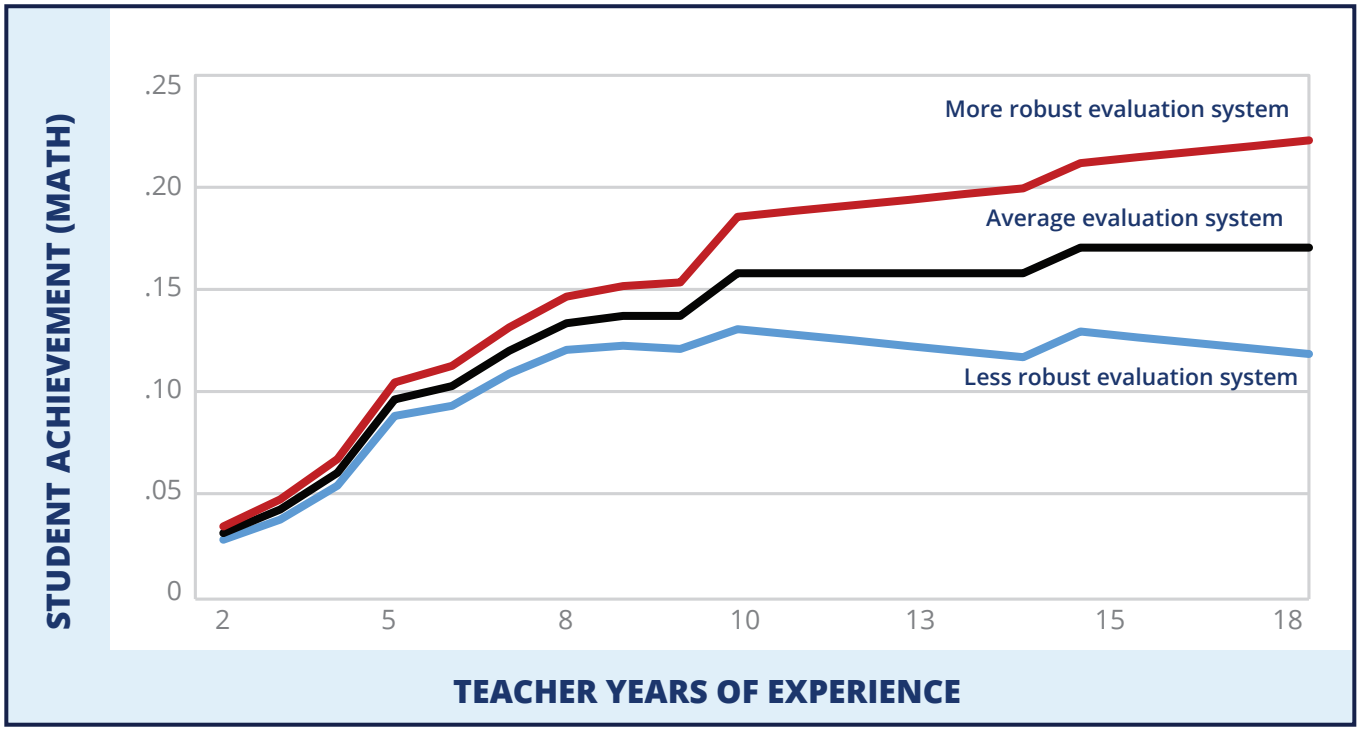

*Source: Adapted from Koedel, Li, Springer, and Tan (2017)*

# 3 THE RATE OF TEACHERS' YEAR-OVER-YEAR IMPROVEMENT INCREASED FOLLOWING EVALUATION REFORM.

The second potential pathway for evaluation reform to influence student achievement is improvement of existing teachers' instructional practices. Evaluation reform required more observations and provided structures for teachers to receive more frequent and more specific feedback from observers, with attention to both strengths and areas for improvement. If these observation and feedback loops work as intended, resulting growth in teacher instruction will drive increased student achievement.

Papay and Richard (2018) find evidence that the observation process helps improve teachers' instructional practice. As shown in Figure 5 below, they find that teachers in schools with robust evaluation systems (as measured by frequency of observation, early initial observation, a greater number of different evaluators, and differentiation of scores across observed teachers) improve faster than teachers in schools with less robust systems.

**FIGURE 5: Teachers in schools with more robust evaluation systems improve faster than teachers in schools with less robust systems.**



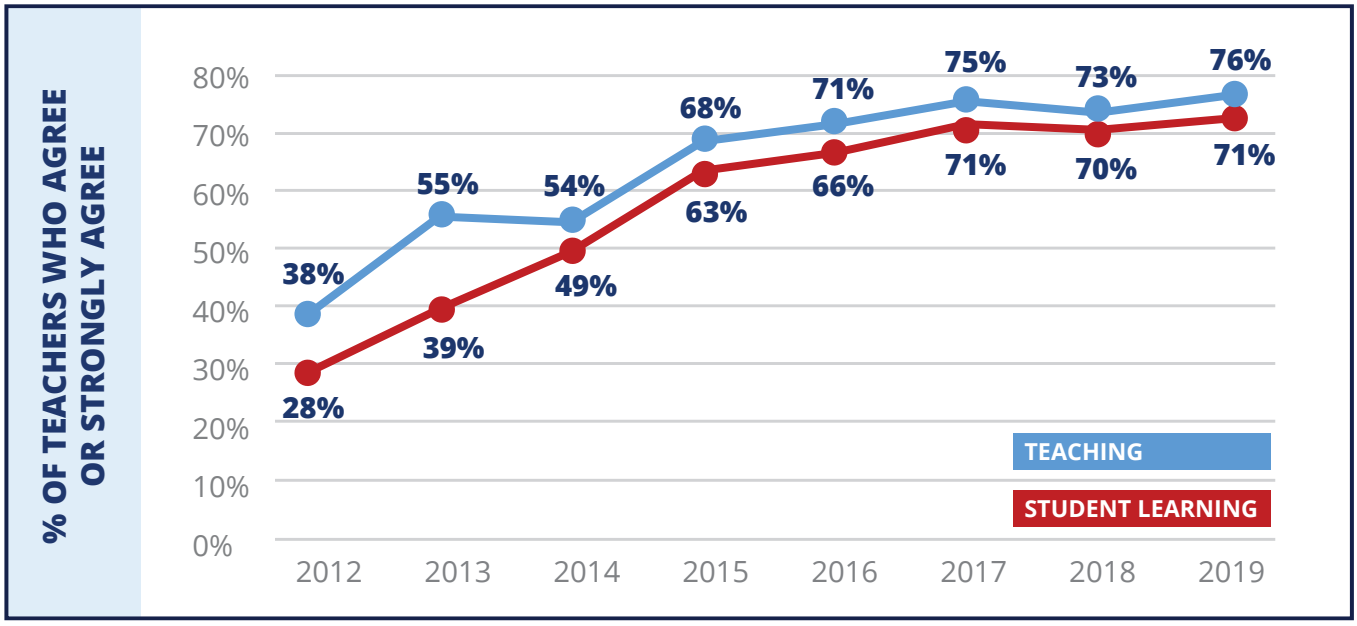

Other TERA evidence shows that these improvements are not merely the result of having more observations, nor the product of teacher ratings themselves. Hunter (2018) shows that teachers who received more observations because of the system's mandate for lower-rated teachers to receive additional ratings did not improve their practice relative to similar teachers who just missed these requirements. For example, assigning lower-rated early-career teachers four observations instead of one did not improve average student mathematics or reading achievement scores. Further, Koedel, Li, Springer and Tan (2019) find no evidence that higher ratings directly cause teachers to modify their professional improvement activities. The absence of effects of observation quantity or the scores themselves suggests the importance of the school's overall culture of evaluation and feedback for teacher improvement.

# 4 TENNESSEE'S TEACHERS INCREASINGLY PERCEIVE THE EVALUATION SYSTEM TO BE LEADING TO IMPROVEMENTS IN THEIR PRACTICE AND STUDENTS' ACHIEVEMENT.

Results from the annual Tennessee Educator Survey indicate that teachers see value in the evaluation system and express increasingly favorable views regarding evaluation's influence on instructional practice and student learning. In the years since 2013, the state has continually made adjustments to the evaluation system based on educator feedback and other metrics. During the same period of time, we've also seen a general upward trend in teacher practice ratings each year.

The percentage of teachers who feel that the evaluation system has improved teaching has doubled since evaluation began in 2012. As of 2019, 76 percent of Tennessee teachers who answered the survey agree that the evaluation system helps improve their teaching and 71 percent agree it helps improve student learning. Responses on the statewide educator survey also signal that the evaluation system facilitates more direct feedback during observations, which may help explain the increased rates of teacher and student growth we have observed.

**FIGURE 6: In 2019, more educators than ever agreed that the evaluation system has led to improvements in teaching and student learning.**




The trajectory of teachers' feelings about the evaluation system suggests implications for future reforms that have large effects on teachers' work. Initially, support for the system was very low. This low favorability offers a warning that the costs of change can be high, as measured by teacher morale, even for reforms teachers will later come to embrace. Policymakers planning the future of teacher evaluation in Tennessee should consider these costs associated with change alongside the benefits of the current system we summarize in this brief.

# SUMMARY AND IMPLICATIONS

Our findings suggest that Tennessee's teacher evaluation reform played an important role in the growth of student achievement in the years following reform.

First, an analysis of national data affirms that Tennessee showed an improvement in student achievement in the years following evaluation reform. Then, a broad body of research produced by TERA researchers over the past several years provides evidence that the evaluation system helped raise the quality of the labor pool of teachers, and where districts and/or schools developed robust approaches to evaluation, supported instructional improvement among existing teachers. That the evaluation system worked as intended, and that its implementation immediately preceded an increase in student achievement, supports the theory that teacher evaluation was an important driver of student growth in Tennessee over the past several years.

There are many possible explanations for why the evaluation system seems to have played a role in improving student achievement. During this time, instructional and administrative practices underwent tremendous system-wide change to better ensure that teachers received the support they needed during implementation and to build a strong culture of achievement throughout the state. For example, because the new law required administrators to observe teachers in their classroom and provide pedagogical feedback, educator preparation programs began training principals to be instructional leaders in addition to their role as a building administrators. Current principals were also required to undergo training that modeled how to effectively observe teachers and also to coach and provide good feedback to teachers. Further, additional funding allowed districts to hire more instructional coaches to assist with the extra observations teachers received under the new system, and to provide more frequent and specific feedback to teachers. While we do not know what role these changes played in raising student achievement in Tennessee, it is likely that they positively impacted implementation of the new evaluation system.

**The amount of evidence suggesting that evaluation reforms have worked as intended and the increasingly positive responses from teachers regarding the efficacy of the process suggests that state policymakers' investment in comprehensive teacher evaluation contributed to the positive outcomes for teachers and students.** The system helps districts to make strategic personnel decisions and facilitates teacher growth. These outcomes matter and likely are contributing to Tennessee's upward achievement trajectory over the last nine years. Policymakers should carefully examine the elements of this system to determine how the evaluation system can help Tennessee's educators consolidate and even build on these gains.

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