

## How Principals Drive School Success

A Brief on Strengthening Tennessee's Education Labor Market

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### Introduction

Researchers and policymakers have paid a lot of attention to Tennessee's statewide teacher evaluation system since its creation in 2011. Yet, redesigned principal evaluations and their ability to predict school outcomes have received far less attention, even in the face of broad agreement that principals are critical to school success. Previous research suggests that effective principals are associated with better instructional practices, more positive learning environments, and higher teacher morale (e.g., Baker & Cooper, 2005; Brewer, 1993; Boyd et al., 2011; Ladd, 2011; Sebastian & Allensworth, 2012). At schools with effective principals, teachers are more satisfied in their jobs and less likely to leave them, especially in schools with more disadvantaged students (Grissom, 2011).

Over the next several years, the Tennessee Education Research Alliance (TERA) will release a series of studies that aim to build our knowledge on what we know about effective school leadership. Based on research completed by Jason A. Grissom and colleagues, this initial brief in the series first explores the relationship between principal observation ratings and student outcomes and then uses this relationship to explore what we can learn about how successful principals are generating better student results.

#### We find three key results when we compare similar schools or the same school in different years:

- The practice ratings that Tennessee principals are given as part of the evaluation system predict growth in student achievement. In other words, student gains are higher in schools where principals' leadership is rated more positively.
- 2 Highly rated principals enjoy more positive teacher perceptions of school leadership and climate.
- **3** Highly rated principals retain effective teachers at higher rates.

# MEASURING THE EFFECTIVENESS OF PRINCIPAL PRACTICE



Our analysis uses Tennessee data from the first four years of implementation of the state's administrator and teacher evaluation system, called TEAM, from school years 2011-12 through 2014-15.

The TEAM evaluation includes a practice rating given to principals by their supervisors—typically the superintendent or another district-level leader, such as an assistant superintendent. At least twice a year, the principal's supervisor assigns the principal a rating between 1 and 5 (with a 5 indicating "Significantly Above Expectations") on domains of school leadership practice, such as "Resource Management" and "Culture for Teaching and Learning." We focus on the average practice rating across domains in a given year as our primary measure of the effectiveness of the principal's job practices that year. This average rating comprises half of the principal's overall evaluation score, with the other half derived from measures of school achievement and growth. We use a statistical technique called regression analysis to assess how other measures of school success vary according to the principal's practice rating. If how well the principal does the job matters for outcomes, and if supervisors can accurately assess their job performance, we would expect that school performance would be higher with a more highly rated principal. Regression allows us to account for other school characteristics, such as student poverty, that might affect school performance. Taking these characteristics into account is important because more effective principals may be more likely to be hired into schools that tend to perform well, such as schools with wealthier students, which might lead us to attribute school success to the principal that is really due to school characteristics.

# **KEY FINDINGS**

### PRINCIPAL OBSERVATION RATINGS EFFECTIVELY PREDICT GROWTH IN STUDENT LEARNING

To see if principals' practice ratings are associated with student learning growth, we correlate principal ratings with two different measures of growth.<sup>1</sup> First, we use school-wide growth scores from TVAAS, the Tennessee Value-Added Assessment System. Calculated by SAS, an analytic services company, for the Tennessee Department of Education to use in school accountability and administrator evaluation, TVAAS growth scores range from 1 to 5, and they reflect how a school's student achievement growth from one year to the next compares to the growth of students in similar schools.

Schools with principals rated as effective see more student growth than similar schools in the same district. In fact, two similar schools whose principals differ by one point in their average practice rating on TEAM would expect to experience student growth differences roughly equivalent to the difference between a Level 3 and Level 5 TVAAS rating.

#### SCHOOLS WITH MORE HIGHLY RATED PRINCIPALS EXPERIENCE MORE GROWTH



Although TVAAS seeks to measure growth on a level playing field by comparing schools with similar prior student performance, there are factors other than prior performance, such as student poverty, that may affect achievement gains that TVAAS may not fully account for. Thus, as an alternative to TVAAS, we also correlate principals' practice ratings with growth in individual students' achievement, directly accounting for such factors as poverty, race/ethnicity, gender, special education status, and other factors. The findings from this analysis generally corroborate the TVAAS results, particularly in math. **Students in schools led by strong principals demonstrate greater math achievement gains than other similar students in similar schools**.

SCHOOLS WITH HIGHLY RATED PRINCIPALS TEND TO ENJOY MORE POSITIVE TEACHER PERCEPTIONS OF SCHOOL LEADERSHIP AND CLIMATE

Leading and collaborating with teachers is an essential part of the principal role. Thus, a school's teachers likely have meaningful insights to offer regarding the performance of their principal. We examine whether principals rated as effective are well-regarded by their staffs by correlating principal supervisor ratings with teacher ratings of school leadership and climate on the annual Tennessee Educator Survey.

When a principal receives higher practice ratings on TEAM, teachers also tend to rate school leadership higher than at other similar schools within the district.

A principal with a rating one point higher than a principal with an average practice rating would expect teacher ratings of leadership in the school to be higher by about 16 percentile points (that is, the difference between the 50th and the 66th percentile).

Similarly, when we correlate principal practice ratings to teacher survey assessments of the school's climate, we find that teachers tend to give higher ratings to the school climate in those schools with higher rated principals. If the school climate rating of the average principal is at the 50th percentile, the principal who scores a point higher in their practice ratings would expect a school climate rating from teachers at about the 58th percentile. These results suggest that principals with more effective practices are held in higher regard by teachers and create a more positive school environment.



Teacher perception ratings are from the Tennessee Educator Survey.



#### SCHOOLS WITH HIGHLY RATED PRINCIPALS HAVE HIGHER SCHOOL CLIMATE RATINGS

Teacher perception ratings are from the Tennessee Educator Survey.

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Teacher retention is important for school success, as teacher turnover has a significant negative impact on student achievement (Ronfeldt et al., 2012; Hanushek et al., 2016). Not all teacher turnover is the same, however. Schools clearly benefit from retaining high-performing teachers but may also benefit if low-performing teachers leave the school.

We examine whether schools with high-performing principals have different levels of teacher turnover on average, as well as whether those schools have different rates of turnover for highand low-performing teachers.<sup>2</sup> We use teacher observation scores on TEAM to measure teacher performance. These teacher observations are typically performed by the teacher's principal or an assistant principal.

#### Fewer Teachers Leave Schools With Highly Rated Principals

In the years following the implementation of the TEAM system, the teacher turnover rate in Tennessee was 13 percent, meaning that about one out of every eight teachers left their schools each year. **The teacher turnover rate was lower, however, in schools with more effective principals.** Controlling for school and teacher-level factors, we find that a one point increase in the principal's average TEAM rating predicts a decrease in teacher turnover of about 1 percentage point. To put this into context, if an average-sized school of 33 teachers with a principal at the 25th percentile of TEAM ratings got a new principal at the 75th percentile, they would retain one more teacher every three years.



#### Highly Rated Principals Demonstrate Strategic Retention

Next, we examine whether effective principals differentiate teacher turnover by teacher effectiveness. In particular, we investigate whether highly rated principals retain high-performing teachers at greater rates but also retain low-performing teachers at low rates, a pattern we refer to as *strategic retention*.

Across the state, in schools with every level of principal effectiveness, we find evidence of strategic retention patterns—strong teachers staying and struggling teachers leaving. When principals rate teachers lower on observations, the teachers are more likely to turn over. In fact, teachers whose average observation scores range from 1 to 2.75 are twice as likely to turn over compared to teachers receiving a score above 4.5.



#### Schools With Highly Rated Principals Experience Less Teacher Turnover

Critically, schools with more effective principals retain teachers even more strategically than other schools. A half-point increase in the average principal TEAM rating predicts a 6 percent increase in turnover among teachers receiving an average observation score below 2.75. **In other words, in schools with principals rated as effective, teachers with low observation ratings are more likely to leave.** 

On the other hand, a half-point increase in the average principal TEAM rating predicts a 13 percent decrease in turnover among teachers receiving an average observation score above 4.50, meaning that **at schools with strong principals, highly rated teachers are more likely to stay.** These effects are especially pronounced for novice teachers<sup>3</sup>, which suggests that school leadership is especially important in influencing the retention decisions of early career educators.

Our results suggest that principals influence whether teachers remain at their school or turn over, and that effective principals are able to wield this influence more strategically. Although questions remain around how principals impact teachers' retention decisions, our analysis indicates that schools with strong principals experience lower levels of teacher turnover, and the most high-performing teachers are more likely to stay in these schools.

### AN IMPORTANT CAVEAT: Observation Scores Drive Strategic Retention

Our analysis indicates that, when measuring teacher performance by average classroom observation scores, higher performing teachers are more likely to stay at a school with a strong principal, while lower performing teachers are more likely to leave. If instead we measure teacher performance by student test score growth, the patterns are different. Teachers with low observation scores are more likely to leave schools with effective principals, regardless of whether they have high or low value-added scores.

It appears that observation scores matter most for strategic retention. The importance of observation scores for retention decisions makes sense, since principals typically don't receive testing information until after the school year has ended. Moreover, they usually conduct observations themselves and are thus more likely to trust the accuracy of those scores (Goldring et al., 2015).



# SUMMARY AND IMPLICATIONS



Our analysis indicates that more effective principals positively influence their schools in many ways. Principal effectiveness, as measured through practice ratings, significantly influences school growth, student math achievement, school climate, and teacher turnover. Additionally, principals with better practices see more ineffective teachers leave their school, and see more effective teachers stay.

These patterns of school success and strategic turnover likely feed into each other. By retaining effective teachers and turning over ineffective teachers, strong principals could increase the quality of instruction and, in turn, student achievement. And by creating a positive school climate with high achievement, principals likely attract effective teachers and signal a lack of fit to less effective teachers.

Above all, our analysis indicates that principal leadership matters for student and school success. While teacher policy often receives more attention than principal policy, principals are important drivers of student success who act as talent managers and execute teacher policy. To drive achievement in schools, policymakers should consider investment in principal talent and the distribution of effective Principals are important drivers of student success who act as talent managers and execute teacher policy. To drive achievement in schools, policymakers should consider investment in principal talent and the distribution of effective principals among schools.

principals among schools. A future TERA brief will detail these patterns in Tennessee.

Furthermore, our results point to the importance of Tennessee's principal evaluation system. As we've demonstrated, principals rated as more effective make substantial and positive impacts on school success. This indicates that the principal supervisors in Tennessee implementing the TEAM system are able to identify and recognize principal leadership, and that their ratings represent helpful insights on principal effectiveness. For district leaders looking to make decisions about hiring and retention, principal evaluation systems like TEAM offer meaningful guidance on which principals will achieve the desired results.

### endnotes

- 1 The analysis summarized in this section can be found in: Grissom, J.A., Blissett, R.S.L., & Mitani, H. (2018). Evaluating school principals: Supervisor ratings of principal practice and principal job performance. Tennessee Education Research Alliance working paper.
- 2 The analysis summarized in this section can be found in: Grissom, J.A., & Bartanen, B. (2018). Strategic retention: Principal effectiveness and teacher turnover in multiplemeasure teacher evaluation systems. Tennessee Education Research Alliance working paper.
- 3 Novice teachers are defined here as teachers who have 0-4 years of experience.

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