

## Teacher Mobility in Texas: Trends in and Associations with Student, Teacher, And School Characteristics

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### What We Studied

The goal of the study is to build a deeper understanding of teacher mobility in Texas by identifying patterns of teacher mobility. The study characterizes the movement of teachers in Texas public schools during the 2011/12 through 2015/16 school years. School-level mobility indicators are presented by each of the state's 20 education service center regions for the state as a whole, and for school districts with exceptionally high mobility rates. Analyses explore links between mobility and teacher, student, and school characteristics. In addition, this study explores the relationship between teacher mobility and school-average teacher effectiveness, as measured by the T-TESS rubric.

Findings from this study provide state policymakers in Texas with updated information about the patterns and trends of mobility in the state's teaching workforce and offer a systematic baseline for monitoring and planning for future changes. For regional and district leaders, the patterns of mobility in their own region may be a reflection of the unique local conditions, district policies, and school climate; thinking through the meaning and implications of the mobility patterns will help these leaders better understand factors and dynamics in the district that affect local mobility rates. Policymakers may want to continually monitor mobility rates to ensure that schools and districts are not experiencing an undesirable loss of staff due to mobility. Information on the differences in mobility rates among regions, districts, or schools also may allow policymakers to conduct deeper investigation into what some regions, districts, or schools are doing differently to influence teacher mobility.

The findings presented here were guided by four research questions developed with the Educator Effectiveness Alliance:

1. What are teacher mobility rates and destination proportions at the district, regional, and state levels in each school year from 2011/12 to 2015/16?
2. What is the association between personal and professional characteristics of Texas public school teachers and their mobility behaviors?
3. What is the association between student/school characteristics and school-level mobility rates?
4. What is the association between school-average rubric ratings of teachers participating in the 2014/15 T-TESS pilot and school-level mobility rates?

### How We Analyzed the Data

To answer the research questions, REL Southwest researchers analyzed data collected by TEA and the Texas Higher Education Coordinating Board from the 2011/12 through 2015/16 school years (see appendix A for a full description of the research methods and see the glossary at the end of the report for an explanation of terms). Teachers were included

in the analytical sample if they taught at least one class during each of the target school years. Teacher school assignments were compared across years to categorize teachers as staying in the same school, moving schools within the district, moving schools across districts, or leaving Texas public schools. Mobility indicators are presented at the district, region, and state level and compared to teacher, student, and school characteristics.

## **What We Discovered**

### **The mobility rate for the state of Texas rose from 18.7 percent in 2011/12 to 22.0 percent in 2015/16.**

During the 2011/12 through 2015/16 school years, the average teacher mobility rate was 20.9 percent. The mobility rate rose 3.3 percentage points during these five school years, from percent in 2011/12 to 22.0 percent in 2015/16. The largest jump in mobility rates occurred between the 2011/12 and 2012/13 school years, with an increase of 2.0 percentage points.

### **Mobility rates for regions fluctuated but increased, on average, across the five-year period.**

The five-year averages for each region were broken into quartiles. The four regions in the lowest quartile had an average mobility rate below 20 percent (Region 1 Edinburg, Region 11 Fort Worth, Region 16 Amarillo, and Region 19 El Paso). Region 1 Edinburg and Region 19 El Paso had the lowest mobility rates, with five-year averages below 16 percent. The four regions in the highest quartile had an average mobility rate above 23 percent (Region 3 Victoria, Region 12 Waco, Region 14 Abilene, and Region 18 Midland).

### **Mobility rates for most districts were similar to the state average, although 55 districts had much higher mobility rates.**

Mobility rates at the district level are more challenging to summarize because there are more than 1,200 districts in the state of Texas. Furthermore, all analyses had to comply with state requirements for masking sensitive data to prevent the release of any personally identifiable information. To ensure privacy of Texas teachers, district-level mobility rates were averaged across the 2013/14, 2014/15, and 2015/16 school years. Most districts are clustered around the state average (21.3 percent for the 2013/14 through 2015/16 school years). However, some districts have mobility rates that reach into 70 and 80 percent. These districts with more extreme mobility rates have the highest rates of teachers moving or leaving Texas public schools. Fifty-five districts with exceptionally high mobility rates all had mobility rates greater than 43 percent.

### **Mobility resulting from teachers leaving Texas public schools rather than moving accounts for half of mobility.**

This study disentangles the different teacher mobility behaviors—that is, moving within a district, moving between districts, and leaving Texas public schools—to calculate destination proportions. Destination proportions provide insight into which mobility behaviors contribute to the overall mobility rate and how the underlying mobility behaviors may change over time. The results show that most mobility is due to teachers leaving Texas public schools (55.2 percent average across five school years) rather than moving within or between school districts.

### **Over time, mobility rates were increasingly driven by movement across districts.**

Destination proportions did change during the five school years. The proportion of mobility due to teachers moving schools between districts more than doubled from 2011/12 to 2015/16. In the 2011/12 school year, 12.1 percent of teacher mobility was due to movement between districts. By the 2015/16 school year, 27.4 percent of teacher mobility was due to movement between districts. This increase in movement between districts was the primary driver behind increases in teacher mobility. The rate of teachers moving within districts and leaving Texas public schools changed little across the five school years, whereas the rate of teachers moving between districts nearly tripled from 7,765 teachers in 2011/12 to 21,505 teachers in 2015/16.

### **Thirty-five districts were identified as having extremely high rates of teachers leaving Texas public schools.**

When destination proportions were examined at the district level, only the indicator for the proportion of teachers who leave Texas public schools was determined to be stable enough for analysis. Indicators for the proportion of moving within and moving across districts were based on very few teachers and, thus, often were masked to protect privacy and could not be reported here. For each district, the proportion of teachers who left Texas public schools was

calculated by averaging across the 2013/14, 2014/15, and 2015/16 school years. The data in figure 4 depict the distribution of district-level mobility rates. Much like the district-level analysis of mobility rates, most districts had rates of teachers leaving Texas public schools that were similar to the state average (53.6 percent for the 2013/14 through 2015/16 school years). For most districts, the proportion of teachers leaving Texas public schools falls between 40 percent and 65 percent. Districts were identified as outliers when proportions of mobility due to teachers leaving Texas public schools exceeded 78 percent. Thirty-five districts had extremely high proportions of teachers leaving Texas public schools. Among these 35 districts, 31 had fewer than 60 teachers who were mobile during the three school years, suggesting these districts were relatively small.

**Teachers stayed in, moved, and left Texas public schools at different rates depending on race/ethnicity, experience, and teaching certification.**

The following analyses examined how teacher characteristics were related to their likelihood of staying in, moving, or leaving Texas public schools. Teachers' personal and professional characteristics included race/ethnicity, sex, educational attainment, experience, area of teaching certification, and type of teaching certification.

*Race/ethnicity.* Hispanic teachers stayed in schools at higher rates than teachers of other racial/ethnic categories for all study years. On average, Hispanic teachers were most likely to stay and least likely to move or leave Texas public schools.

*Teacher experience.* Differences in rates of stayers, movers, and leavers also emerged in comparison with the nine categories of years of experience published in Texas Academic Performance Report data. Teachers with more experience, especially those in the categories of more than eight and fewer than 30 years, were more likely to be stayers than their counterparts. Teachers with fewer than four years had the highest rates of moving. Teachers with more than 30 years of experience had the highest rates of leaving, possibly due to retirement. The rates of moving teachers decreased as teachers' experience increased; the most experienced teachers had very low rates of moving.

*Certification field.* The teacher certification field included 12 different categories. The only substantive difference in rates of stayers, movers, and leavers by certification field existed for teachers with special education certifications. When averaged across the 2011/12 through 2015/16 school years, 18.5 percent of teachers with special education certificates left Texas public schools each year, whereas 11.5 percent of teachers with other certifications left. Teachers with special education certificates moved schools at rates similar to their counterparts (11.2 percent vs. 9.9 percent).

*Certification type.* On average, across the 2011/12 through 2015/16 school years, 77.9 percent of teachers with standard certifications stayed in schools, whereas 64.8 percent of teachers with emergency certifications stayed in schools. Teachers with emergency certifications moved at twice the rate as teachers with standard certifications (20.1 percent versus 9.9 percent).

**School-level mobility rates showed significant correlations with the proportion of special education, economically disadvantaged, low-performing, minority, and English learner students.**

School-level mobility rates were correlated with several school and student characteristics. Mobility rates were significantly positively correlated with the proportion of special education students, the proportion of economically disadvantaged students, and the proportion of Black students. Mobility rates were negatively correlated with student enrollment, student–teacher ratio, proportion of English learners, proportion of gifted/talented students, proportion of students passing State of Texas Assessments of Academic Readiness assessments, and proportion of Asian and White students.

Moving within a district was positively correlated with:

- Student–teacher ratio
- Proportion of English learner students
- Proportion gifted and talented students

And negatively correlated with the proportion of special education students. Moving between districts was positively

correlated with the proportion of economically disadvantaged students, and negatively correlated with student-teacher ratio and the proportion of English learner students.

Leaving Texas public schools was positively correlated with:

- Proportion of economically disadvantaged students
- Proportion of English learner students
- Proportion of Black students and negatively correlated with:
- Proportion gifted and talented students
- Proportion of White students

### **Schools with higher average evaluation ratings on the Texas Teacher Evaluation and Support System rubric tend to have lower mobility rates.**

The final set of analyses examined the association between mobility rates and school-average evaluation ratings from the 2014/15 T-TESS pilot. Schools with higher school-average evaluation ratings tended to have lower percentages of teachers leaving the school. However, the magnitude of the correlations was low, and only a few of the coefficients were statistically significant. The most notable correlation was between mobility rates and the overall T-TESS ratings (-0.185), which was the average of the four domain ratings. Correlations with the domain ratings were generally low, and only correlations with the Planning and Professional Development domains were statistically significant. That is, schools that had higher average ratings on these two domains tended to have lower percentages of teachers leaving. At the dimension level, only coefficients for the Differentiation and Monitor and Adjust dimensions of the Instruction domain and for the Demeanor and Ethics and Goal Setting dimensions of the Professional Practices domain were statistically significant.

### **Among schools with similar school characteristics, the Learning Environment domain had a positive relationship with the mobility rate.**

The second approach to this analysis was to conduct a regression analysis that controlled for school characteristics. That is, researchers examined how school-average teacher evaluation ratings and school-level mobility rate (the percentage of teachers who leave a school) were related, among schools with similar characteristics. Table 5 presents the results for two regression models. At the overall level, evaluation ratings did not have a statistically significant relationship (-0.022) with mobility rates (model 1). At the domain level, the Learning Environment domain exhibited a positive relationship with mobility rates (model 2). After adjusting for school characteristics, a 1.0-point increase in school-average Learning Environment ratings was associated with a 4.6 percentage-point increase in the school-level mobility rate on average. The other three domains did not have a statistically significant relationship with school-level mobility rate. The combination of school characteristics and teacher ratings explained approximately 37 percent of the variation in school-level mobility ratings.

## **Policy Recommendations/Implications**

The findings from this study illuminate patterns of teacher mobility in Texas public schools in several meaningful ways. First, during the 2011/2012 school year, about 18.7 percent of Texas teachers moved schools within a district, moved between districts, or left the Texas Public School system. By 2015/2016, this mobility rate had increased to 22.0 percent. These findings show that on average, approximately 20 percent of Texas public school teachers are mobile each year, which translates to an average of more than 72,000 teachers moving or leaving Texas public schools. However, some regions, such as Edinburg and El Paso, had substantially lower mobility rates than other regions. Further investigation into the practices and policies as well as the teacher and school characteristics of these regions is warranted to determine whether other regions can learn from policy and practice in these regions.

The majority of mobility is due to teachers leaving Texas public schools each year, although moving schools between districts accounts for increasingly higher proportions of mobility from 2011/12 through 2015/16. The data on Texas teacher mobility presented in this study are disaggregated in new ways by separating the mobility rates into the proportion of teachers moving schools within districts, moving schools between districts, and leaving Texas public schools. The researchers uncovered a trend of increasing proportion of teachers moving between districts over the five

years. The findings showed that more than half of all mobility was due to teachers leaving Texas public schools, whereas an increasing percentage of mobility was due to teachers moving across districts. Policies and practices targeting mobility should differentiate between objectives focused on impacting teachers who move or leave Texas public schools given that the impetus behind these two different mobility behaviors likely differs. Deeper investigation into the motivating factors behind movement across districts is also warranted. For example, district differences in salary and benefits packages may motivate teachers to switch districts.

Second, the findings from this study highlight links between teacher mobility and teacher demographic characteristics. Teachers with special education certifications were nearly twice as likely to leave Texas public schools as other teachers. Similarly, teachers with emergency certifications were more than twice as likely to move to a different school than teachers with standard certificates. Efforts aimed at increasing teacher retention could benefit from a specific focus on understanding and targeting mobility for teachers with special education and emergency certificates.

Third, the findings also reveal important links between school characteristics and mobility rates. School-level mobility rates showed significant positive correlations with the proportion of special education, economically disadvantaged, low-performing, and minority students. However, school mobility rates were negatively correlated with the proportion of Hispanic students and English learner students in the school. When these findings are considered together with the regional trends for Edinburg and El Paso, both of which have high Hispanic populations, a pattern emerges: one of lower mobility rates in areas and schools with higher Hispanic populations. This pattern is worth further investigation.

Fourth, correlational analysis between school-level mobility rates and school-average teacher ratings indicate that schools with higher overall ratings on the T-TESS rubric tend to have lower mobility rates. At the domain level, the results show that schools with higher school-average ratings on the Planning and Professional Practices and Responsibilities domains have lower mobility rates. These findings may serve as one point of departure for future research on how certain aspects of teacher effectiveness relate to teacher retention. The regression results for the subset of schools that participated in the T-TESS pilot, for example, may serve as a springboard for deeper exploration.

Additional analyses suggest that among schools with similar characteristics, a positive relationship exists between school-level mobility rates and school-average ratings on the Learning Environment domain. This domain consists of dimensions that capture teachers' ability to maintain a focus on learning and order in the classroom. One potential explanation for this finding is that these skills may be highly demanded by schools, particularly those with challenging environments. The explanation has support from the research literature on geographic mobility, which makes the distinction between "push" and "pull" factors that, respectively, either motivate individuals to leave an area or attract individuals to an area in the long run (Lee, 1966). In this case, teachers at schools with high school-average Learning Environment ratings may be heavily recruited and "pulled" away from their schools, toward schools in need of effective teachers of this kind, thus contributing to the finding that schools with higher school-average Learning Environment ratings also have higher mobility rates. It is important to note that because the study examined only school-average ratings, it cannot be concluded at the individual level whether teachers with higher Learning Environment ratings are more likely to leave schools.

This study addresses the growing interest in and efforts aimed at measuring and evaluating teachers by linking rubric ratings to mobility rates. Although correlational analyses between the pilot T-TESS evaluation scores and mobility metrics were meant to be exploratory and the results of the analyses should be interpreted with care, this study's findings suggest that among schools with similar characteristics, there are relationships between the percentage of teachers who leave a school and school-average teacher ratings that warrant further research.

Findings from the study will help guide the state's more targeted efforts to reduce inequities in the distribution of teachers through approaches for recruiting and retaining teachers. For instance, instead of using generic approaches to enhance the overall supply of teachers or improve recruitment, more targeted efforts are likely to be more productive. These efforts may focus on attracting and retaining teachers in specific subject areas (for example, special education), in certain stages of their career (for example, novice teachers), and in certain geographic areas, and may focus on targeting specific mobility behaviors (for example, movement across districts). Other Texas stakeholders (for example,

districts and teacher preparation programs) also can use information from the study to foster conversations about the possible causes of teacher mobility in certain regions, and enact policies and strategies to address those challenges at the local level.

This study, as well as studies such as those from West Virginia (Lochmiller, Adachi, Chesnut, & Johnson, 2016) and Minnesota (Podgursky, Ehlert, Lindsay, & Wan, 2016), represent local efforts to understand teacher mobility. Although the findings are best interpreted by considering regional and contextual factors for these states, the findings may be relevant to states with similar characteristics. These findings also may help other states develop their own specific inquiries into teacher mobility by learning from factors that were important in Texas.

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## **American Institutes for Research**

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