



Superintendent (In)Stability and Student Achievement in the United States

Rachel S. White

University of Texas at Austin

Superintendents shape conditions for teaching and learning, yet the limited studies of their impact—concentrated in a few states and focused on superintendent turnover—find small or null effects on student achievement. Using more than 37,000 district-year records from national superintendents and student achievement datasets, and drawing on organizational learning and managerial succession theories, I reframe superintendent influence as a district’s cumulative leadership stability rather than a discrete turnover event. I find that districts with more instability had lower achievement, and the penalty grew with each additional departure. The penalty was larger when departures were contentious and concentrated in the highest-poverty districts. A within-district analysis of discrete turnover events yielded no reliable effects, underscoring that measurement shapes whether superintendents appear to matter.

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PK-12 public school district superintendents in the United States are responsible for instructional, personnel, financial, and policy decisions that shape how districts operate and how students are served. For example, superintendents hire, evaluate, and support district and school leaders; propose and enact the district budget and policies; influence, interpret, and implement state and federal policy; and interface with community partners and families in ways that build the trust and engagement necessary to advance the district's educational mission. These responsibilities position the superintendent as a consequential actor who shapes the conditions under which administrators, teachers, instructional staff, families, and community partners support student learning. Yet, research has typically found that superintendents have small or null effects on student achievement (Chingos et al., 2014; Redding & Carlo, 2026)—a finding that is potentially difficult to reconcile given the substantial evidence that the educators and leaders they hire and support meaningfully shape student learning.

The evidence around teacher and leader impact on student achievement is substantial. While most variation in student achievement is attributable to out-of-school factors such as family and neighborhood resources (Reardon, 2011), among in-school factors, teachers exert a meaningful effect on student learning. Studies show that the teacher to whom a student is assigned accounts for between 7-30% of the variance in student achievement gains (Hanushek et al., 1998; Kane & Staiger, 2008; Nye et al., 2004; Rivkin et al., 2005; Rockoff, 2004; Rothstein, 2010; Rowan et al., 2002). Additionally, the benefits of a highly effective teacher extend beyond test scores to longer-run outcomes such as college attendance and earnings (Chetty et al., 2014). Teacher turnover is also associated with lower student achievement, with the largest effects in schools serving higher proportions of students from low-income families and students of color

(Atteberry et al., 2017; Hanushek et al., 2016; Ronfeldt et al., 2013).

School leaders, too, shape student outcomes. Although the magnitude of principal effects on student achievement remains contested (Bartanen et al., 2024; Grissom et al., 2021), principals have been shown to influence teacher recruitment and retention, school culture and climate for both students and educators, and the coordination of instructional programs (Bartanen et al., 2019; DeMatthews et al., 2022, 2026; Grissom et al., 2021; Sebastian & Allensworth, 2012)—all of which shape student learning opportunities and outcomes. And, similar to teachers, principal turnover has been linked to lower levels of average student achievement in a school (Bartanen et al., 2019). Research also shows that assistant principals, instructional coaches, intervention specialists, and teacher leaders shape the instructional conditions in which teachers work and students learn (Biancarosa et al., 2010; Campbell & Malkus, 2011; Kraft et al., 2018).

With their positional authority over operations, budget, and policy, superintendents shape the district-level conditions that determine if and how educators and administrators can do their work effectively. In contrast to the extensive literature on teacher and leader effects on student learning, however, research on the relationship between superintendents and student achievement remains limited (Schwartz et al., 2023). Studies that have been conducted on this topic have primarily been limited to one or two states (Alsbury, 2003; Chingos et al., 2014; Redding & Carlo, 2026). This scarcity, in part, may reflect long-standing data constraints: until relatively recently, neither national data on superintendents nor student achievement data that is comparable across states existed. The availability of the Stanford Education Data Archive (Reardon et al., 2024) and the National Longitudinal Superintendent Database (White, 2023) has now removed those obstacles.

Understanding whether superintendents shape student achievement is a pressing

empirical and policy question. According to the Education Recovery Scorecard, as of Spring 2026, just 17% of U.S. students in grades 3-8 were enrolled in districts where average math achievement was at or above 2019 levels; in reading, that share was 11% (Dewey et al., 2026). The Scorecard also showed that academic recovery has been notably uneven: high-income districts and the highest-poverty districts have made the greatest gains, while middle-income districts have largely stalled (Dewey et al., 2026). Reflecting on these findings, Thomas Kane, one of the authors of the Scorecard, noted that “leadership matters” and “demographics are not destiny” (Harvard Graduate School of Education, 2026). Yet it remains unclear which dimensions of leadership may matter for these divergent trajectories in academic performance.

This study takes up that question, examining one key, measurable dimension of district leadership—superintendent (in)stability. Superintendent instability is common: only about half of superintendents new to their district in Fall 2020 were still serving there in Fall 2024 (White et al., 2025). Moreover, two-thirds of PK-12 public school districts have experienced at least one superintendent turnover event since 2019; of those, more than one-quarter have experienced two or more superintendent turnovers in that time (White, 2026). However, no research has examined the potential academic consequences of superintendent (in)stability on a national scale. Whereas prior research has measured superintendent effects on student achievement through discrete superintendent turnover events and individual superintendent tenure (Alsbury, 2003; Chingos et al., 2014; Redding & Carlo, 2026), this study’s focus on superintendent (in)stability captures a district’s accumulated history of leadership continuity. Moreover, the nature of superintendent transitions can vary: some are planned and healthy, while others are politicized or contentious. Yet, whether the nature of superintendent (in)stability experienced by a district over time carries different consequences for students also remains unexplored.

Conceptualizing stability as the cumulative history of superintendent continuity, while drawing on organizational learning and leadership succession theories, I pose three research questions about whether and how superintendent (in)stability shapes student achievement. First, what is the relationship between superintendent (in)stability and student academic achievement? Second, how, if at all, does the relationship between superintendent (in)stability and student achievement vary by the nature of superintendent (in)stability? Third, in light of evidence that pandemic recovery has been uneven across districts serving communities of differing income levels (Dewey et al., 2026), does the relationship between superintendent (in)stability and student achievement differ by district poverty concentration?

Review of Literature: Measuring Superintendent Impact on Student Outcomes

A considerable body of research has descriptively examined superintendent labor market trends, including pathways to, through, and out of the superintendency. For example, research has examined the demographic composition of superintendent labor markets, as well as career pathways to the superintendency (Björk et al., 2003; DeMatthews et al., 2024; Fusarelli et al., 2003; Glass & Björk, 2003; Kowalski, 2003; Timmer & Woo, 2023; White, 2021; 2023). Researchers have also documented rates and patterns of superintendent turnover and identified contributors to superintendents staying and leaving—including compensation, district performance and characteristics, school board dynamics, and superintendent-community alignment (DeMatthews et al., 2024, 2025; Grissom & Andersen, 2012; Grissom & Mitani, 2016; Kamrath & Brunner, 2014; Kamrath, 2022; Natkin et al., 2003; White, 2023; White & Jerman, 2025). Collectively, this research has illuminated descriptive patterns of superintendent labor markets, as well as contributors to, and contexts of, superintendent turnover and stability. Considerably less is known about the consequences of superintendent stability—in particular,

whether and how superintendent (in)stability relates to student outcomes.

A related line of qualitative and case-study research addresses the question of how superintendents lead district improvement and impact student educational experiences through instructional leadership, central-office redesign, organizational coherence, and policy implementation (e.g., Donaldson et al, 2021; Honig 2012; Leithwood, 2010; Moore Johnson, 1996; Torres et al., 2024; Turner & Spain, 2016). This work richly documents the practices through which superintendents shape the conditions for teaching and learning; however, it generally does not quantify effects on student achievement.

The few studies that have examined the impact of superintendents staying or leaving on student outcomes have focused on superintendent tenure and discrete turnover events. These studies have reached competing conclusions—that superintendents either have a significant (Waters & Marzano, 2006) or limited (Chingos et al., 2014; Redding & Carlo, 2026) impact on student outcomes. The evidence most often cited for a positive superintendent effect on student achievement traces to one widely cited meta-analysis (Waters & Marzano, 2006), whose conclusions rest on a limited evidence base. Published as a working paper, the meta-analysis included 27 studies, three (11%) of which were from peer-reviewed academic journals; 21 (78%) were doctoral dissertations and three (11%) were non-peer reviewed reports. Among the peer-reviewed studies—published in 1975, 1976, and 1987—two drew on data from small samples in a single school year ($n=104$ in Colorado, $n=24$ in Maryland) and one drew on six years of data from 66 randomly selected California school districts. Waters and Marzano (2006) reported a positive weighted correlation ($r = .19$) between superintendent tenure and student achievement, with gains showing up as early as a superintendent's second year in a district. However, the limited scope of the underlying peer-reviewed evidence, as well as the age of the studies, limits

the generalizability of these findings to contemporary public school district contexts.

More recent and methodologically rigorous studies of superintendent effects have reached more tempered conclusions. Chingos and colleagues (2014) drew on ten years of student-level administrative data (2000-01 through 2009-10) from Florida and North Carolina to examine superintendent influence on student achievement in math and reading. Using data on students in grades 3-8 in North Carolina and grades 3-10 in Florida, the authors explored whether achievement improved with superintendent longevity; whether hiring a new superintendent was associated with achievement gains; and the share of variance in student achievement attributable to superintendents relative to districts, schools, teachers, and student characteristics. The authors applied within-district fixed effects and value-added specifications to isolate superintendent-level variation from district and student characteristics and used hierarchical linear modeling (HLM) to decompose the variance in achievement across levels of the system. Because the application of HLM required linking individual teachers to students, the variance decomposition analyses were restricted to grades 4 and 5 in North Carolina, where such data were available.

Chingos and colleagues (2014) found no statistically significant relationship between superintendent tenure and student achievement in reading or math. Comparing achievement in the years before and after a superintendent turnover event, they identified a single statistically significant estimate in math scores, three years post-superintendent turnover; however, they found no consistent effect of superintendent turnover on subsequent student achievement levels. Their HLM model showed that 0.3% of the variance in student achievement could be attributed to differences among superintendents, compared to 1.7% attributable to districts, 3.0% to schools, and 4.0% to teachers. From these findings, the authors concluded that “our results make clear that, in general, school district superintendents have very little influence on student

achievement in the districts in which they serve” (Chingos et al., 2014, p. 13).

The most recent study of superintendent effects, conducted by Redding and Carlo (2026), drew on superintendent turnover data in Texas and Florida from 2009-10 to 2017-18 linked to SEDA achievement data. The authors employed an event study difference-in-difference design with matching weights to compare student achievement trajectories in districts experiencing superintendent turnover to those of matched non-turnover districts. They estimated an average post-turnover decrease in a district’s average reading performance of -0.029 units on the SEDA scale (equivalent to -0.015 standard deviation units) with negative effects concentrated in urban districts, larger districts, and districts serving higher concentrations of students living in poverty. They found no significant impact of superintendent turnover on math achievement. The authors showed that pre-trends in achievement were stable in the three years immediately prior to turnover but were elevated in the fourth and fifth years prior to turnover, suggesting a longer-run downward trajectory in treated districts that predated the turnover event. Redding and Carlo (2026) acknowledged that the observed post-turnover declines in student achievement may be partially explained by pre-existing trends that contributed to the superintendent’s departure.

Whereas Chingos and colleagues (2014) as well as Redding and Carlo (2026) treated all superintendent transitions as equivalent, another single-state study introduced a distinction central to the present work: whether the political character of turnover conditions its relationships to student achievement. Using survey and state assessment data from 162 districts in Washington, Alsbury (2003) compared “politically motivated” and “apolitical” board turnover, as well as superintendent turnover (undifferentiated) against changes in student achievement from 1993 to 2001. He found that board turnover was significantly associated with declining test scores only when board turnover was “politically motivated” (i.e., driven by

incumbent defeat) and not when it was apolitical. Alsbury (2003) found no significant relationship between superintendent turnover (undifferentiated) and student achievement. Alsbury (2003) nonetheless cautioned that his correlational design, with several unmeasurable confounding variables, could not support causal claims.

Together, these studies represent the relatively small body of empirical evidence on superintendent influence on student achievement. The studies have advanced the field in meaningful ways—bringing attention to the question of superintendent influence and refining the methodological tools available for examining this question. This study builds upon this work by making three unique contributions. This is the first study that examines the relationship between superintendent stability and student achievement at a national scale; the first study to conceptualize and measure cumulative superintendent stability rather than tenure or turnover; and the first study to do so across the COVID-19 pandemic and recovery period.

Conceptual Framework

In the studies previously summarized, superintendent influence was measured either through a binary indicator of whether the superintendent stayed or left in a given year or through the length of a superintendent's tenure within a district. Both operationalizations describe a district's current leadership but neither reflects the district's accumulated history of leadership transitions. Consider two districts observed in the same year: District A experienced its first superintendent change in a decade; in District B, four superintendents cycled through in the same period, and the fifth was just hired. A single-year turnover measure would show that a change occurred in both districts, and a tenure measure would show that both superintendents are new. Neither measure captures that District B has cycled through several superintendents while District A has been stable. To explain why this accumulated stability could matter for students, I

draw on two theoretical perspectives. First, drawing on organizational theory, I argue that superintendent stability enables the accumulation of knowledge that reaches classrooms and, thus, student learning. Second, drawing on managerial succession research, I discuss how repeated transitions—and especially conflict-driven ones—may disrupt knowledge accumulation, motivating this study’s focus on cumulative superintendent (in)stability.

Superintendent Stability and Organizational Knowledge

Organizational learning (OL) theory emphasizes that an organization’s performance is tightly linked to the accumulation of organizational knowledge over time (Levitt & March, 1988). Organizational knowledge, however, is the product of “supraindividual collectives,” and leaders of organizations serve as repositories and distributors of that knowledge (Walsh & Ungson, 1991, p. 58). Particularly in organizations where executive authority is concentrated in a single role, an executive’s knowledge functions as organizational knowledge, shaping decisions, structuring relationships, and mediating how the organization functions (Levitt & March, 1988).

Applied to U.S. PK-12 public school districts, a superintendent accumulates knowledge over time about their community’s history and political dynamics; the assets, strengths, and needs of district employees and students; internal and external, as well as formal and informal power structures; resource opportunities and constraints; the priorities and personalities of board members; the successes and failures of prior reform initiatives, and more. This knowledge can shape superintendents’ strategic decision-making. When a superintendent transition occurs, this accumulated knowledge is interrupted and the new superintendent—especially one arriving from outside that community—must build organizational knowledge, often from scratch. An internal successor may bring knowledge with them, but the organization may still lose some of the relational and political knowledge held by the prior superintendent.

The Tacit Dimensions of Superintendent Knowledge. Organizational knowledge creation theory emphasizes that OL is a dynamic process involving both explicit and tacit knowledge (Basten & Haamann, 2018; Nonaka, 1991). Explicit knowledge is often directly communicated through policy documents, budget spreadsheets, strategic plans, curriculum alignment documents, and meeting minutes. Tacit knowledge, in contrast, is “highly personal” (Basten & Haamann, 2018, p. 3) and rooted “in an individual’s commitment to a specific context” (Nonaka, 1991, p. 98). For superintendents, tacit knowledge may include knowing which leaders are best suited to lead a new initiative or navigate a human resource challenge, knowing when a board member’s public position may differ from their private concerns, and recognizing which constituencies require careful trust building before any policy can take hold. This knowledge is built through sustained presence in the community, and can be *socialized*, *externalized*, *combined*, and *internalized* (Basten & Haamann, 2018).

A superintendent *socializes* tacit knowledge by cultivating a shared understanding of district priorities among their cabinet, principals, union leadership, teachers, and parent organizations. They *externalize* it by translating information into “comprehensible forms that can be understood by others” (Nonaka & Konno, 1998, p. 43)—for example, translating lessons from a failed levy campaign into a revised public-engagement strategy. A superintendent also *combines* explicit knowledge from multiple internal and external sources; for example, they may combine accountability data, principal input, teacher focus groups, community survey results, and board members’ knowledge of political stances of key local government actors into a coherent strategic plan. Through *internalization*, a superintendent converts explicit knowledge into tacit knowledge. Because each of these processes accrues over time and requires relational continuity, superintendent transitions can interrupt knowledge development and translation.

Superintendents as Knowledge Officers, Managers, and Brokers. Within the OL literature, Basten and Haamann (2018) distinguish people-based approaches to OL from those rooted in processes and technology. This study draws on three people-based applications of OL that apply to superintendents' generation and transmission of knowledge in ways that can shape educational outcomes. First, as chief knowledge officers, superintendents "design, implement, and oversee" a district's "knowledge infrastructure" (Jones et al., 2003, p. 50) by proactively establishing and frequently revisiting organizational values, goals, and culture and identifying when behavioral changes are needed. Second, as knowledge managers, superintendents ensure that knowledge is stored, organized, and retrievable by others (Jones et al., 2003; Karim & Hussein, 2008), and they integrate knowledge from prior experiences with local knowledge (Jones et al., 2003; Pantry & Griffith, 2003; Teodorescu, 2006). Third, as knowledge brokers, superintendents "facilitate the transfer of knowledge" among departments, schools, and external partners (Pawlowski & Robey, 2004, p. 645), play a critical role in knowing who holds what knowledge, and help internal and external stakeholders translate language and knowledge from one context to another (Cillo, 2005; Pawlowski & Robey, 2004; Teodorescu, 2006).

Together, these roles suggest that a longer-serving superintendent is well positioned to build the tacit knowledge necessary to perform knowledge building, brokering, and management functions. In turn, a superintendent with long-standing knowledge of the community and organization is equipped to identify points of leverage, think carefully and strategically through resource allocation, and advance evidence-based reforms that align with community desires. While these knowledge functions operate at the district level, their consequences may ultimately reach classrooms. For example, a stable superintendent may be better able to sustain a coherent instructional vision across budget cycles, retain high-quality and effective staff, protect multi-

year reforms to allow them to mature, and maintain board and community trust. Although instructional coherence, staff continuity, sustained implementation, and resource stability are related to student achievement (Borman et al., 2003; Jackson et al., 2016; Miller, 2013; Newmann et al., 2001; Ronfeldt et al., 2013), each is vulnerable to disruption when a leader departs. Thus, superintendent stability may be a distal but pertinent factor operating through the organizational conditions that shape teaching and learning.

Managerial Succession and Organizational Performance

Building on OL theory, this study is also informed by theories of managerial succession, which hold that new leaders' organizational knowledge takes time to translate into organizational performance shifts. Early work in management and organizational sociology reached mixed conclusions about the impact of leader succession. Gouldner's (1954) case study of a gypsum factory found that a plant manager transition disrupted operations and precipitated a labor strike that was not supported by management. Grusky (1963) found that baseball teams with frequent managerial turnover performed worse than those with stable management. In contrast, Guest (1962) found that a managerial transition on an automobile assembly line improved performance.

While early studies looked at performance immediately after a managerial change, subsequent studies began to explore long-term impacts. For example, examining mid-season manager changes among teams, Gamson & Scotch (1964) found that most teams experienced a boost in performance during the period immediately after receiving a new manager, but rarely was that improvement sustained over the entire season. Similarly, Eitzen and Yetman (1972) found that basketball coach changes often resulted in immediate improvements in performance but, in the long run, made "no difference in team effectiveness" (p. 113). Allen and colleagues (1979) explored a similar question with professional baseball data from 1920 to 1973, finding

that teams with more frequent succession had weaker performance. These studies speak to a selection issue central to this study: if managerial turnover follows declining performance, observed post-transition outcomes may reflect pre-existing trajectories.

These insights shape my analytic approach in two ways. First, I focus on cumulative number of superintendent transitions over time, rather than on whether turnover in a single year produced measurable changes in student outcomes. Second, because not all transitions may be organizationally equivalent, I classify superintendent (in)stability according to whether departures were amicable or contentious. Contentious departures that disrupt systems may carry organizational costs that extend beyond the transition period, potentially disrupting the relational and knowledge networks that OL theory suggests are central to performance.

This body of work also motivates two hypotheses about how superintendent stability may relate to student achievement. First, if OL operates through knowledge accumulation over time, I hypothesize that districts with greater cumulative superintendent instability will have lower academic achievement, reflecting the compounding costs of repeated disruptions to knowledge accumulation (RQ1). Second, because conflict-driven departures may be more likely to disrupt relational and political knowledge as well as trust on which organizational learning depends, I hypothesize that superintendent instability associated with contentious departures will carry larger achievement penalties than amicable instability (RQ2). Finally, given that post-pandemic recovery has varied by district average income level and that districts serving the highest proportions of students living in poverty have higher superintendent turnover rates and have historically been under-resourced, making it difficult to absorb turnover disruptions (Dewey et al., 2026; White, 2023), I hypothesize that the association between superintendent stability and achievement is stronger in the highest-poverty districts (RQ3).

Data and Methods

This study primarily draws on two national longitudinal datasets that track U.S. PK-12 public school district superintendents and district-level student academic achievement data. The datasets are linked using district identification numbers from the U.S. Department of Education's National Center for Education Statistics. In what follows, I detail the data sources, analytic sample, measures, and analytical approach.

Data

The National Longitudinal Superintendent Database (NLSD) provides year-to-year records of the names of all superintendents leading traditional PK-12 public school districts ($n \sim 12,500$ per year). For this study, the NLSD observation window spans seven school years, from 2019-20 to 2025-26. The NLSD includes a superintendent change variable that flags any year in which a district experiences a superintendent departure. The NLSD also includes qualitative coding of the nature of each superintendent departure—coded as (a) ostensibly amicable, (b) taking place in a politicized or contentious context, or (c) not enough data. These codes are derived from publicly available information related to the superintendent departure, including but not limited to news media, social media, and school board meeting minutes or videos. Qualitative codes are not forced onto superintendent transition events; if there is no publicly available data on the nature of the transition, the transition is coded as “not enough data.” Additional details about the qualitative coding process to characterize superintendent turnover, as well as NLSD data collection processes, are available via White and Jerman (2025).

Second, I draw on the Stanford Education Data Archives (SEDA; Reardon et al., 2024), which provides standardized district-level student achievement estimates from 2009 through 2025 using state accountability assessment data from grades three through eight in

reading/language arts (RLA) and math. Achievement estimates are unavailable for the 2020 and 2021 years due to COVID-19 pandemic-related testing disruptions. For ease of interpretation, I use the Grade-Year Scale (GYS) estimates, where one unit corresponds to approximately one grade level of learning. For example, a difference of 0.50 on the GYS corresponds to roughly one-half of a grade level of learning. The GYS estimates are derived using Bayesian methods applied to state standardized test data and linked to the National Assessment of Educational Progress scale to support comparability across states and over time (Reardon et al., 2024).

Finally, student racial/ethnic composition, geographic locale (i.e., rural, town, suburban, urban), and enrollment are drawn from the SEDA covariate files. District economic disadvantage data comes from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE), which measures the share of school-aged children (ages 5-17) living in poverty. I use SAIPE rather than the U.S. Department of Education's free- and reduced-price lunch (FRPL) measure because universal meal programs have decoupled reported FRPL rates from underlying family income (Domina et al., 2018; Fazlul et al., 2023; Harwell & LeBeau, 2010). SAIPE, by contrast, provides an income-based poverty measure that is consistently defined across districts and years.

Sample

The analytic sample is comprised of traditional PK-12 public school districts that have both superintendent data in the NLSD and at least one year of post-pandemic SEDA achievement data in either math or RLA.¹ The full NLSD panel includes 12,568 district observations across seven school years, for a total of 87,976 district-year records. A small number of districts (<.01%) exited the NLSD through closure or consolidation rather than a superintendent departure. Because these represent the dissolution of a district rather than a superintendent change, they are not coded as transitions and contribute to observations only for the years they

were operational. Restricting to NLSD district-years with valid SEDA achievement data in either math or RLA yields an analytic sample of 37,631 district-year observations across 10,073 districts for math and 37,071 observations across 9,941 districts for RLA. Each subject includes data from 43 states and the District of Columbia; however, because SEDA coverage is subject-specific, the two samples cover overlapping but not identical sets of districts and states.²

Measures

For RQ1 and RQ3, my primary independent variable is a categorical variable of superintendent stability. I created this measure first by summing the number of superintendent transitions that a district experienced between the 2019-20 and 2025-26 school years. Districts were then categorized into three superintendent stability groups: no transitions/persistent stability (n=3,239), one transition (n=4,615), and two or more transitions/chronic instability (n=2,413).

For RQ2, I decomposed the cumulative superintendent stability measure into two counts: the cumulative number of amicable departures and the cumulative number of contentious departures a district experienced over the observation window. These counts entered the cohort model as separate predictors, so each coefficient captures the association of one additional departure of that nature, holding the other constant. Because sufficient public information was not available to code the nature of 13.2% of superintendent transitions, I created a variable that is the count of “undetermined” transitions to be included as a control.

The dependent variables across all models include district-level mean student achievement in math and RLA on the GYS scale, estimated separately by subject. In the primary cohort specification, the outcome is a district’s average (2022-2025) post-pandemic achievement. As a secondary outcome, I also examine each district’s 2022-2025 achievement slope (i.e., its rate of recovery). While pre-pandemic data (2009-2019) do not serve as outcome observations,

they are utilized in two ways. First, the Spring 2019 district mean serves as a pre-pandemic baseline control so that the estimated differences in achievement associated with superintendent stability reflect divergence from a common starting point rather than pre-existing differences in achievement. Second, I use 2009-2019 data to test whether districts with different stability histories were on comparable pre-pandemic academic achievement trajectories.

Finally, the cohort models adjust for district geographic locale (rural, town, suburban, urban) and a set of time-varying district and superintendent characteristics. Geographic locale is coded as binary indicators for urban, suburban, and town, with rural districts as the omitted reference category. The remaining controls include district-level child poverty rates, student enrollment (natural log), the proportion of Black and Hispanic students enrolled in the district, superintendent gender (0=male, 1=female) and interim status (0=permanent, 1=interim).³ Table 1 reports descriptive statistics for all variables in the main analytic sample.

[INSERT TABLE 1 ABOUT HERE]

Analytical Approach

To answer RQ1, I first collapse the panel to a single observation per district and regress each district's mean post-pandemic achievement (2022-2025) on its superintendent stability category, conditioning on the 2019 pre-pandemic baseline, district and superintendent characteristics, and state fixed effects. The model is

$$\bar{Y}_d = \alpha + \beta Stability_d + \gamma X_d + \delta_s + \varepsilon_d$$

where $\bar{Y}_d$ represents district d 's mean post-pandemic (2022-2025) achievement in math or RLA; $Stability_d$ is a district's cumulative superintendent stability category, with persistently stable (no transition) districts as the reference category; X_d is a vector of district and superintendent characteristics, including the district's 2019 baseline achievement, enrollment,

student demographics, geographic locale, and the superintendent's gender and interim status; and δ_s is a state fixed effect. Because each district has a single outcome (average 2022-2025 academic achievement), district fixed effects would absorb the outcome entirely. Instead, I adjust for differences across districts using the 2019 achievement baseline, district covariates, and state fixed effects, so the stability coefficients capture differences in achievement by superintendent stability net of these factors, rather than change within a district over time. As a secondary outcome, I re-estimate the model with each district's 2022-2025 achievement slope (i.e., rate of recovery) in place of achievement level. As robustness checks, I (1) re-estimate the model with a four-group classification of stability (i.e., zero, one, two, and three or more transitions) to test sensitivity to the number of stability categories; and (2) apply a timing-based classification to distinguish districts by when their superintendent transitions occurred. Because superintendent stability is not randomly assigned (Grissom & Mitani, 2016; Redding & Carlo, 2026; White et al., 2025), coefficients should be interpreted as descriptive associations, not causal effects.

A central threat to my between-district design is selection: districts that accumulate more superintendent transitions may have been on different student achievement trajectories to begin with. A cross-sectional association could reflect pre-existing differences across districts rather than the accumulation of superintendent instability. Therefore, before conducting my main analysis, I examine whether districts with different superintendent stability histories were on comparable pre-pandemic achievement trajectories. Figure 1 plots each superintendent stability group's mean student achievement from 2009 to 2025 relative to its 2019 baseline: districts that eventually experienced chronic superintendent instability between 2019-20 and 2025-26 were already diverging downward in academic achievement before the pandemic. In contrast, the academic achievement patterns of districts with no or one superintendent transition tracked more

closely together. I then run group-by-year and group-by-linear-trend models to jointly test whether pre-pandemic student achievement trajectories differed by districts' eventual superintendent stability category. The results confirmed the visual pattern: pre-2019 academic achievement trends were nearly parallel for districts that later experienced no or a single superintendent transition, but chronically unstable districts were already on a significantly steeper downward achievement trajectory, with the divergence emerging around 2015. In particular, relative to persistently stable districts, the pre-2019 linear achievement trend of one-transition districts differed marginally in math (-0.004 per year, $p = .05$) and RLA (-0.004 , $p = .05$), whereas chronically unstable districts were already on a steeper downward trajectory (math -0.011 per year, $p < .001$; RLA -0.006 , $p = .007$).

[INSERT FIGURE 1 ABOUT HERE]

To test whether this pre-existing trend drove my cross-sectional estimates, I re-estimate the cohort model controlling for each district's 2009-2019 linear achievement slope in addition to its 2019 baseline level. The results are essentially unchanged, with additional superintendent transitions still associated with progressively lower student achievement: chronic superintendent instability is associated with -0.104 GYS in math and -0.080 in RLA with slope control, versus -0.104 in math and -0.085 in RLA without slope control. The one-transition estimates are similarly stable across models (-0.043 with and -0.039 without slope control for RLA; -0.047 with and -0.043 without slope control for math). Because conditioning on the 2009-2019 trends left the estimates essentially unchanged, the association between superintendent stability and student achievement reflects more than a continuation of pre-existing declines.

To address RQ2, I re-estimate the cohort model but replace the cumulative stability variable with two predictors that represent counts of each district's amicable and contentious

transitions. A count of undetermined-nature transitions is included as a control, so each coefficient reflects the association of an additional amicable or contentious departure, holding other departures constant. To test whether the nature of superintendent instability matters, I compare the amicable and contentious coefficients via an F -test.

To address RQ3, I assess whether the association between cumulative superintendent stability and achievement varies with district poverty levels. I first assign each district to a poverty quartile based on its district-level SAIPE child poverty rate, averaged over its observed years, with Q1 representing the lowest-poverty and Q4 the highest-poverty districts. I then estimate the cohort model in two ways. First, I add a full set of interactions between superintendent stability group and district poverty quartile and test their joint significance with an F -test. Second, I estimate the cohort model separately within each poverty quartile to examine where any variation lies. In both specifications, I replace the continuous child-poverty control variable used in the RQ1 model with the poverty-quartile terms to avoid collinearity, retaining all other covariates and state fixed effects as in the RQ1 model.

Finally, replicating prior work and presented as an identification exercise, I examine whether superintendent influence might operate as an acute, within-district effect on individual turnover events. Applying the within-district designs used in other studies of one or two states (Chingos et al., 2014; Redding & Carlo, 2026) now at a national scale, I estimate the effect of a discrete superintendent turnover event using two-way fixed effects (TWFE) and event-study models, as well as the Callaway and Sant'Anna (2021) difference-in-differences (DiD) estimator, which compares each treated cohort only to not-yet-treated and never-treated districts and is robust to heterogeneity in treatment timing. The DiD estimator also produces an event study with pre-transition “leads” that directly test the parallel-trends assumption on which TWFE designs

depend. In this model, the time-invariant characteristics such as geographic locale are absorbed by the district fixed effects, so only time-varying covariates are used (i.e., student racial demographics, SAIPE child poverty rates, superintendent gender and interim status). I conduct robustness checks on these within-district estimates, including restricting the analysis to exclude interim superintendent years, restricting to states with complete 2025 coverage, and introducing a lagged-dependent variable specification. Because superintendent turnover often happens more than once in districts in my study's time horizon, I apply the de Chaisemartin and D'Haultfœuille (2023) estimator for recurring and switching treatments.

Findings

Cumulative Superintendent Stability and Student Achievement

I begin by presenting the descriptive relationship between district superintendent stability and post-pandemic achievement. Greater superintendent instability was associated with lower average district-level student achievement levels: average student achievement levels from 2022 to 2025 in districts with persistent superintendent stability (i.e., zero transitions) were nearly one-third of a grade level higher than in districts experiencing chronic superintendent instability (i.e., two or more transitions in the observed window)—a gap of about 0.30 GYS units. As the subsequent models show, however, much of this unadjusted gap in average achievement reflected where districts started in 2019 rather than their superintendent stability histories. Conditioning on each district's 2019 achievement baseline reduced the gap in student achievement between persistently stable and chronically unstable districts to about one-tenth of a grade level.

The baseline-adjusted cohort estimates are shown in Table 2. Relative to districts that had complete superintendent stability over the observation window, districts with a single superintendent transition had significantly lower average achievement levels across 2022-2025

after adjusting for each district's 2019 pre-pandemic baseline. Compared to completely stable districts with similar 2019 achievement levels, one-transition districts scored, on average, 0.043 GYS units lower in math ($SE = 0.013, p = 0.001$) and 0.039 lower in RLA ($SE = 0.013, p = .002$). Districts experiencing chronic instability scored 0.104 units lower in math ($SE = 0.017, p < .001$) and 0.085 lower in RLA ($SE = 0.017, p < .001$) than districts with complete superintendent stability. The association between superintendent stability and student achievement roughly doubled between districts with one transition and those with two or more. In learning terms, one-transition districts trailed no transition districts by about 1.5 weeks of learning in both math and RLA, and chronically unstable districts trailed nearly a month in math and three weeks of learning in RLA.

Full model estimates, including all covariates, are reported in Supplemental Appendix Table A.1. Although district poverty, student demographics, and 2019 baseline achievement were all strong predictors of post-pandemic achievement, the association between superintendent stability and student achievement remained after adjusting for them. In short, superintendent stability remained a meaningful predictor of achievement even after accounting for these factors.

[INSERT TABLE 2 ABOUT HERE]

Shifting from achievement level to rate of post-pandemic academic recovery, I find that persistently stable districts recovered somewhat more strongly than chronically unstable districts. Descriptively, completely stable districts gained the most in math at 0.030 GYS units per year, compared with 0.018 for one-transition and 0.022 for two-or-more-transition districts. In RLA—where all groups have declined post-pandemic (Dewey et al., 2026)—persistently stable districts declined the least (-0.071 GYS units per year), followed by one-transition (-0.077 GYS units per year) and two-or-more-transition districts (-0.079 GYS units per year). When estimating the

cohort model using each district's 2022-2025 achievement slope as the outcome, the association remained negative (Table 2). Relative to persistently stable districts, districts that experienced superintendent transition(s) recovered more slowly in math (one transition, -0.012 , $p = .02$; two+ transitions, -0.012 , $p = .06$) and RLA (one transition, -0.009 , $p = .08$; two+ transitions, -0.012 , $p = .08$), though only the one-transition math estimate reached conventional significance levels. The slope estimates are likely noisier than the achievement level estimates because each district's recovery slope includes two to four observations. As such, a single year fluctuation could shift a district's estimate and make standard errors correspondingly large. Additionally, unlike the achievement level where the negative association grew with each additional superintendent transition, the slope results for districts with one and two transitions were relatively similar.

Sensitivity analyses confirm that these results were robust across alternative operationalizations of stability. First, after disaggregating the chronic instability group (two or more transitions) into two transitions ($n=1,882$ districts) versus three or more transitions ($n=531$ districts), I found that, compared to completely stable districts, two-transition districts scored 0.107 units lower in math and 0.083 lower in RLA. Districts with three or more superintendent transitions scored 0.087 and 0.091 lower than completely stable districts in math and RLA, respectively. Second, I tested a timing-based classification where I grouped districts by when their superintendent transitions occurred—early (2020-2021, which coincided with the COVID-19 pandemic), later (2022-2025), or both. Relative to districts with persistent superintendent stability, districts that experienced a superintendent transition early and then stabilized scored 0.066 units lower in math ($p = .007$) and 0.044 units lower in RLA ($p = .07$). In comparison, districts that experienced superintendent transitions both early and later fared substantially worse than completely stable districts—scoring 0.107 units lower in math and 0.093 units lower in RLA

(both $p < .001$). Districts that experienced one superintendent transition later, and no early transition, scored 0.054 units lower in math and 0.048 units lower in RLA than completely stable districts (both $p < .001$; Supplemental Appendix Table A.2). In sum, districts that stabilized after an early transition fared better than those that kept churning, reinforcing the idea that accumulation—not just the occurrence—of superintendent departures matters.

Student Achievement and the Nature of Superintendent Instability

As shown in Table 3, and visually in Figure 2, both cumulative amicable and contentious instability are negatively associated with student achievement; however, contentious instability is associated with a larger penalty on student achievement. In math, a district with one additional amicable departure is associated with a 0.030 unit decline in student achievement ($SE = 0.008$, $p < .001$). In comparison, each additional contentious departure is associated with a 0.062 unit decline ($SE = 0.016$, $p < .001$). The contentious departure penalty is roughly two times larger, and the difference between the two is marginally significant ($F = 3.68$, $p = .055$). I find a similar pattern in RLA (amicable -0.026, $p = .001$; contentious -0.051, $p = .001$) but the two are not statistically distinguishable ($F = 2.35$, $p = .13$). These findings suggest that the accumulation of contentious superintendent instability is associated with larger achievement penalties, at least in math, where each additional amicable departure is associated with about one week less of learning, and each contentious departure was associated with roughly two weeks less.

[INSERT TABLE 3 ABOUT HERE]

[INSERT FIGURE 2 ABOUT HERE]

The Superintendent Stability-Achievement Relationship and District Poverty

While superintendent stability mattered for student achievement, district poverty was also among the strongest predictors of post-pandemic achievement in the cohort model (Supplemental

Appendix Table A.1). To examine whether poverty also shaped this association, I (a) tested a cumulative stability-by-poverty quartile interaction and (b) estimated the cohort model separately within each poverty quartile. The cumulative stability-by-poverty quartile interaction was significant in both math ($F(6, 9837) = 2.90, p = .008$) and RLA ($F(6, 9650) = 2.20, p = .040$). The within-quartile estimates (Table 4) show that the strongest association was concentrated among the highest-poverty districts. In the lowest three poverty quartiles, the superintendent instability penalty is modest and largely not significant: districts with two or more transitions scored roughly 0.06 GYS units lower in math and 0.05 GYS units lower in RLA—about two weeks of learning—than persistently stable districts of comparable poverty. Among the highest-poverty quartile districts, however, the penalty is three to four times larger: high-poverty districts with two or more superintendent transitions scored 0.243 units lower in math and 0.178 units lower in RLA (both $p < .001$) than persistently stable high-poverty districts. Even a single superintendent transition in a high-poverty district was associated with a decline of 0.113 units in math and 0.107 units in RLA (both $p < .001$). Figure 3 plots the chronic instability estimates within each poverty quartile, showing that the penalty is modest and largely nonsignificant in the lower three quartiles but several times larger, and significant, in the highest-poverty quartiles.

[INSERT TABLE 4 ABOUT HERE]

[INSERT FIGURE 3 ABOUT HERE]

Discrete Superintendent Turnover Events: An Identification Exercise

As previewed in the analytical approach, I also estimated the effect of discrete superintendent turnover events using within-district designs, which I treated as an identification exercise. The within-district TWFE model revealed no statistically significant relationship between a discrete superintendent turnover event and student achievement level (any transition: -

0.006 in math, $p = .15$; -0.003 in RLA, $p = .46$; Supplemental Appendix Table A.3). Employing the Callaway-Sant'Anna estimator, I found a negative average effect of a district's first superintendent transition in both math (-0.022, $p = .014$) and RLA (-0.025, $p = .010$). However, the estimated treated-versus-comparison differences in the years before the superintendent transitions—which should be zero if the parallel trends assumption holds—are significantly negative (average pre-period effect -0.022, $p < .001$ in math; -0.011, $p = .069$ in RLA; Supplemental Appendix Figure A.1). Consistent with the longer pre-pandemic divergence described earlier (Figure 1), these results indicate that the treated and comparison districts were not on parallel trends: districts that experienced turnover were already achieving significantly below comparable districts in the years before the turnover event occurred.

The estimates also do not survive the Rambachan and Roth (2023) sensitivity analysis (Supplemental Appendix Figure A.2). This relative-magnitudes approach asks how large a post-turnover violation of parallel trends can be relative to the violations observed before a turnover, before the estimate loses significance. The negative effect is distinguishable from zero only under exact post-turnover parallel trends ($\bar{M} = 0$). I find that even once half of the pre-period violation is permitted ($\bar{M} = 0.5$), the confidence interval includes zero in both math and RLA. Because parallel trends are violated before the turnover, assuming they hold perfectly after the transition is not credible and, thus, I do not interpret the estimates as robust. The de Chaisemartin & D'Haultfœuille (2023) estimator (Supplemental Appendix Table A.4) also reveals a statistically significant positive pre-treatment placebo in math (+0.014, $p = .014$); the RLA placebo is positive, but not significant (+0.007, $p = .200$). As such, these estimates should not be interpreted as reliable effects of superintendent turnover on student achievement.

The within-district results are robust across several alternative samples and specifications – excluding interim-superintendent years, restricting to only states with complete 2025 coverage⁴, and adding a lagged dependent variable; no specification approaches significance (Supplemental Appendix Table A.5). As such, I do not interpret these within-district estimates as identifying a causal effect of superintendent turnover on student achievement. Instead, these results indicate that the impact of individual superintendent turnover events is likely entangled with pre-existing declines that could precipitate superintendent turnover.

Discussion and Implications

In this study, I examined the relationship between cumulative stability of a district's superintendent and student achievement, with a primary focus on post-pandemic achievement and recovery. I also explored whether the nature of superintendent (in)stability matters for this relationship, and whether the association between superintendent stability and student achievement varies by concentration of students living in poverty in a district. First, I find that cumulative superintendent stability is associated with student achievement post-pandemic, with those experiencing two or more superintendent transitions scoring about twice as far below those with just one superintendent transition. Second, the nature of a district's superintendent instability matters: each additional contentious departure was associated with a penalty on student achievement that was roughly twice as large as that of an additional amicable departure. Third, the association between superintendent stability and student achievement was concentrated among the highest-poverty districts, where districts that experienced chronic instability scored three to four times further below their stable peers than comparable districts in the lowest three poverty quartiles. Finally, a within-district analysis of discrete superintendent turnover events produced no reliable effects. This null finding, however, likely reflects the limits

of the analytical approach—namely, the challenge in separating superintendent turnover from pre-existing academic achievement declines that precipitated it.

In absolute terms, the magnitude of the association between superintendent stability and student achievement was modest. While these associations should not be overstated, two features of the results deserve emphasis. First, the association is graded, growing with each additional superintendent departure. Second, situating the magnitude of the association beside prior estimates of superintendent-achievement relationships offers useful perspective. Chingos et al. (2014) concluded that superintendents account for a small share of the variation in student achievement (0.3%) in North Carolina, and Redding and Carlo (2026) estimated that a single superintendent turnover event is associated with roughly a 0.015 standard deviation decline in student achievement in Florida and Texas. My findings show that, nationally, a single superintendent turnover event corresponds to about 0.03 standard deviations and chronic superintendent instability corresponds to about 0.07 standard deviations in math achievement—roughly two to five times Redding and Carlo’s (2026) per-event estimate in Texas and Florida. Given the difference between a within-district per-event effect and a cross-district cumulative association, the comparison is simply illustrative; however, the pattern shows that accumulation of superintendent transitions is associated with a larger achievement penalty than the impact of a single turnover event—and both exceed the near-zero effect implied by a variance decomposition of superintendent tenure found by Chingos and colleagues (2014).

These findings carry equity implications. The association between superintendent instability and achievement was not uniform; rather, it was three to four times larger in the highest-poverty districts than those with lower poverty concentrations. This is concerning because the districts most often operating with limited resources and administrative capacity are

also the ones that experience the most superintendent turnover (White, 2023). Superintendent instability, in this way, is regressive, concentrating its costs where resources are often already the scarcest. Superintendent instability, thus, may widen, rather than reflect, existing inequities.

Methodological Implications

A central contribution of this study is reframing how superintendent influence is measured and demonstrating how measurement choices can shape research findings. Superintendents are typically organizationally distant from classrooms where student learning directly takes place. As such, their influence on student learning likely operates indirectly through organizational conditions that accumulate over time, such as fostering instructional coherence, staff continuity, and board and community trust. An analytic approach that treats superintendent turnover as a discrete event and asks what happens to student achievement in the years immediately around it implicitly models superintendent influence as a one-time shock to the system. If, however, a superintendent's contribution is understood as an accumulated organizational condition, then the small or null estimates from Redding and Carlo's (2026) discrete-event study may not mean that superintendents do not matter for student learning but, rather, that the measure may not capture how superintendent influence operates. This measurement challenge is not unique to superintendents; Bartanen and colleagues (2024) similarly show that changes in student performance are sometimes misattributed to principals due to unobserved, time-varying factors.

In offering this reframing toward cumulative (in)stability, I do not suggest that any one analytical approach is "better" because each carries its own assumptions and limitations. Rather, the different approaches answer different questions, and the choice between which to be tightly linked to a framework for how superintendents shape student achievement. The cumulative

stability approach that I presented is limited by selection problems that are different from those of within-district designs. For example, districts accumulating more superintendent transitions may differ from stable districts in unobserved ways, such as their governance, fiscal stability, or local context. However, I do account for where districts started and where they were heading, so the remaining association between superintendent stability and achievement reflects more than a continuation of those patterns. In this way, the cumulative superintendent stability measure is matched to how I theorized that superintendent influence may operate—as an accumulated district condition rather than a one-time event. Nonetheless, similar to within-district approaches, my findings should be interpreted as associations and not causal effects.

This study joins a small body of work that has focused on instability in broader educator workforces. In particular, Holme and colleagues (2018) argued that annual turnover rates of teachers conceal how staffing losses accumulate over time and advocated for longitudinal measures of teacher stability. Jabbar and Holme (2025) then qualitatively documented how teacher instability in one district eroded the organizational social capital (e.g., networks, trust, shared knowledge) through which schools improve. My findings extend this idea to the district level, and add a distinction around the nature of (in)stability. The character of a district's superintendent transition(s), I find, shapes its association with student achievement. As such, measures of leadership stability—and perhaps other educator stability—should consider capturing not just how often leaders change, but the circumstances surrounding those changes.

Theoretical Connections

The findings build on the OL and managerial succession literature by applying them to K-12 public education. From an OL perspective, a district's capacity to improve depends on knowledge, relationships, and institutional memory that accumulate over time. A superintendent

transition may disrupt those stores of knowledge. The dose-response pattern that I find, in which each additional superintendent transition is associated with lower achievement, suggests that the cost of disruption compounds as superintendent churn accumulates. The results also speak to a tension in the managerial succession literature: while some scholars posit that a new leader provides an opportunity for improvement, others see managerial succession as disruptive (Gamson & Scotch, 1964; Grusky, 1963). My findings are more aligned with the disruption view: on average, superintendent churn appears to cost districts. However, I did not observe the quality or effectiveness of superintendents, so I cannot distinguish between the disruption of transitions and the possibility that the incoming superintendents were, on average, no more effective than those they replaced. Additionally, because my estimates are averages, they may mask cases in which a strong successor improved student outcomes.

The findings related to contentious superintendent instability connect to managerial succession theory by emphasizing the importance of examining not just whether a transition occurs but how. Contentious superintendent departures—which may be more likely to rupture the relational capital that superintendent continuity holds—are associated with larger penalties on student achievement, suggesting that the mechanism linking superintendent instability to achievement is not merely the loss of a superintendent, but the manner of their leaving.

Implications for Practice

For school boards, these findings reframe the stakes of a decision to retain or remove a superintendent. Media accounts have increasingly described boards moving on from a superintendent for personal, political, or ideological reasons (Peterson et al., 2026). The results of this study suggest that these decisions are not without cost, and that contentious superintendent transitions may be the costliest of all to students. Each additional contentious

superintendent departure that a district experienced was associated with roughly twice the achievement penalty of an amicable departure. As such, boards should consider not only whether to move on from a superintendent, but why. They should also work together to distinguish between genuine concerns about a superintendent's effectiveness and those related to political, ideological, or personal differences or discomfort that are unrelated to their job duties as the district leader. If there is concern with a superintendent's performance, boards should not jump directly to removal, but should first ask whether the current superintendent could improve with more support, mentorship, professional development, or clearer expectations.

Because contentious departures were associated with a greater penalty on student achievement, boards should ensure they proactively manage the relationship with the superintendent to keep manageable tensions from escalating. To that end, boards should ensure they have a strong superintendent evaluation process as well as clearly articulated, co-developed superintendent-school board communication and relationship development norms. If a transition is warranted, boards may consider whether the expected improvement under a new superintendent outweighs the disruption of a transition. Though stability is not an end in itself and boards should not retain ineffective or harmful superintendents, boards must recognize that the consequences of removing a superintendent may reverberate through classrooms long after both board members and the superintendent have moved on. State and national school board associations and training organizations can support boards in this work, sharing research on the impact of board decisions and offering training on superintendent evaluation, board-superintendent relations, and governance practices that support healthy transitions.

For superintendents, these findings emphasize that sustained commitment to a community matters for student learning. Leadership continuity is, in part, the accumulation of

relationships, trust, and local knowledge. Recent qualitative evidence on rural superintendents found that those who remained in their position for extended periods described becoming deeply embedded in their communities through relationships they built over time (DeMatthews et al., 2025). When a superintendent departs, these relational assets can be lost. Superintendent transitions are, of course, often driven by legitimate personal considerations such as family, compensation, and well-being. However, if the impulse to depart reflects a perceived lack of fit or acceptance by the community, investing in relationships and trust-building may serve students better than quickly moving on. State and national superintendent associations can lend support by providing superintendents with peer networks and mentoring—especially for leaders in high-churn districts—that help leaders navigate issues of fit and the political demands of the role.

When a departure is inevitable, superintendents may still be able to shape its impact. Because contentious superintendent departures have negative consequences for student achievement, departing superintendents should consider giving adequate notice and supporting a smooth handoff to the next superintendent, provided that doing so does not compromise their own safety or well-being. Additionally, given the costs of instability compound, superintendents may reduce departure disruptions by developing strong cabinet teams, distributing decision-making, and documenting institutional knowledge that can be passed along to other leaders.

Implications for Policy

At the policy level, the findings point to the value of structures that support superintendent stability and longevity. State policies that dictate superintendent contracts are one such lever. In many states, superintendent contracts run only two or three years. Thus, a new superintendent often begins negotiating the terms of their next contract almost as soon as their

current one starts. Allowing for longer contracts, or contract provisions that reward continuity, could give superintendents more time to build trust and see initiatives through.

Beyond contracts, state policy makers might target superintendent retention supports to the districts that need them most. Because the achievement costs of superintendent instability fall disproportionately on high-poverty districts, and because prior work finds that the same districts experience elevated superintendent turnover (DeMatthews et al., 2024; Timmer & Woo, 2023; White, 2023), state education agencies and state associations of superintendents could identify high-churn, high-need districts and support their superintendents directly through targeted superintendent networks, cross-district resource sharing, and mentoring for new superintendents.

Implications for Leadership Preparation

Finally, these results have several implications for superintendent preparation and training. National surveys of superintendents have identified job-related stress and board relations as leading reasons superintendents seek out other job opportunities or, ultimately, leave (Schwartz & Diliberti, 2023; White et al., 2023). If superintendent stability matters for student achievement, then superintendent preparation and training should treat board relations, conflict management, and community relationship building as skills central to this job—alongside the instructional and managerial competencies that many superintendent preparation programs already emphasize. Superintendents themselves have made this case. In a study that included interviews with superintendents about what preparation programs should change, those leading through the post-pandemic period reported feeling unprepared to navigate the political realities of the job and called for explicit training in navigating relationships with school board members, communities, the media, and legislators (Kurochkina et al., 2026). Yet, as Kurochkina and colleagues (2026) point out, the standards that shape leadership preparation programs—the

National Educational Leadership Preparation (NELP) standards—give little attention to the political dimensions of leadership. My findings support Kurochkina and colleagues’ (2026) call for NELP standard revisions that reflect the contemporary demands of the role: if the costliest departures are contentious ones, the skills that keep a transition from turning contentious should be taught in superintendent preparation programs.

Adding a NELP standard around political dimensions of leadership, however, is not enough on its own. Superintendent preparation programs should also attend to how the skills and dispositions relevant to board relations, conflict management, and community relationship and trust-building are taught so that leaders are prepared for these demands on their first day in the position. For example, cohort-based and network models of preparation, which can build durable relationships among leaders across districts, may be especially valuable in settings where instability is most common or consequential. In-depth case studies and simulations, which let leaders work through political, ethical, and community dilemmas in authentic yet low-stakes settings, may be particularly useful, as these types of experiential learning have been found to be associated with deep understanding of how to apply knowledge and skills to authentic problems of practice (Gilbert et al., 2018; Levin & Muchnik-Rozanov, 2023; Staub & Bravender, 2014).

Directions for Future Research

These findings raise several questions that could be explored in future research. First, because this study is associational, it cannot speak to why or how superintendent (in)stability is associated with student achievement. Qualitative research that follows districts through superintendent transitions—as Jabbar and Holme (2025) did in their case study of teacher instability—could reveal if and how superintendent churn disrupts knowledge accumulation, relationships, and shared understandings; and why conflictual departures may be particularly

damaging to the organization. This work complements Snodgrass Rangel's (2018) review of the principalship literature, which finds that principal leadership churn disrupts the multi-year process through which change can take hold, as well as evidence that principal turnover elevates teacher turnover (DeMatthews et al., 2022). Future research, thus, should examine the potential cascading effects of leader and teacher (in)stability such as the relationship between superintendent stability and district administrator or building leader stability.

Future work should also examine why the association between superintendent stability and student achievement is more pronounced in high-poverty districts, and what, if any, conditions may buffer that heightened vulnerability. For example, Bartanen and colleagues (2019) found that replacing a departing principal with an experienced principal offset much of the disruption of principal turnover. Future research may likewise consider whether incoming superintendents' experience and compensation, or the board and community support they inherit, may help mitigate the disparities documented here.

This type of work depends on data infrastructure that is still developing. Sustained investment in achievement data that is comparable across states as well as national longitudinal records of superintendents is critical. The national data on superintendents itself could also be deepened. Superintendents, for example, could be directly involved in expanded data collection efforts to surface information about their experiences and contexts that administrative data miss but that may be critical to the superintendent-student achievement association. Superintendent involvement in data collection could also ensure that measures of the nature of superintendent turnover reflect the complexity of superintendents' own experiences. These data could allow researchers to move beyond documenting superintendent stability toward identifying which

superintendents, in which contexts, are best positioned to provide the stable leadership this study links to stronger achievement and how key stakeholders can help more superintendents do so.

Finally, these findings are also bound by what the SEDA data can measure. SEDA captures district average achievement in math and reading in grades 3-8. As such, the findings can speak to one dimension of what superintendents may shape. Future research could examine other dimensions, such as student growth in the early grades or high school, attendance, graduation, school climate, access to high-quality learning materials and appropriate learning supports, the retention and growth of high-quality teachers and leaders, and family engagement. Moreover, my estimates describe district averages rather than individuals or the within-district distributions. Future research could examine whether superintendent stability matters more for some groups of students than others, such as students with disabilities whose learning hinges on specialized staff continuity, sustained institutional knowledge of individual student needs, and coherent and well-resourced programming. If superintendent instability disrupts these conditions, the costs may fall disproportionately on students who rely on stable, coordinated supports.

Conclusion

Historically, empirical research has suggested that superintendents mattered little for student achievement, even as the educators and leaders they hire and support have meaningful influences on student learning. I suggest that part of the reason why effects found in prior superintendent-student achievement studies are small or null may lie in how superintendent influence is measured. Using within-district designs measuring superintendent turnover as a discrete event, I find similarly small and non-robust effects at a national scale as Redding and Carlo (2026) found in Florida and Texas. The larger, graded associations between superintendent stability and student achievement emerge when instability is measured cumulatively. Measured

this way, in a national sample spanning the pandemic and its recovery, districts with more superintendent instability had lower post-pandemic achievement. This association grew with each additional superintendent transition, was more pronounced when districts had more contentious departures, and was concentrated in the highest-poverty districts.

Practically, these findings should be interpreted carefully. On average, the association between superintendent stability and student achievement is modest. Improving superintendent stability may be comparatively inexpensive to pursue, through contract and governance design, improved training and support, and succession planning. However, investing in superintendent stability should not override other investments—such as effective teachers and leaders and high-quality tutoring and learning supports—that have been shown to significantly impact student learning (e.g., Chetty et al., 2014; Hanushek et al., 1998; Kane & Staiger, 2008; Kraft et al., 2018; Nickow et al., 2020; Rivkin et al., 2005). In the highest-poverty districts, the disparity is considerable, with average student achievement in those with chronic superintendent instability falling roughly two months of learning behind their peers in districts with persistent superintendent stability. Whatever its magnitude, the value of stability may lie less in stability itself than in what superintendent continuity enables, such as improved trust and relationships, deep knowledge of the community and students served, and strong district-wide instructional coherence. Supporting stable, effective superintendents, thus, should be understood not as an alternative to direct investments strongly linked to improved student learning, but as a condition that makes those investments more likely to take hold and succeed.

Notes

¹ Public charter school districts and specialized districts (e.g., vocational/technical schools, regional education service agencies, state-run schools for the deaf or blind) are not included. Additionally, please note that the SEDA panel is unbalanced in that some states lack particular outcome years, including Illinois, Kansas, North Dakota, and Oklahoma in 2025. Each district contributes only the years it is observed. SEDA also pools tested grades 3-8, so where a state reports fewer grades in a year, the district estimate reflects a “valid grade-pooled mean” based on fewer grades (Fahle et al., 2023). Results are robust to restricting to states with complete 2025 coverage.

² New York and Oregon are excluded because they do not have SEDA district-level estimates for either math or RLA after 2019. Virginia has no data for math but does have data for RLA in all years. Arkansas data is available for math, but not RLA. Vermont data is available for RLA only, and only from 2022 to 2025; Vermont has no data available for math. For more information about the availability of SEDA estimates by state-subject-year-grade, see SEDA Technical Documentation Version 2025.1, Table 4a.

³ See White & Jerman (2025) for discussion of superintendent demographics available via the NLSD. Race, gender identity, and age—among other demographics—are not available nationally because these data are not publicly available or reported (via self-reports) in most states. For example, less than five percent of state education agencies publicly report data on superintendent race.

⁴ This robustness check drops the states whose 2025 SEDA data was missing or partial (IL, KS, NE, NY, ND, MT, OK, OR). Because SEDA's 2025 release was not complete for every state at the time of analysis, the set of states observed in 2025 differs from earlier years; this check confirms the null isn't an artifact of that unbalanced composition.

References

- Allen, M. P., Panian, S. K., & Lotz, R. E. (1979). Managerial succession and organizational performance: A recalcitrant problem revisited. *Administrative Science Quarterly*, 24(2), 167-180. <https://doi.org/10.2307/2392492>
- Alsbury, T. (2003). Superintendent and school board member turnover: Political versus apolitical turnover as a critical variable in the application of the dissatisfaction theory. *Educational Administration Quarterly*, 39(5), 667-698. <https://doi.org/10.1177/0013161X03257141>
- Atteberry, A., Loeb, S., & Wyckoff, J. (2017). Teacher churning: Reassignment rates and implications for student achievement. *Educational Evaluation and Policy Analysis*, 39(1), 3-30. <https://doi.org/10.3102/0162373716659929>
- Bartanen, B., Grissom, J. A., & Rogers, L. K. (2019). The impacts of principal turnover. *Educational Evaluation and Policy Analysis*, 41(3), 350–374. <https://doi.org/10.3102/0162373719855044>
- Bartanen, B., Husain, A. N., & Liebowitz, D. D. (2024). Rethinking principal effects on student outcomes. *Journal of Public Economics*, 234(105115). <https://doi.org/10.1016/j.jpubeco.2024.105115>.
- Basten, D. & Haamann, T. (2018). Approaches for organizational learning: A literature review. *Sage Open*, 8(3). <https://doi.org/10.1177/2158244018794224>
- Biancarosa, G., Bryk, A.S., & Dexter, E.R. (2010). Assessing the value-added effects of Literacy Collaborative professional development on student learning. *The Elementary School Journal*, 111(1), 7-34. <https://doi.org/10.1086/653468>
- Björk, L., Keedy, J., & Gurley, D. (2003). Career patterns of American superintendents. *Journal of School Leadership*, 13(4), 406-427. <https://doi.org/10.1177/105268460301300404>

- Borman, G. D., Hewes, G. M., Overman, L. T., & Brown, S. (2003). Comprehensive school reform and achievement: A meta-analysis. *Review of Educational Research*, 73(2), 125–230. <https://doi.org/10.3102/00346543073002125>
- Callaway, B. & Sant’Anna, P. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrica*, 225(2), 200-230. <https://doi.org/10.1016/j.jeconom.2020.12.001>
- Campbell, P. F., & Malkus, N. N. (2011). The impact of elementary math coaches on student achievement. *The Elementary School Journal*, 111(3), 430-454. <https://doi.org/10.1086/657654>
- Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the impact of teachers II: Teacher value-added and student outcomes in adulthood. *American Economic Review*, 104(4), 2633-2679. <https://doi.org/10.1257/aer.104.9.2633>
- Chingos, M. M., Lindquist, K. M., & Whitehurst, G. J. (2014). *School superintendents: Vital or irrelevant?* Brown Center on Education Policy at Brookings. <https://www.brookings.edu/articles/school-superintendents-vital-or-irrelevant/>
- Cillo, P. (2005). Fostering market knowledge use in innovation: The role of internal brokers. *European Management Journal*, 23, 404-412. <https://doi.org/10.1016/j.emj.2005.06.008>
- de Chaisemartin, C., & D’Haultfœuille, X. (2023). *Difference-in-differences estimators of intertemporal treatment effects*. (Working Paper 29873). NBER Working Paper Series. <https://doi.org/10.3386/w29873>
- DeMatthews, D. E., Aylward, A., Hart, T. D., & Reyes, P. (2025). Superintendent turnover and retention: A mixed-methods study of leavers and stayers in rural districts. *AERA Open*, 11(1), 1-20. <https://doi.org/10.1177/23328584251357253>

- DeMatthews, D. E., Aylward, A., Knight, D., & Reyes, P. (2024). Understanding the superintendent pipeline: A call for a national longitudinal dataset. *Educational Researcher*, 53(3), 184-187. <https://doi.org/10.3102/00013189x241232621>
- DeMatthews, D. E., Knight, D. S., & Shin, J. (2022). The principal-teacher churn: Understanding the relationship between leadership turnover and teacher attrition. *Educational Administration Quarterly*, 58(1). <https://doi.org/10.1177/0013161X211051974>
- DeMatthews, D. E., Shin, J., & Reyes, P. (2026). Principals' special education experience: Implications for special education teacher turnover. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 49(1), 50-72. <https://doi.org/10.1177/08884064251403416>
- Dewey, D. C., Fahle, E., Kane, T. J., Reardon, S. F., & Staiger, D. O. (2026). *From learning recession to learning recovery: Understanding the sources of U.S. K–12 improvement*. Education Scorecard. <https://educationscorecard.org/>
- Domina, T., Pharris-Ciurej, N., Penner, A. M., Penner, E. K., Brummet, Q., Porter, S. R., & Sanabria, T. (2018). Is free and reduced-price lunch a valid measure of educational disadvantage? *Educational Researcher*, 47(9), 539–555. <https://doi.org/10.3102/0013189X18797609>
- Donaldson, M. L., Mavrogordato, M., Youngs, P., Dougherty, S. Al Ghanem, R. (2021). “Doing the ‘real’ work”: How superintendents’ sensemaking shapes principal evaluation policies and practices in school districts. *AERA Open*, 7. <https://doi.org/10.1177/233285842098617>

- Eitzen, D. S., & Yetman, N. R. (1972). Managerial change, longevity, and organizational effectiveness. *Administrative Science Quarterly*, 17(1), 110-116.
<https://doi.org/10.2307/2392099>
- Fahle, E. M., Sibilia, S., Kalogrides, D., Shear, B R., Reardon, S. F., & Ho, A. D. (2023). *Stanford Education Data Archive technical documentation*.
<https://purl.stanford.edu/db586ns4979>
- Fazlul, I., Koedel, C., & Parsons, E. (2023). Free and reduced-price meal enrollment does not measure student poverty: Evidence and policy significance. *Economics of Education Review*, 94, 102376. <https://doi.org/10.1016/j.econedurev.2023.102374>
- Fusarelli, L. D., Cooper, B. S., & Carella, V. A. (2003). Who will serve? An analysis of superintendent occupational perceptions, career satisfaction, and mobility. *Journal of School Leadership*, 13(3), 304-327. <https://doi.org/10.1177/105268460301300304>
- Gamson, W. A., & Scotch, N. A. (1964). Scapegoating in baseball. *American Journal of Sociology*, 70(1), 69-82. <https://doi.org/10.1086/223739>
- Gilbert, K. A., Voelkel, R. H., & Johnson, C. W. (2018). Increasing self-efficacy through immersive simulations: Leading professional learning communities. *Journal of Leadership Education*, 17(3), 154-174. <https://doi.org/10.12806/V17/I3/R9>
- Glass, T. E., & Björk, L. (2003). The superintendent shortage: Findings from research on school board presidents. *Journal of School Leadership*, 13(3), 264-287.
<https://doi.org/10.1177/105268460301300302>
- Gouldner, A. W. (1954). *Patterns of industrial bureaucracy*. The Free Press (MacMillan Publishing).

- Grissom, J. A., & Andersen, S. (2012). Why superintendents turn over. *American Educational Research Journal*, 49(5), 1146-1180. <https://doi.org/10.3102/0002831212462622>
- Grissom, J. A., Egalite, A. J., & Lindsay, C. A. (2021). *How principals affect students and schools*. The Wallace Foundation. <https://doi.org/10.59656/EL-SB1065.001>
- Grissom, J. A., & Mitani, H. (2016). Salary, performance, and superintendent turnover. *Educational Administration Quarterly*, 52(3), 351-391. <https://doi.org/10.1177/0013161X15627677>
- Grusky, O. (1963). Managerial succession and organizational effectiveness. *American Journal of Sociology*, 69(1), 21-31. <https://doi.org/10.1086/223507>
- Guest, R. H. (1962). Managerial succession in complex organizations. *American Journal of Sociology*, 68(1), 47-54. <https://doi.org/10.1086/223265>
- Harvard Graduate School of Education. (2026). New education scorecard finds “u-shaped recovery.” <https://www.gse.harvard.edu/ideas/news/26/05/new-education-scorecard-finds-u-shaped-recovery>
- Harwell, M., & LeBeau, B. (2010). Student eligibility for a free lunch as an SES measure in education research. *Educational Researcher*, 39(2), 120–131. <https://doi.org/10.3102/0013189X10362578>
- Holme, J. J., Jabbar, H., Germain, E., & Dinning, J. (2018). Rethinking teacher turnover: Longitudinal measures of instability in schools. *Educational Researcher*, 47(1), 62-75. <https://doi.org/10.3102/0013189X17735813>
- Honig, M. I. (2012). District central office leadership as teaching: How central office administrators support principals’ development as instructional leaders. *Educational Administrative Quarterly*, 48(4), 733-774. <https://doi.org/10.1177/0013161X12443258>

- Jabbar, H., & Holme, J. J. (2025). Teacher turnover, social capital, and improvement: How instability disrupts schools. *Educational Evaluation and Policy Analysis*, 48(1), 268-292.
<https://doi.org/10.3102/01623737241311304>
- Jackson, C. K., Johnson, R. C., & Persico, C. (2016). The effects of school spending on educational and economic outcomes: Evidence from school finance reforms. *The Quarterly Journal of Economics*, 131(1), 157–218. <https://doi.org/10.1093/qje/qjv036>
- Jones, N. B., Herschel, R. T., & Moesel, D. D. (2003). Using “knowledge champions” to facilitate knowledge management. *Journal of Knowledge Management*, 7(1), 49-63.
<https://doi.org/10.1108/13673270310463617>
- Kamrath, B. (2022). Revisiting the revolving door of rural superintendent turnover. *The Rural Educator*, 43(2), 16-33. <https://doi.org/10.55533/2643-9662.1325>
- Kamrath, B., & Brunner, C.C. (2014). Blind spots: Small rural communities and high turnover in the superintendency. *Journal of School Leadership*, 24, 424-451.
- Kane, T.J., & Staiger, D.O. (2008). Estimating teacher impacts on student achievement: An experimental evaluation. *NBER Working Paper Series* (No. 14607).
<http://www.nber.org/papers/w14607>
- Karim, N. S. & Hussein, R. (2008). Managers perception of information management and the role of information and knowledge managers: The Malaysian perspective. *International Journal of Information Management*, 28, 114-127.
<https://doi.org/10.1016/j.ijinfomgt.2007.08.003>
- Kowalski, T. J. (2003). Superintendent shortage: The wrong problem and wrong solutions. *Journal of School Leadership*, 13(3), 288-303.
<https://doi.org/10.1177/105268460301300303>

- Kraft, M., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, 88(4), 547-588. <https://doi.org/10.3102/0034654318759268>
- Kurochkina, T., Wong, L., & Waddell, S. F. (2026). Superintendency preparation programs: Superintendents weigh in on needed changes. *Journal of Research on Leadership Education*, 21(3), 311-333. <https://doi.org/10.1177/19427751251413191>
- Leithwood, K. (2010). Characteristics of school districts that are exceptionally effective in closing the achievement gap. *Leadership and Policy in Schools*, 9(3), 245-291. <https://doi.org/10.1080/15700761003731500>
- Levin, O., & Muchnik-Rozanov, Y. (2023). Professional development during simulation based learning: Experiences and insights from preservice teachers. *Journal of Education for Teaching*, 49(1), 120-136. <https://doi.org/10.1080/02507476.2022.2048176>
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, 14, 319-338. <https://doi.org/10.1146/annurev.so.14.080188.001535>
- Miller, A. (2013). Principal turnover and student achievement. *Economics of Education Review*, 36, 60–72. <https://doi.org/10.1016/j.econedurev.2013.05.004>
- Moore Johnson, S. (1996). *Leading to change: The challenge of the new superintendency*. Wiley.
- Natkin, G.L., Cooper, B.S., Alborano, J.A., Padilla, A., & Ghosh, S.K. (2003). Predicting and modeling superintendent turnover. *Journal of School Leadership*, 13, 328-346.
- Newmann, F. M., Smith, B., Allensworth, E., & Bryk, A. S. (2001). Instructional program coherence: What it is and why it should guide school improvement policy. *Educational Evaluation and Policy Analysis*, 23(4), 297–321. <https://doi.org/10.3102/01623737023004297>

- Nickow, A., Oreopoulos, P., & Quan, V. (2020). *The impressive effects of tutoring on PreK-12 learning: A systematic review and meta-analysis of the experimental evidence* (NBER Working Paper 27476). National Bureau of Economic Research.
<https://doi.org/10.3386/w27476>
- Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, 69, 96-104.
- Nonaka, I. & Konno, N. (1998). The concept of “Ba”: Building a foundation for knowledge creation. *California Management Review*, 40(3), 40-54. <https://doi.org/10.2307/41165942>
- Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis*, 26(3), 237-257.
<https://www.jstor.org/stable/3699577>
- Pantry, S., & Griffiths, P. (2003). Librarians or knowledge managers? What’s in a name, or is there a real difference? *Business Information Review*, 20(2), 102-109.
<https://doi.org/10.1177/0266382103202011>
- Pawlowski, S. D., & Robey, D. (2004). Bridging user organizations: Knowledge brokering and the work of information technology professionals. *MIS Quarterly*, 28(4), 645-672.
<https://doi.org/10.2307/25148658>
- Peterson, E., Simko, T., Joyce, M., McCrain, J., & White, R. (2026). *The personnel costs of nationalization: Culture war conflicts increase school policymaker turnover*. OSF Pre-Print. https://doi.org/10.31235/osf.io/sn2p4_v1
- Rambachan, A., & Roth, J. (2023). A more credible approach to parallel trends. *Review of Economic Studies*, 90, 2555-2591. <https://doi.org/10.1093/restud/rdad018>
- Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. In G. J., Duncan & R. J. Murnane (Eds),

Whither opportunity: Rising inequality, schools, and children's life changes (pp. 91- 115).

Russell Sage Foundation & Spencer Foundation.

Reardon, S. F., Ho, A. D., Shear, B. R., Fahle, E. M., Kalogrides, D., Saliba, J., et al. (2024).

Stanford Education Data Archive: Technical Documentation (Version 6.0). Stanford

University. https://stacks.stanford.edu/file/xh833nn4025/SEDA_documentation_6.0.pdf

Redding, C., & Carlo, S. M. (2026). Superintendent turnover and student achievement: A two-state analysis. *Educational Evaluation and Policy Analysis*, 48(1), 392-399.

<https://doi.org/10.3102/01623737241310837>

Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic

achievement. *Econometrica*, 73(2), 417-458. <https://www.jstor.org/stable/3598793>

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American Economic Review*, 94(2), 247-252.

<https://doi.org/10.1257/0002828041302244>

Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement.

American Educational Research Journal, 50(1), 4–36.

<https://doi.org/10.3102/0002831212463813>

Rothstein, J. (2010). Teacher quality in educational production: Tracking, decay, and student

achievement. *The Quarterly Journal of Economics*, 125(1), 175-214.

<https://doi.org/10.1162/qjec.2010.125.1.175>

Rowan, B., Correnti, R., & Miller, R. J. (2002). What large-scale, survey research tells us about teacher effects on student achievement: Insights from the Prospects Study of Elementary

Schools. *Teachers College Record*, 104(8), 1525-1567. [https://doi.org/10.1111/1467-](https://doi.org/10.1111/1467-9620.00212)

[9620.00212](https://doi.org/10.1111/1467-9620.00212)

- Schwartz, H. L., & Diliberti, M. K. (2023). *Politics is the top reason superintendents are stressed: Select findings from the Spring 2023 American School District Panel Survey*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA956-17.html
- Schwartz, N., Kang, H., Loeb, S., Grissom, J., Bartanen, B., Cheatham, J., Chi, O., Donaldson, M., Lemos, R.F., Mellon, G., Moffitt, S., Nurshatayeva, A., Owens, J., Pinker, E., White, R., & Zimmerman, S. (2023). *Studying the superintendency: A call for research*. Annenberg Institute at Brown.
- Sebastian, J., & Allensworth, E. (2012). The influence of principal leadership on classroom instruction and student learning: A study of mediated pathways to learning. *Educational Administration Quarterly*, 48(4), 626-663. <https://doi.org/10.1177/0013161X11436273>
- Snodgrass Rangel, V. (2018). A review of the literature on principal turnover. *Review of Educational Research*, 88(1), 87-124. <https://doi.org/10.3102/0034654317743197>
- Staub, N. A., & Bravender, M. (2014). Principal candidates create decision-making simulations to prepare for the JOB. *International Journal of Educational Leadership Preparation*, 9(1).
- Teodorescu, D. (2006). Institutional researchers as knowledge managers in universities: Envisioning new roles for the IR profession. *Tertiary Education and Management*, 12, 75-88. <https://doi.org/10.1007/s11233-005-4069-0>
- Timmer J. D., & Woo, D. S. (2023). Precarious positions: Glass ceilings, glass escalators, and glass cliffs in the superintendency. *Frontiers in Education*, 8. <https://doi.org/10.3389/feduc.2023.1199756>
- Torres, A.C., Frost Waldron, S., & Burns, J. (2024). Compliance, chaos, or coherence? How superintendents, districts, and school craft coherence from school turnaround policy.

Educational Evaluation and Policy Analysis, 46(1), 133-159.

<https://doi.org/10.3102/01623737231161363>

Turner, E. , & Spain, A.K. (2016). The multiple meanings of (in)equity: Remaking school district tracking policy in an era of budget cuts and accountability. *Urban Education*, 55(5), 783-812. <https://doi.org/10.1177/0042085916674060>

Walsh, J. P. & Ungson, G. R. (1991). Organizational memory. *The Academy of Management Review*, 16(1), 57-91. <https://doi.org/10.5465/amr.1991.4278992>

Waters, J. T., & Marzano, R. (2006). *School district leadership that works: The effect of superintendent leadership on student achievement*. McREL International.

White, R.S. (2021). What's in a first name? America's K-12 public school district superintendent gender gap. *Leadership and Policy in Schools*, 22(2), 385-401.

<https://doi.org/10.1080/15700763.2021.1965169>

White, R.S. (2023). Ceilings made of glass and leaving en masse?: Examining superintendent gender gaps and turnover over time across the United States. *Educational Researcher*, 52(5), 272-285. <https://doi.org/10.1177/08959048251329324>

White, R. S. (2026). *Superintendent labor market dashboard* [Interactive data dashboard]. The Superintendent Lab. <https://thesuperintendentlab.com/state-superintendent-labor-market-dashboards/>

White, R. S., DeMatthews, D. E., Shin, J., & Aylward, A. (2025). *Challenges and opportunities in measuring school district superintendent impact*. Brookings Institution.

<https://www.brookings.edu/articles/challenges-and-opportunities-in-measuring-school-district-superintendent-impact/>

White, R. S., Evans, M., & Malin, J. (2023). The unique (and not-so-unique) political battles of suburban superintendents. *Phi Delta Kappan*, 104(5), 6-10.

<https://doi.org/10.1177/00317217231156223>

White, R. S., & Jerman, J. (2025). Illustrating the complexity and power of a national longitudinal superintendent database through exploring national trends in superintendent mobility. *Journal of Educational Administration*, 63(4), 302-314.

<https://doi.org/10.1108/JEA-07/2024-0211>

SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Table 1

Descriptive Statistics for Analytic Sample

Variable	n	Mean (SD)
<i>Student achievement (GYS scale)</i>		
Math	37,631	5.21 (1.42)
Reading (RLA)	37,071	5.16 (1.39)
<i>Superintendent transitions & characteristics</i>		
Female superintendent	38,478	0.27 (0.45)
Interim superintendent	38,146	0.02 (0.15)
<i>District characteristics</i>		
Any superintendent transition	38,476	0.17 (0.37)
SAIPE child-poverty rate (%)	38,485	15.27 (8.66)
Black students (proportion)	38,500	0.08 (0.16)
Hispanic students (proportion)	38,500	0.18 (0.23)
Urban locale	38,501	0.06 (0.22)
Rural locale	38,501	0.53 (0.45)
Enrollment	38,406	4,282 (13,771)

Note. (1) Proportions are reported for binary indicators. (2) Ns vary slightly by variable due to item missingness. (3) “Any transition” is the share of district-years in which a superintendent change occurred.

SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Table 2

Superintendent Stability and Achievement Cohort Model: Post-Pandemic Level and Recovery

	Math	RLA
Panel A. Achievement level (2022–2025 mean, baseline-adjusted)		
One transition	–0.043** (0.013)	–0.039** (0.013)
Two or more transitions	–0.104*** (0.017)	–0.085*** (0.017)
R ²	0.836	0.845
Districts (N)	9,898	9,711
Panel B. Recovery rate (2022–2025 achievement slope)		
One transition	–0.012* (0.005)	–0.009† (0.005)
Two or more transitions	–0.012† (0.007)	–0.012† (0.007)
R ²	0.057	0.069
Districts (N)	9,823	9,640

*Note. Cells are coefficient (robust SE) relative to districts with complete stability, conditional on the 2019 subject-specific baseline, district and superintendent covariates, and state fixed effects. Full estimates for all covariates appear in Appendix A.1 Panel B uses each district's 2022–2025 achievement slope and is limited to districts observed in ≥ 2 post-pandemic years. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.*

SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Table 3

Cumulative Stability Decomposed by Nature of Transition Cohort Model

Nature of additional departure	Math	RLA
Amicable	−0.030*** (0.008)	−0.026*** (0.008)
Contentious	−0.062*** (0.016)	−0.051*** (0.015)
Undetermined (control)	−0.070*** (0.018)	−0.058** (0.019)
H3: amicable = contentious	F = 3.68, $p = .055$	F = 2.35, $p = .13$
Districts (N)	9,898	9,711

* $p < .05$, ** $p < .01$, *** $p \leq .001$.

SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Table 4

Cumulative Stability and Achievement by SAIPE Child-Poverty Quartile Cohort Model

Panel A. Math

	Q1 (lowest)	Q2	Q3	Q4 (highest)
One transition	−0.035 (0.022)	−0.013 (0.026)	−0.034 (0.029)	−0.113*** (0.029)
Two or more transitions	−0.055* (0.028)	−0.059 (0.033)	−0.066 (0.037)	−0.243*** (0.036)
Districts (N)	2,524	2,494	2,465	2,415

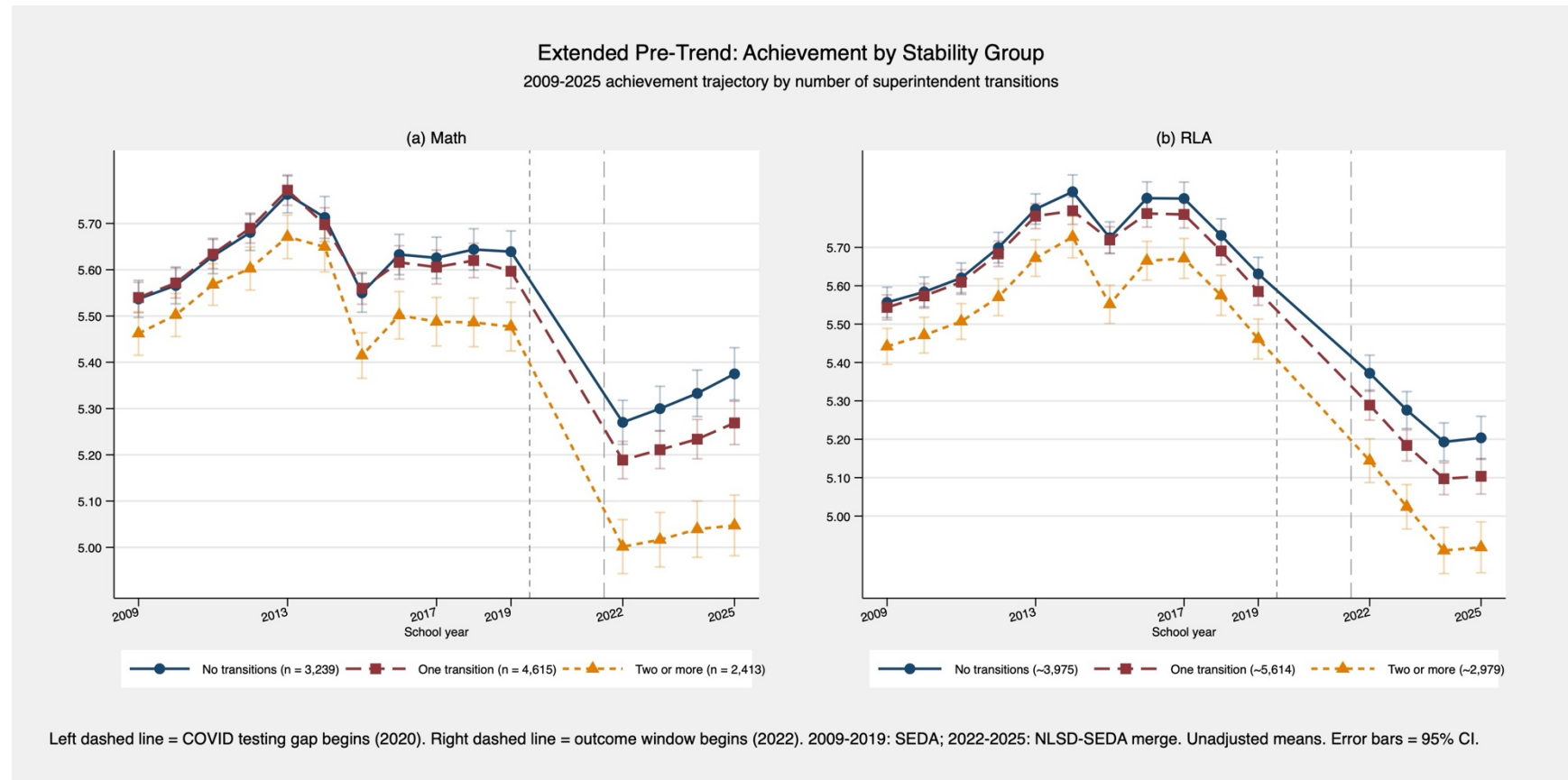
Panel B. RLA

	Q1 (lowest)	Q2	Q3	Q4 (highest)
One transition	−0.053* (0.022)	0.006 (0.025)	−0.021 (0.028)	−0.107*** (0.028)
Two or more transitions	−0.051 (0.028)	−0.048 (0.033)	−0.062 (0.035)	−0.178*** (0.036)
Districts (N)	2,538	2,475	2,397	2,301

*Note. Cells are coefficients (robust SE) relative to persistently stable districts in the same quartile. * $p < .05$, ** $p < .01$, *** $p < .001$.*

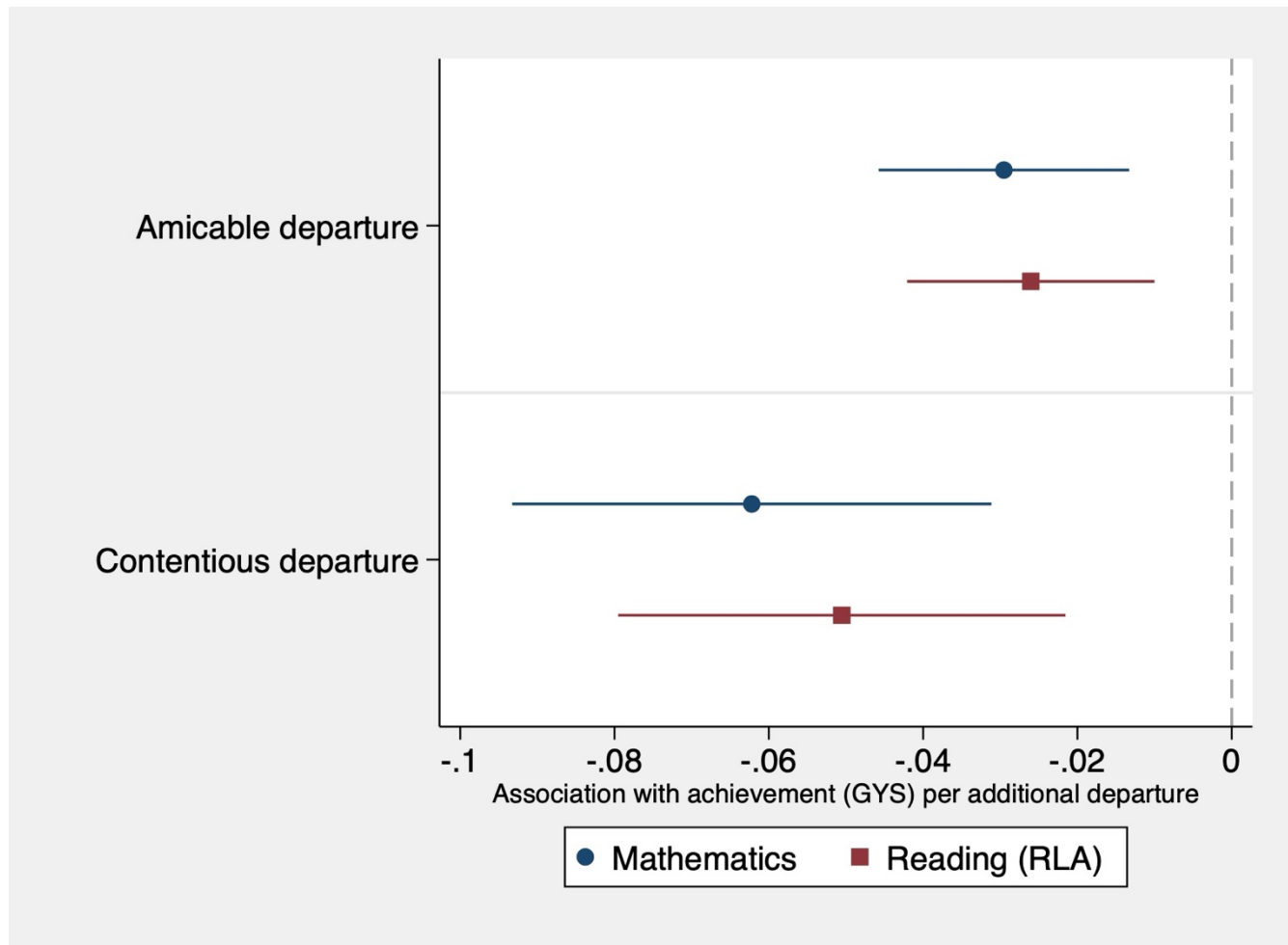
SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Figure 1



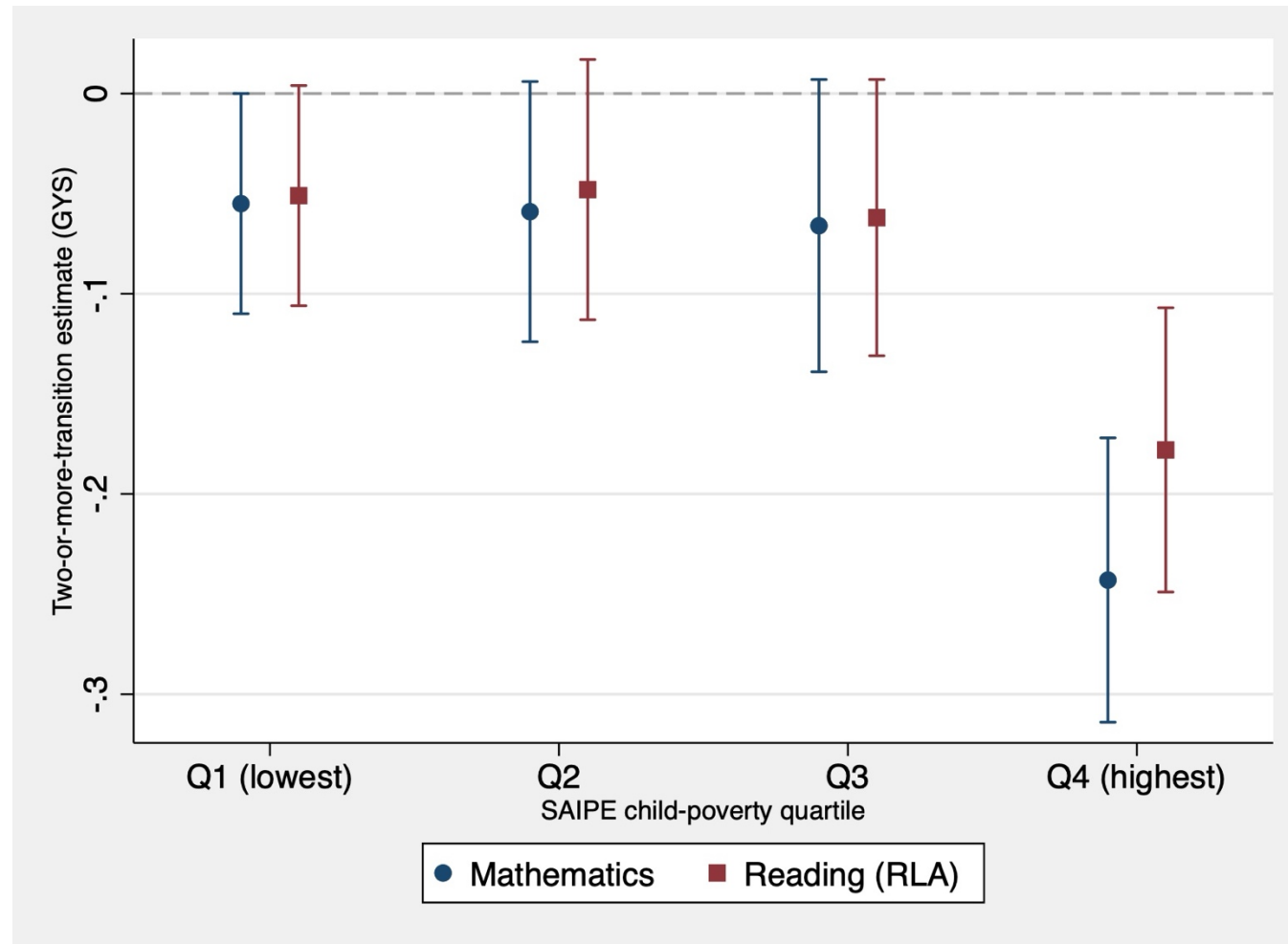
SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Figure 2



SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Figure 3



SUPERINTENDENT (IN)STABILITY AND STUDENT ACHIEVEMENT

Figure Captions

Figure 1. Extended Pre-Trend: Student Achievement by Superintendent Stability Group

Figure 2. Association Between the Nature of Superintendent Instability and Student Achievement

Figure 3. Association Between Chronic Superintendent Instability and Student Achievement, by District Poverty Quartile