

THE FAMILY CLOCK AND THE SCHOOL LEDGER

A national evidence review of staggered busing and four-day school weeks,
2006-2026

Jeff A Pierson

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Reader's note

This is a long-form, thesis-style evidence review, not a doctoral dissertation submitted to a university. It contains no original human-subject interviews, no institutional-review-board research, and no claim of a complete federal census. It does something that public debates often do not: it separates the institution's judgment from the family's judgment and both from measurable results.

The two policies examined here are different and are reviewed separately.

1. Staggered or tiered busing changes school bells so one driver and one bus can serve two, three, or sometimes four consecutive groups of students.
2. A four-day school week reduces the number of regular school days, usually by lengthening the remaining days. It can exist with or without tiered busing.

The report covers the twenty-year period from the 2006-07 school year through July 18, 2026. It profiles every nationally significant or sufficiently documented district example located in the review, provides state-level inventories where district-level enumeration is available, and explains why “every example in the nation” cannot honestly be claimed. No federal agency maintains a historical registry of tiered-bus conversions. Four-day-week counts are better, but states use different definitions and several do not track the schedule. The best national four-day database is research-built rather than an official public register.¹ Consequently, silence about a district is not evidence that the policy was absent.

Quotations come from named parents, students, school officials, journalists, or published studies. No quotation is invented. Where a public parent comment could not be found, the case table says so. District and vendor metrics are identified as such and are not converted into independent findings by repetition.

The reader is invited to score each policy. A district can be operationally successful and still fail families. Families can prefer a calendar even when measured learning growth is weaker. A first-year launch can fail while a later repair succeeds. A proposal can be wisely rejected without ever producing an outcome. Those are not contradictions. They are the actual shape of the evidence.

Abstract

Tiered busing and four-day school weeks are usually proposed as answers to scarcity: too few drivers, too few teachers, too much transportation expense, or too little money. Both policies rearrange time rather than create new resources. That distinction matters. Tiering can reduce the number of buses

¹ National Conference of State Legislatures, [“Four-Day School Week Overview”](#), updated 2025, accessed July 18, 2026. NCSL notes that state tracking is incomplete and reports roughly 850 districts in 24 states in 2023.

needed at one moment by making each bus work more sequential runs. It may also lengthen the span of the family day, move very young children into darkness, or create incompatible sibling and work schedules. A four-day calendar can improve morale and family time while reducing instructional exposure, moving childcare and meal obligations to households, and saving less money than the public expects.

The national record does not support one universal verdict. San Francisco Unified reports about \$3 million in annual transportation savings from standardized bell tiers. Bismarck reduced morning routes from 52 to 39 and projected roughly \$635,000 in annual savings, while some families reported 5:30 a.m. wakeups and hour-long rides. Pender County reported fewer instructional losses from late buses after a three-tier conversion, but parents continued to report unsafe waits and late afternoon arrivals. Howard County's tightly compressed 2023 launch produced cascading delays; additional buffer and buses improved performance. Boston canceled an algorithmically optimized plan after families showed that mathematically efficient bells could be socially impossible. Jefferson County, Kentucky, cut more than 100 routes and then saw one child arrive home at 9:58 p.m. on opening day. Its superintendent said, "What happened today is unacceptable."²

The four-day evidence is broader. By 2024-25, more than 2,100 public schools in 26 states reportedly used the schedule, about 90 percent of them rural.³ Families and students in a multi-state RAND study strongly preferred keeping it, but students accumulated academic growth more slowly than matched peers on five-day schedules.⁴ A 2025 systematic review of causal studies summarized the answer as: "It depends, but probably not."⁵ The strongest recurring moderator is time. When weekly instructional hours remain low, achievement effects are more negative; at roughly 32 hours or more, several estimates become statistically indistinguishable from zero. Average operating savings are generally around 0.4 to 2.5 percent, not the dramatic budget rescue implied by eliminating 20 percent of school days.⁶ Evidence that the calendar reliably solves teacher recruitment or retention is weak.

Family judgment is often more favorable than the outcome literature. RAND found 84 percent of surveyed parents would choose the four-day schedule again. Independence, Missouri, voters kept it in a

² WDRB, ["JCPS parents frustrated with new bus routes as some kids get home at almost 10"](#), August 10, 2023, accessed July 18, 2026.

³ NWEA, ["What the Research Tells Us About Four-Day School Weeks"](#), February 24, 2026, accessed July 18, 2026. The article synthesizes scale, academic effects, instructional time, attendance, staffing, cost, and preference research.

⁴ M. Rebecca Kilburn et al., RAND Corporation, [Does Four Equal Five? Implementation and Outcomes of the Four-Day School Week](#), 2021. The study combined district data, surveys, interviews, site visits, and matched achievement analysis in Idaho, New Mexico, and Oklahoma.

⁵ HEDCO Institute for Evidence-Based Educational Practice, University of Oregon, [Does a Four-Day School Week Benefit Students?](#), June 2025.

⁶ National Conference of State Legislatures, ["Four-Day School Week Overview"](#), updated 2025, accessed July 18, 2026. NCSL summarizes research estimating roughly 0.4 to 2.5 percent average savings and a maximum estimate of 5.43 percent.

2025 election. Yet Cartwright Elementary District in Arizona voted to return to five days despite strong family and staff preference, and Webster County, Kentucky, returned after early gains gave way to declining scores. The calendar's burden is not evenly distributed. Families with flexible employment, extended-family care, older children, or farm and shift-work schedules may gain useful time. Families paid by the hour, those with young children, and households relying on school meals or specialized services may receive an unpaid fifth-day assignment.

The report's principal conclusion is methodological rather than political: define success before adoption, publish the counterfactual, measure family costs as real costs, disaggregate who gains and who pays, and make continuation conditional on public results. The scorecards at the end do not produce a verdict here. They make the assumptions visible so the reader can.

Executive findings

What the evidence supports

1. Tiering is a fleet-utilization strategy, not automatically a mileage-reduction strategy. Reusing a bus can reduce peak buses and drivers while increasing the distance each remaining bus travels.
2. Four-day schooling is a calendar strategy, not automatically a transportation redesign. It mechanically removes one operating day, but it does not prove that routes are shorter, safer, cheaper per day, or better staffed.
3. District success and family success frequently diverge. A transportation office may meet its route-completion and fleet targets while a household absorbs earlier alarms, longer supervisory spans, lost work, or multiple school trips.
4. The launch matters. Howard County and Jefferson County show that optimization assumptions, vendor readiness, route validation, driver training, and recovery plans can matter as much as the policy concept.
5. Measured preferences are real but not dispositive. Strong family approval of a four-day week is evidence about lived value. It is not proof of academic equivalence. Conversely, a modest test-score penalty does not show that every family is worse off.
6. The size of the instructional week is one of the most important four-day variables. "Four days" hides schedules ranging from about 470 to 530 minutes per day in Texas alone.⁷
7. Average four-day savings are small because most costs are not proportional to days. Salaries, buildings, debt, technology, insurance, and many services continue.

⁷ University of Houston Education Research Center, [The Four-Day School Week in Texas: Prevalence and Policy Context](#), 2025, accessed July 18, 2026. Researchers manually reviewed calendars for all 1,021 traditional districts.

8. Teacher recruitment claims are much stronger in local testimony than in causal research. Some districts report larger applicant pools. Multi-state studies generally find no consistent retention advantage, or only small effects that do not resolve normal turnover.
9. Fifth-day care is a distributional test. Low use of formal care in rural surveys may mean families prefer informal care. It may also mean one parent changes work, a grandparent fills the gap, or care is unavailable. A low enrollment count is not a complete burden measure.
10. Proposed policies cannot be called successes. Jerome's 2026 tiered-bell proposal, Trumbull's rejected plan, Saratoga Springs' withdrawn plan, and Corpus Christi's upcoming changes belong in a design record, not an outcome leaderboard.

What the evidence does not support

The record does not support a national claim that tiering always shortens ride times, that four-day weeks reliably improve attendance, that either policy automatically solves staffing shortages, or that family survey approval substitutes for outcome evaluation. It also does not support treating the district's avoided expense as the whole social cost. When a parent loses a shift, purchases care, drives an extra trip, or places a child at an unsupervised stop, a cost has moved. It has not disappeared.

The reader's core test

For each case, ask four questions in order:

1. What problem was the district trying to solve?
2. Compared with what realistic alternative?
3. Who received the benefit and who absorbed the cost?
4. Did the result persist after the launch year?

I. What counts as success?

Success is plural

Public discussion often treats success as one switch: on or off. These policies require at least nine separate judgments.

Dimension	A credible success measure	A common misleading substitute
Reliability	On-time arrival distribution, missed pickups, completed runs	One districtwide average
Fleet and labor	Peak buses, filled driver shifts, overtime, spare ratio	Number of routes removed
Student time	Median and 90th-percentile rides, earliest pickup,	Shortest or average ride alone

Dimension	A credible success measure	A common misleading substitute
	latest arrival	
Safety	Supervised waits, darkness exposure, verified incidents	"No major incident" without exposure data
Learning	Growth, proficiency, course access, graduation, subgroup results	One year's district average
Family life	Childcare, work changes, sibling coordination, transport trips	General satisfaction question alone
Equity	Results by age, disability, income, language, geography, housing status	Whole-district average
Finance	Recurring net savings after new costs and household cost transfer	Gross budget reduction
Legitimacy and durability	Informed choice, transparent revision, persistence or public reauthorization	A one-time board vote

No single row cancels another. If buses become more reliable but first graders wait before dawn, the correct finding is not "success" or "failure." It is reliable service with a safety and family burden that must be weighed. If families strongly prefer a four-day calendar while matched students learn more slowly, both findings belong in the verdict.

Three voices, three evidence columns

Every case in this report distinguishes:

- District judgment: what administrators, boards, or official reports said and whether they continued, altered, or reversed the policy.
- Family or community judgment: attributable parent, student, employee, voter, or community evidence, including surveys and public comment.
- Measured result: audited, administrative, or research evidence, with vendor and district self-reports labeled.

These columns answer different questions. Continuation suggests institutional acceptance, but it can reflect sunk costs or lack of alternatives. Survey approval captures preference, but response bias and unequal participation matter. A statistically significant effect can be too small to dominate family values, and a large local change can still be caused by something else.

Time horizon and counterfactual

The first month tests implementation. The first year tests adaptation. Several years test whether staffing, savings, learning, and family arrangements last. Webster County's four-day calendar looked

stronger in its early years than near the end of a decade. Howard County's first weeks were far worse than its later performance. The evaluation date must therefore be printed beside the result.

The counterfactual is equally important. "The district saved \$600,000" is incomplete unless the reader knows whether the alternative was hiring more drivers, buying buses, eliminating routes, raising pay, revising attendance zones, or maintaining an already failing system. A fair score compares plausible choices, not a proposal with perfection.

Cost shifting is not cost saving

The public ledger records district expenses. The family clock records unpaid time. If a new bell eliminates 13 peak buses but adds 30 minutes to a parent's morning supervision, the district gains a measurable asset while the household absorbs a diffuse obligation. If a four-day calendar reduces food-service days while families buy another breakfast and lunch, the school budget falls and household spending rises. The social result is the sum of both.

This report therefore uses "district savings" unless a study actually measures broader social costs. It reserves "net public benefit" for evidence that includes the new expenses, risks, and time imposed outside the school system.

II. Staggered busing and tiered bells

The mechanism

Traditional single-wave routing tries to deliver most students within a narrow morning interval. A tiered system spreads school starts. One bus might serve an early elementary school, then a high school, then a middle school. The same fleet can cover more students because the peak demand is lowered.

The basic arithmetic is capacity through time:

$$\text{peak buses required} \approx \max_t \left(\frac{\text{students requiring seats at time } t}{\text{usable seats per bus}} \right)$$

Tiering changes the time distribution in the numerator. It does not necessarily reduce total student-miles, route-miles, or the length of the operational day. More sequential work can require deadhead travel between schools and can magnify one late run into two later tiers.

Five design choices largely determine the family result:

1. tier order, especially which ages travel earliest or latest;
2. the buffer between bells;

3. stop distance and whether neighborhood service is replaced by hubs;
4. maximum ride and wait thresholds; and
5. the relationship among siblings' bells, adult work hours, childcare, meals, athletics, and darkness.

National evidence limits

No federal source counts districts by number of bus tiers, and school bell schedules are often stored as current web pages rather than historical data. “Tiered” can mean two waves, four waves, or merely different bells within one grade span. Some districts have used multiple tiers for decades and never announced a conversion. Others changed bells for adolescent sleep and then adjusted transportation around the new order. A literal all-district census for 2006-2026 would require collecting and validating roughly 13,000 local calendars for each year.

The inventory below is therefore a documentary census of located, consequential conversions, proposals, reversals, and evaluations, not a claim that no other district tiered buses. Twenty-three cases are summarized, and more than a dozen are examined in depth. Cases without credible family evidence remain visible because missing voice is itself an evaluation weakness.

Documentary case census, 2006-2026

District and state	Year and status	Design or purpose	District view	Family or community view	Reader status
Charlotte-Mecklenburg, NC	2011, implemented and contested	Late fourth tier; about 120 buses removed	Saved about \$4 million to preserve roughly 80 teaching positions	Parents and staff opposed 4:15 p.m. dismissal; task force recommended ending it	Mixed
Seattle, WA	2016 onward, implemented	Later secondary start plus tier reordering	Continued and rebalanced in 2023	Sleep gains welcomed; childcare and sibling logistics remained concerns	Mixed-positive
Hillsborough County, FL	2018, implemented	Three principal bell groups to reduce chronic lateness	District cited more than 12,000 daily late students under old system	Large survey and later parent reports were mixed; some schools reported mostly positive feedback	Mixed
Boston, MA	2017, proposed and canceled	Algorithmically optimized bells paired later high school with earlier elementary starts	Model projected about \$5 million annual savings	Family backlash centered on work and care disruption; superintendent withdrew plan	Rejected proposal, responsive reversal
San Francisco Unified, CA	2021 onward, implemented	Standard 7:50, 8:40, and 9:30 tiers	Reports about \$3 million annual savings; continues model	Public survey data are incomplete; district anticipated dissatisfaction	District-positive, family evidence incomplete

District and state	Year and status	Design or purpose	District view	Family or community view	Reader status
Atlanta, GA	2021, proposed then revised	Early high-school tier to fit bus plan	Withdrew early high-school time after 6,240 responses	Nearly three quarters of respondents preferred later high school; student petition drew nearly 1,500 signatures	Process correction, not outcome
Baltimore City, MD	2022, implemented	Bells changed at 93 schools so buses could serve multiple schools	Proceeded with network redesign	Families argued many nonriders bore schedule disruption for a small rider group	Mixed, outcome evidence thin
Tippecanoe School Corp., IN	2022, implemented	Expanded from two to four tiers during driver shortage	Said reliability and staffing required the change	District acknowledged adjustments; attributable post-launch parent evidence not located	Unmeasured
Anne Arundel County, MD	2022, implemented	Later secondary starts, reordered transportation	Treated as health and access reform	District warned of childcare, meal, athletics, and activity changes	Mixed; family outcome evidence incomplete ⁸
Howard County, MD	2023, implemented then repaired	Compressed three-tier system plus new vendor and routes	Acknowledged inadequate launch; added buffer and buses	Families faced severe delays and demanded correction	Launch failure, later improvement
Jefferson County, KY	2023, catastrophic launch and redesign	Nine start times; routes cut from about 730 to 600	Superintendent called first day unacceptable; district canceled two days and reworked service	Families reported missing children, moved stops, lost work, and arrivals near 10 p.m.	Clear implementation failure
Denver, CO	2023, implemented	Healthy start times paired with transportation changes	Prioritized later secondary bells under staffing constraints	Parents called route cuts a crisis; engagement was uneven across school communities	Mixed, equity concern
Albuquerque, NM	2023, implemented	Later secondary starts and two elementary groups	Continued with revisions	Families cited work, care, and activity conflicts; sleep rationale retained support	Mixed
Roanoke City, VA	2024, implemented	Four tiers, including 7:15 elementary and 9:30 middle	Reported roughly 98 percent on-time service in 2024-25	Parents raised sleep, childcare, walking-distance, and darkness concerns	Operationally positive, family mixed
Pender County, NC	2025, implemented and amended	Three tiers in eastern attendance area	Reported double routes fell from 38 to 20 and tardy losses declined	Parents described late buses, sibling conflicts, 5:30 wakeups, and unsafe stops	Mixed

⁸ Conduit Street, Maryland Association of Counties, [“Anne Arundel Updates School Start Times for Next Year to Promote Healthier Learning”](#), February 7, 2022. The report relays the district’s warning about changes to meals, athletics, childcare, and co-curricular activities.

District and state	Year and status	Design or purpose	District view	Family or community view	Reader status
Bismarck, ND	2025, implemented and modified	Two tiers to use fewer buses and drivers	Projected about \$635,000 savings; transported more students	Some parents reported 5:30 wakeups and hour rides; bells slated for modification	Mixed
Saratoga Springs, NY	2025, proposed and withdrawn	Proposed tier changes to manage only 67 drivers against need for about 85	Withdrew plan after opposition	Parents and teachers cited childcare, very late elementary bells, and wellbeing	Rejected proposal
Trumbull, CT	2026, proposed and rejected	Three-tier consultant plan to reduce rides and crowding	Board rejected; considered adding buses instead	Survey identified childcare as central; parents challenged early and late bells	Rejected proposal
Jerome, ID	2026, proposed and tabled	Three school groups; district projected fewer vacancies and shorter routes	Board tabled decision until Sept. 22; no outcome exists	Parent David Ellis called the plan “really disjointing” for multi-school families	Proposed, not measurable
Corpus Christi, TX	2026-27, selected schools	Elementary 20 minutes later, middle 20 minutes earlier; high school unchanged	Narrowed proposal after survey; addresses driver shortage	Family and staff feedback changed the scope; post-launch evidence unavailable	Prospective
District 196, MN	2027-28, approved	Two elementary schools move from 9:30 to 7:45	Board approved unanimously after system analysis	Parents pleaded for alternatives affecting nearly 2,000 students	Prospective, contested
Madison County, KY	2026-27, approved	Three more elementary schools move earlier for driver shortage	District cites route feasibility	Public family outcome evidence not yet available	Prospective
Loudoun County, VA	2024-25 modeling, limited adjustment	Modeled earliest-pickup thresholds against added buses	Analysis made resource tradeoff visible	Family burden quantified through threshold alternatives	Planning evidence ⁹

The table includes both policies driven by transportation and later-start reforms that materially changed tiers. It excludes simple boundary changes and route cuts without bell staggering.

⁹ Loudoun County Public Schools, [Staggered Bell Times Study: Minimal Impact Adjustment for 2024-2025](#), May 21, 2024. Scenario 1 paired no pickups before 6:30 with two added buses and drivers; Scenario 2 paired no pickups before 6:40 with eight.

Charlotte-Mecklenburg: savings with a late-family price

In 2011 Charlotte-Mecklenburg Schools faced a fiscal choice. It reduced approximately 120 buses and drivers through attrition, used a 9:15 a.m. to 4:15 p.m. tier at 35 campuses, and reported about \$4 million in transportation savings. The district said those savings preserved roughly 80 teaching positions.¹⁰ On the institutional ledger, the exchange was concrete: fewer buses for more classrooms.

The family side was not a rounding error. Seventeen elementary schools, fifteen middle schools, one high school, and two specialty campuses occupied the late tier. Families and staff objected to young children returning late, after-school care shifting, and activities compressing into the evening. A district task force later recommended eliminating the 4:15 dismissal, shortening the elementary day, and studying later high-school starts.

District judgment: financially useful and operationally feasible. Family judgment: sufficiently adverse to trigger organized reconsideration. Measured result: a reported \$4 million district saving and a 120-bus peak reduction, but no published valuation of lost family time. Reader's question: if 80 teaching jobs were the realistic alternative, how much family disruption would be acceptable, and should the district have shown other ways to save the same amount?

Seattle: a tier change with unusually strong student evidence

Seattle's 2016 bell reordering was not merely a bus-efficiency exercise. It moved high schools later, allowing researchers to compare sleep and school outcomes before and after. Two high schools moved 55 minutes later. Students slept about 34 minutes more per night, and researchers reported better attendance and an approximate 4.5 percent increase in median grades at one school.^{11,12} The district later adjusted start and end times at twelve schools for 2023-24 so drivers could serve multiple routes.¹³

This is a case where a transportation constraint and a student-health goal aligned. Yet the family result remained conditional. Later secondary dismissal can conflict with athletics, jobs, care of younger siblings, and a parent's evening schedule. A district family survey specifically asked about those effects.¹⁴

¹⁰ EducationNC, ["The School Schedule Dilemma"](#), accessed July 18, 2026. The retrospective reports the Charlotte-Mecklenburg savings, fleet reduction, late-tier schools, and task-force response.

¹¹ University of Washington, ["Teens Get More Sleep, Show Improved Grades and Attendance with Later School Start Time"](#), December 12, 2018.

¹² Gideon P. Dunster et al., ["Sleepmore in Seattle: Later School Start Times Are Associated with More Sleep and Better Performance in High School Students"](#), *Science Advances* 4, no. 12 (2018).

¹³ Seattle Public Schools, ["Start and End Time and Transportation Changes for Fall 2023"](#), 2023, accessed July 18, 2026.

¹⁴ West Seattle Blog, ["Seattle Public Schools Bell-Time Changes: New Family Survey"](#), March 2016, accessed July 18, 2026.

The published physiological and school evidence is stronger than in most tier cases; the published household cost estimate is weaker.

District judgment: durable enough to continue and rebalance. Family judgment: mixed, with clear sleep benefits and practical care concerns. Measured result: positive sleep and some attendance and grade evidence in the studied schools. Reader's question: should later adolescence carry more weight than earlier elementary service when one fleet must serve both?

Hillsborough County: a large consultation, incomplete outcome record

Hillsborough County approved new bells for 2018-19 after receiving roughly 57,000 survey responses. The superintendent had said more than 12,000 students arrived late each day under the old transportation system.¹⁵ The scale of engagement was notable. It also showed why pre-adoption consultation is not the same as post-adoption evaluation.

At some campuses, leaders reported acceptance. One principal said, "It's a drastic change, but I've gotten mostly positive feedback from parents."¹⁶ Other families reported late buses during implementation.¹⁷ A credible verdict would require route-level on-time distributions before and after, not only isolated praise or complaint.

District judgment: a necessary response to a system that routinely lost instruction. Family judgment: mixed and locally variable. Measured result: the baseline problem was quantified, but a transparent multi-year family and reliability dashboard was not located. Reader's question: does a large survey count as success if the district does not publish the same measures after launch?

San Francisco: a stable efficiency model with a voice gap

Since 2021, San Francisco Unified has used standard 7:50, 8:40, and 9:30 starts, separated by 50 minutes. The district explains that a bus can serve three schools and reports about \$3 million in annual transportation savings.¹⁸ Officials rejected a higher-savings alternative, reportedly worth about \$5.1 million, in favor of a more student-centered arrangement. The district also stated that "any changes are inevitably going to make some people unhappy."¹⁹

¹⁵ WUSF, "[Hillsborough School Board Approves Proposed Bell Schedule for 2018-19](#)", October 18, 2017.

¹⁶ Neighborhood News, "[New Tampa Parents Happier with New Bell Times for 2018-19 School Year](#)", 2018, accessed July 18, 2026.

¹⁷ WTSP, "[Parents Say They're Frustrated with Late Hillsborough County Buses](#)", 2018, accessed July 18, 2026.

¹⁸ San Francisco Unified School District, "[School Start and End Times, 2025-26](#)", accessed July 18, 2026.

¹⁹ San Francisco Unified School District, "[School Start Times](#)", accessed July 18, 2026. See also Ida Mojada, "[San Francisco Schools Plan Full Fall Return with New Start Times](#)", *San Francisco Standard*, May 26, 2021.

Continuation through 2025-26 supports an institutional judgment of feasibility. It does not establish a representative family judgment. Public pages describe survey and design work, but a sufficiently complete, disaggregated post-launch family dataset was not located. This case is therefore not classified as a family success or failure.

District judgment: continuing and financially positive. Family judgment: not adequately documented in the public record reviewed. Measured result: district-reported annual savings, not an independent social-cost evaluation. Reader's question: how much confidence should continuation deserve when the family outcome column is blank?

Boston: when the optimum failed the household test

Boston's routing work demonstrated two different achievements that are sometimes conflated. An algorithm helped remove about fifty buses and save an estimated \$5 million annually without imposing the later proposed bell schedule. Researchers then modeled bells and routes jointly, projecting additional efficiency and later starts for many adolescents.²⁰

The 2017 bell plan moved some elementary schools as early as 7:15 a.m. and produced rapid family opposition. Superintendent Tommy Chang withdrew it, explaining that the "dramatic shifts to some school start times" disrupted family schedules more than intended.²¹ Parents who supported later high school also objected to the way costs fell on elementary households.

District judgment: the routing algorithm was an operational success, but the bell package was socially unsustainable. Family judgment: sufficient opposition to stop implementation. Measured result: savings from route optimization, no outcome from the canceled bells. Reader's question: can a district preserve the algorithm's routing gains while treating family time as a hard constraint rather than a soft penalty?

Atlanta: reversal as process success

Atlanta Public Schools initially proposed a 7:45 a.m. high-school start for 2021-22. Students warned that some pickups could occur around 5:45 a.m., and a petition drew nearly 1,500 signatures.²² The district

²⁰ Dimitris Bertsimas, Arthur Delarue, and Sebastien Martin, ["Optimizing Schools' Start Time and Bus Routes"](#), *Proceedings of the National Academy of Sciences* 116, no. 13 (2019): 5943-5948. See also Kellogg Insight, ["Researchers Designed an Algorithm to Save Schools Money and Improve Student Equity"](#), October 1, 2020.

²¹ Spencer Buell, ["Boston Public Schools Won't Change Start Times in 2018"](#), *Boston Magazine*, December 22, 2017. See also WBUR, ["Facing Uproar Over New Start Times, Boston's School Leaders Hear from Parents"](#), December 14, 2017.

²² FOX 5 Atlanta, ["Atlanta Public Schools Students Raise Concerns over New Start Times"](#), 2021, accessed July 18, 2026.

then received 6,240 survey responses, nearly three quarters favoring a later high-school start, and shifted high school to 8:45.²³

There is no early-tier outcome because the district did not impose it. That is not missing evidence. It is evidence of a policy process responding before harm was locked in. The final schedule still had transportation tradeoffs, but the clearest conclusion concerns legitimacy.

District judgment: the first design was not publicly sustainable. Family judgment: strongly against the early high-school tier. Measured result: no implementation result; strong participation result. Reader's question: should withdrawal be scored as failed planning, successful listening, or both?

Baltimore City: systemwide bells for a minority of riders

For 2022-23, Baltimore City changed bells at 93 schools so yellow buses could serve multiple campuses.²⁴ News coverage reported that fewer than 10 percent of students rode those buses in at least some relevant schools, while nearly every family experienced the bell change. One school reportedly had nine yellow-bus riders among about 900 students.^{25,26}

This is a classic denominator problem. Routing efficiency is calculated over riders; schedule disruption falls on enrollment. A district may still reasonably choose the systemwide bell if the riders have legally or educationally essential transportation. But it should report the burden per rider served and explain why less disruptive alternatives were rejected.

District judgment: proceeded as a transportation necessity. Family judgment: organized opposition argued that the impact was disproportionate. Measured result: no rigorous public before-and-after family-cost study located. Reader's question: what ratio of affected nonriders to benefited riders becomes unreasonable?

Tippecanoe: a continued model without an adequate public verdict

Tippecanoe School Corporation expanded from two to four tiers in 2022, setting major start times at approximately 7:30, 8:25, 8:50, and 9:30. The district said the driver shortage made the existing design unreliable and acknowledged that families would need to adjust.²⁷

²³ *Atlanta Journal-Constitution*, [“After Outcry, Atlanta Public Schools Changes High School Start Time”](#), 2021, accessed July 18, 2026.

²⁴ Baltimore City Public Schools, [“New Bell Schedules for the 2022-23 School Year”](#), 2022, accessed July 18, 2026.

²⁵ WBAL-TV, [“Baltimore Parents Unsure About School Bell-Time Changes”](#), June 2022, accessed July 18, 2026.

²⁶ WYPR, [“Baltimore City School Parents Push Back Against New Bell Schedules”](#), July 22, 2022.

²⁷ Tippecanoe School Corporation, [“TSC Adopts New Class Start Times to Address Transportation Issues”](#), 2022, accessed July 18, 2026.

The current system suggests institutional continuation. The reviewed public record did not provide a representative parent survey, route-level outcome series, or independent evaluation. This case is retained to prevent a common research error: treating lack of controversy as proof of satisfaction.

District judgment: continuing. Family judgment: not publicly measurable from located evidence. Measured result: insufficient. Reader's question: should districts be required to publish a one-year follow-up whenever bells change systemwide?

Howard County: an optimization failure, then a buffer repair

Howard County Public School System's 2023-24 launch bundled a new three-tier schedule, major route changes, nontransportation-zone changes, and a new contractor. The morning bell window narrowed to roughly two hours and the afternoon to one hour forty-five minutes. Routes were stacked with little recovery time. One late segment cascaded into later tiers. Superintendent Michael Martirano told the community, "I know this is a big ask of families."²⁸

The district's April 2024 transportation update later acknowledged that the design had not been sufficiently tested, that many routes could not complete in the available time, and that staff lacked adequate procedures and contract oversight. On September 20, 2023, it shifted bells by five to ten minutes to create more buffer. It also planned eleven additional buses at \$125,000 each, about \$1.375 million, to restore portions of the nontransportation areas.²⁹

The contractor later reported more than 98 percent morning on-time performance and above 90 percent in the afternoon. A vendor case study also reported that 97 percent of 4,107 app ratings were four or five stars.³⁰ Those figures document improvement but should not be treated as an independent audit. A subsequent audit reported that the contractor had overpromised and underdelivered at launch.³¹

District judgment: the launch design failed and required material correction. Family judgment: initial frustration was severe; later app ratings were favorable among users who rated trips. Measured result: better vendor-reported reliability after added time and capacity. Reader's question: should the eventual performance redeem the first-year cost, and should the added \$1.375 million be charged against the original savings case?

²⁸ WBAL-TV, "[Howard County Public Schools Roll Out New Start Times](#)", September 2023, accessed July 18, 2026.

²⁹ Howard County Public School System, "[Transportation Update](#)", Board of Education meeting, April 25, 2024.

³⁰ Zum, "[Howard County Public Schools System Updates](#)", accessed July 18, 2026; and Student Transportation News partner content, "[Case Study: Transportation Lessons from the 2023-2024 School Year Launch](#)", November 1, 2023. Both are vendor-originated sources.

³¹ WMAR 2 News, "[Audit Says Howard County's Bus Contractor Overpromised and Underdelivered](#)", accessed July 18, 2026.

Jefferson County: when the first day becomes the finding

Jefferson County Public Schools proposed nine start times and a route reduction from roughly 730 to 600 to cope with a severe driver shortage.³² More than 100 routes disappeared. On August 9, 2023, some children spent hours on buses and the last rider reportedly arrived home at 9:58 p.m. The district canceled the next two school days.

Parents described stops moved without usable notice, inability to locate children, lost work, and profound fear. Daycare director and parent Tiesha Calbert called the first day a disaster. The superintendent's phrase, "What happened today is unacceptable," was an unusually direct institutional judgment.³³

A later external review found sprawling failures in project management, staff readiness, communication, routing, training, and accountability. It also matters that the district simultaneously changed bells, routes, and its transportation logic. Tiering was part of the failed launch, but the evidence does not show that all tiered systems necessarily fail.^{34,35}

District judgment: clear launch failure followed by redesign. Family judgment: clear failure. Measured result: extraordinary late arrivals, school cancellation, and audit-confirmed management problems. Reader's question: what prelaunch simulation or limited pilot would have exposed the failure before children did?

Denver: healthy starts and an equity debt

Denver Public Schools implemented "Healthy Start Times" in 2023, moving secondary schools later. Transportation service was reduced at six of 204 schools, affecting about 3 percent of routes, according to the district.³⁶ Some families learned shortly before school that service had been cut. Parent Ashleigh Smith said, "It's creating a crisis for families."³⁷

³² Jefferson County Public Schools, ["JCPS Unveils School Start Times Proposal"](#), 2023, accessed July 18, 2026.

³³ WDRB, ["JCPS parents frustrated with new bus routes as some kids get home at almost 10"](#), August 10, 2023, accessed July 18, 2026.

³⁴ Jess Clark, Louisville Public Media, ["Audit Reveals JCPS Botched Transportation Rollout Was the Result of Sprawling Central Office Failures"](#), March 25, 2024.

³⁵ WAVE, ["JCPS Audit Reveals Leadership, Cultural Problems Ahead of Transportation Failures"](#), March 25, 2024. See also Prismatic Services, ["JCPS Phase 1 Report"](#), 2024.

³⁶ Denver7, ["DPS Parents, Students Share Concerns About Cut School Bus Routes"](#), August 21, 2023.

³⁷ Denver7, ["Denver Public School Bus Cuts Put Parents in Tough Situation Days Before Start of School Year"](#), 2023, accessed July 18, 2026.

The process also raised an engagement concern. Reporting indicated that fewer than 40 of about 5,000 survey responses came from four working-class high-school communities particularly affected by the proposal.³⁸ A district leader conceded, “Making a change of this scale in a system this large is going to hurt.”³⁹

District judgment: health benefits justified a large change under resource constraints. Family judgment: some families supported later starts, while those losing service faced a direct transportation and work burden. Measured result: route cuts were limited districtwide but concentrated. Reader’s question: should an apparently small districtwide percentage receive a low burden score when the harm is clustered in a few communities?

Roanoke City: high on-time performance, unresolved family geometry

Roanoke City moved to four tiers in 2024: an early elementary group at 7:15, another at 8:00, high school at 8:45, and middle school at 9:30. The district reported roughly 98 percent on-time performance for 2024-25. It also said the earliest elementary pickup improved to about 6:20, compared with 6:10 the prior year and 5:45 two years earlier.⁴⁰

Those facts complicate an easy critique of the 7:15 bell. The early tier was still early, but the earliest pickup reportedly became later. Parents nevertheless raised sleep and classroom alertness. One warned, “Students are already coming to school sleeping in class.”⁴¹ Other families needed new childcare, and hub-stop or walking expectations placed responsibility on households.^{42,43}

District judgment: strong operational performance and continued model. Family judgment: mixed, with specific care, sleep, and walking objections. Measured result: district-reported on-time success and later earliest pickup. Reader’s question: is an early bell acceptable if routing changes make the earliest actual pickup later than before?

³⁸ Melanie Asmar, Chalkbeat Colorado, [“Denver Plans Later Middle and High School Start Times, but Some Families Weren’t Heard”](#), May 20, 2021.

³⁹ Melanie Asmar, Chalkbeat Colorado, [“Denver’s Healthy Start Times Plan Will Mean School Bus Service Cuts”](#), February 11, 2022.

⁴⁰ Roanoke City Public Schools, [“Understanding Routes and the Four-Tier Transportation Model”](#), accessed July 18, 2026.

⁴¹ WDBJ7, [“Roanoke Parents Are Concerned After Discussion of Potential School-Time Changes”](#), May 16, 2024.

⁴² WDBJ7, [“Childcare Options Accommodate Roanoke City Schools Start-Time Changes”](#), July 11, 2024.

⁴³ WSL 10, [“What Are Your Concerns About Changes to Some School Bus Routes for Roanoke City Schools?”](#), August 15, 2024.

Pender County: fewer double routes, more visible family strain

Pender County's eastern attendance area opened 2025-26 with high school at 7:10, elementary at 7:55, and middle school at 8:40. The district called the model a "win-win."⁴⁴ It reported that eastern double routes fell from 38 to 20 and that the one to one-and-a-half hours of instruction previously lost to bus tardiness had largely disappeared. A later district comparison showed attendance moving from 92.98 to 93.28 percent, a modest association rather than proof of causation.^{45,46}

Families reported middle-school buses twenty minutes late in the morning and 45 to 60 minutes late in the afternoon, 5:30 a.m. wakeups, sibling schedules that no longer fit, and stops they considered unsafe. Parent Whitney Kay summarized her launch experience: "It has been a nightmare."⁴⁷

District judgment: fewer double runs and improved instructional reliability. Family judgment: divided and in some cases strongly negative. Measured result: operational gains with continuing complaints and subsequent amendments. Reader's question: what reliability threshold and what maximum family-day span must both be met before the word "win" is justified?

Bismarck: the cleanest example of a split verdict

Bismarck Public Schools moved to two tiers in 2025-26. Morning routes declined from 52 to 39. Contractor drivers fell from 47 to 45 and district drivers from 17 to 14. Average route mileage reportedly declined from 19.3 to 18.6 for contractor routes and from 30 to 16.8 for district routes. The system transported 5,490 students, up from 5,063. Projected cost fell from \$6,845,289 to \$6,210,392, a difference of \$634,897.⁴⁸

The same report showed a promise-performance gap. The planning goal was no pickup before 6:30 a.m.; after launch, 29 students had earlier pickups, the earliest at 6:14. Previously, ten students had pickups before 6:30, with the earliest at 6:00. Thus the earliest child improved by fourteen minutes while the number of children crossing the threshold nearly tripled.

Parent Janice Briesse said her seven-year-old woke at 5:30, boarded around 6:25, and rode about an hour. "What family time is there? There isn't any," she asked.⁴⁹ The district later proposed bell

⁴⁴ Pender County Schools, ["Three-Tier Transportation Model Coming to Eastern Pender Schools"](#), 2025, accessed July 18, 2026.

⁴⁵ Port City Daily, ["PCS Says Three-Tier Schedule Is Making District Better, Parents Not Convinced"](#), September 11, 2025.

⁴⁶ Port City Daily, ["Three-Tiered Bus Schedule Amended in Pender County Again"](#), June 12, 2026.

⁴⁷ Port City Daily, ["PCS Says Three-Tier Schedule Is Making District Better, Parents Not Convinced"](#), September 11, 2025.

⁴⁸ Bismarck Public Schools, ["Two-Tier Background and Transportation Data"](#), accessed July 18, 2026.

⁴⁹ KFYR-TV, ["BPS Two-Tiered School Bus System Facing Parental Complaints"](#), August 20, 2025.

modifications for 2026-27.⁵⁰

District judgment: clear fleet, staffing, cost, and ridership gains. Family judgment: some households experienced unacceptable early mornings and long days. Measured result: both sets of facts are well documented. Reader's question: how should \$634,897 and service to 427 more students be weighed against nineteen additional children picked up before the published threshold?

Rejected and prospective cases: evidence about consent, not outcomes

Saratoga Springs proposed major bell changes when it had roughly 67 drivers against an estimated need for 85. Some elementary schools could have started around 9:50 and high school around 7:30. Parent and teacher opposition centered on childcare and student wellbeing; the district withdrew the plan.⁵¹

Trumbull's consultant projected a three-tier design could cut ride times 41 to 52 percent, reduce riders or crowding by about 31 percent, and move the earliest pickup from 6:14 to 6:35. A survey identified childcare as the leading problem. On May 5, 2026, the board rejected the design and considered adding two buses for roughly \$200,000 instead.⁵²

Corpus Christi narrowed a 2026-27 proposal after family and staff feedback. Selected elementary schools will start twenty minutes later, selected middle schools twenty minutes earlier, and high-school times will remain unchanged.⁵³ District 196 in Minnesota approved moving two elementary schools from 9:30 to 7:45 for 2027-28 despite parent pleas for alternatives.⁵⁵ None of these prospective designs has an outcome. Scoring them as success would confuse forecast with fact.

Jerome, Idaho: the arithmetic before the verdict

Jerome's tiered-bell proposal was discussed in July 2026 and tabled until September 22. Proposed bells were approximately 7:30 a.m. to 2:46 p.m. for elementary, 9:10 a.m. to 4:19 p.m. for middle school, and 9:00 a.m. to 4:33 p.m. for high school.⁵⁶ The district described driver recruitment, route safety, and

⁵⁰ KFVR-TV, "[Bismarck Public Schools Proposes Changes to Bell Times](#)", January 12, 2026.

⁵¹ Times Union, "[Saratoga Springs Nixes Plan to Change School Start Times](#)", January 2025, accessed July 18, 2026.

⁵² CT Insider, "[Trumbull School Board Votes Down Three-Tier Busing Plan](#)", May 2026, accessed July 18, 2026.

⁵³ Corpus Christi Independent School District, "[CCISD Announces Select Bell-Schedule Adjustments](#)", 2026, accessed July 18, 2026.

⁵⁴ KRIS 6 News, "[Corpus Christi ISD Adjusts Bell Schedules at Select Schools to Address Bus Driver Shortage](#)", 2026, accessed July 18, 2026.

⁵⁵ CBS News Minnesota, "[Rosemount-Apple Valley-Eagan Schools Approve Start-Time Changes](#)", 2026, accessed July 18, 2026.

⁵⁶ Jerome School District, "[Board Agenda and Materials. July 14, 2026](#)", accessed July 18, 2026.

⁵⁷ KMVT, "[School Board Discusses Staggering Start Time for Schools](#)", July 15, 2026.

shorter rides as objectives. Parent David Ellis said it was “really disjointing to families that have elementary and high school kids.”⁵⁸

The district presentation contains a revealing transportation matrix.⁵⁹

Scenario as presented or derived	Operating school days	AM miles on an operating day	Weekly AM miles	Change from current weekly AM miles	Weekly student ride time
Current five-day, nonstaggered	5	496.55	2,482.75	Baseline	10.80 hours
Five-day, staggered	5	700.68	3,503.40	+41.1%	9.00 hours
Four-day, nonstaggered, derived	4	496.55	1,986.20	-20.0%	8.64 hours
Four-day, staggered	4	700.68	2,802.72	+12.9%	7.20 hours

The row labeled as four-day staggered in the source presentation shows 560.54 “daily” miles. That number equals 700.68 multiplied by 0.8. It is best understood as five-day-normalized daily mileage, not the miles a bus would travel on an actual operating day. On each of four operating days, the route pattern would still be approximately 700.68 AM miles. The actual weekly total would be 2,802.72.

This distinction changes the public story. Compared with the current five-day week, a four-day staggered design lowers the five-day staggered total but still raises weekly AM miles about 12.9 percent. The transportation saving comes from deleting a day, while the mileage increase comes from staggering. Those effects should not be blended.

The presentation reports elementary route examples declining from roughly one hour forty-two minutes to 54 minutes, weekly student transit declining from 10.8 to 9.0 hours under five-day staggering and to 7.2 hours under four-day staggering, and projected driver vacancies moving from four to one to zero. These are forecasts, not outcomes. “Up to 47 percent” shorter applies to selected examples, not necessarily the system average.

Jerome’s board separately approved a four-day week by a 4-1 vote for 2027-28. The superintendent reported roughly two-thirds parent and staff support.⁶⁰ Because neither the calendar nor tiered bells has begun, district belief means predicted feasibility, family belief means survey preference and public comment, and measured success is not yet available.

⁵⁸ KMVT, [“School Board Discusses Staggering Start Time for Schools”](#), July 15, 2026.

⁵⁹ Jerome School District, [Transportation Staggering Presentation](#), July 2026, accessed July 18, 2026. The mileage and ride-time figures are district forecasts.

⁶⁰ KMVT, [“Jerome School District Approves Four-Day School Week”](#), April 3, 2026.

⁶¹ Idaho Education News, [“Jerome Adopts Four-Day Week Two Years After Teacher Walkout”](#), 2026, accessed July 18, 2026.

The Jerome decision should therefore show at least four alternatives, not only the two bundled columns in the district matrix: current five-day nonstaggered, five-day staggered, four-day nonstaggered, and four-day staggered. The four-day nonstaggered row is essential because it isolates the calendar effect from the routing effect.

What the tiered-busing record permits the reader to say

The strongest operational successes are systems that reduced peak vehicles or stabilized on-time service and published enough detail to show it: Bismarck, Pender County, Roanoke, San Francisco, and the repaired phase of Howard County. The clearest implementation failure is Jefferson County's 2023 launch. Boston, Atlanta, Saratoga Springs, and Trumbull are process cases, not operational results. Atlanta demonstrates responsive revision; Boston demonstrates that algorithmic efficiency can collapse when the household constraint is introduced.

The family verdict is usually less favorable than the district verdict, but not uniformly negative. Later-secondary systems can create meaningful sleep benefits. An earlier bell can coexist with a later earliest pickup if route geometry improves. The recurring failure is not tiering alone. It is a model that optimizes the bus and treats the family as an unlimited buffer.

III. Four-day school weeks

A large policy with a small federal footprint

The four-day school week is no longer a rare Western experiment. NWEA researchers estimated that more than 2,100 public schools in 26 states used the schedule in 2024-25 and that roughly 90 percent were rural.⁶² The National Conference of State Legislatures reported approximately 850 districts across 24 states for 2023.⁶³ These counts are not necessarily inconsistent. They refer to different years, units, definitions, and source systems. One counts schools; the other discusses districts. States also differ over whether a hybrid calendar, occasional fifth day, or school-specific schedule qualifies.

Texas illustrates the measurement problem. The Texas Education Agency did not maintain the calendar variable researchers needed. University of Houston researchers examined the published calendars of all 1,021 traditional districts. They found two districts and 244 students on four-day schedules in 2017-18, then 156 districts, 389 campuses, and 134,240 students in 2023-24. For 2024-25 they identified 181 districts and 506 campuses.⁶⁴ A schedule that looked marginal in statewide administrative data had grown to a significant local institution.

Missouri showed a similar expansion. Counts vary slightly by classification, but approximately 178 or 179 districts operated four-day calendars in 2024-25. That represented roughly one third of local education agencies but a much smaller share of students because adoption remained concentrated in rural systems.^{65,66}

No honest national appendix can list every district-year from 2006 through 2026 without access to the calendars and research database used to construct the national panel. Some states do not track the schedule, and schedules change within districts. This report therefore offers three levels of coverage:

1. national and multi-state causal evidence;
2. state censuses where public enumeration is available; and
3. detailed district cases selected because they document success, failure, reversal, family impact, or a critical design difference.

⁶² NWEA, [“What the Research Tells Us About Four-Day School Weeks”](#), February 24, 2026, accessed July 18, 2026. The article synthesizes scale, academic effects, instructional time, attendance, staffing, cost, and preference research.

⁶³ National Conference of State Legislatures, [“Four-Day School Week Overview”](#), updated 2025, accessed July 18, 2026. NCSL notes that state tracking is incomplete and reports roughly 850 districts in 24 states in 2023.

⁶⁴ University of Houston Education Research Center, [“The Four-Day School Week in Texas: Prevalence and Policy Context”](#), 2025, accessed July 18, 2026. Researchers manually reviewed calendars for all 1,021 traditional districts.

⁶⁵ PRIME Center, Saint Louis University, [“Four-Day School Week Summary”](#), accessed July 18, 2026.

⁶⁶ Missouri State University, [“Four-Day School Week Research and Missouri District List”](#), accessed July 18, 2026.

What changes when Friday disappears?

Most four-day districts do not simply remove one fifth of instruction. They lengthen the remaining days, reduce transitions, and sometimes add optional tutoring, meals, childcare, activities, or teacher planning on the fifth day. Yet the annual exposure generally falls.

RAND’s multi-state study found a typical four-day schedule of about 7 hours 55 minutes per day across 146 days, or roughly 1,156 scheduled hours. The comparison five-day schedule averaged about 7 hours 6 minutes across 171 days, or roughly 1,214 hours. The difference was about 58 hours per year, approximately eight conventional school days.⁶⁷

That average hides major variation. Texas full four-day districts in 2024-25 averaged about 503 minutes per day, with a range from 470 to 530. About 73.8 percent took Friday off, 22.1 percent Monday, and 4.1 percent used an alternating pattern. Of the full four-day districts examined, only one advertised paid district childcare on the off-day.⁶⁸

The schedule therefore changes at least six resources at once:

- instructional minutes and the distribution of fatigue across a longer day;
- teacher planning and recovery time;
- student sleep, activities, employment, and unsupervised time;
- school meals and access to specialists;
- household work and care arrangements; and
- transportation, utilities, food service, and hourly staffing.

It is not one intervention. “Four-day week” is a label applied to many packages.

National research synthesis

Question	Best-supported national or multi-state finding	Confidence and limitation
How common?	More than 2,100 public schools in 26 states in 2024-25; about 90% rural	Strong recent research count, but definitions and district-year changes matter
Do families like it?	RAND: 84% of parents would choose it again; 95% of surveyed students would	Strong for surveyed adopting rural communities; not a national random sample

⁶⁷ M. Rebecca Kilburn et al., RAND Corporation, [Does Four Equal Five? Implementation and Outcomes of the Four-Day School Week](#), 2021. The study combined district data, surveys, interviews, site visits, and matched achievement analysis in Idaho, New Mexico, and Oklahoma.

⁶⁸ University of Houston Education Research Center, [The Four-Day School Week in Texas: Prevalence and Policy Context](#), 2025, accessed July 18, 2026. Researchers manually reviewed calendars for all 1,021 traditional districts.

Question	Best-supported national or multi-state finding	Confidence and limitation
Does learning improve?	Average growth is slower, often equal to roughly 2 to 7 weeks of learning per year; reading effects are often more consistent	Moderate to strong causal evidence; effects vary by locale, hours, grade, and subject
Does more weekly time help?	Weeks near or above 32 hours show smaller or statistically indistinguishable achievement differences in several studies	Important moderator, not proof that time alone eliminates all effects
Does attendance improve?	Most multi-state work finds little or no improvement; some high-school settings show worse chronic absence	Moderate; local self-reports often conflict with causal estimates
Does it retain teachers?	Multi-state causal work finds no consistent overall advantage; reported effects commonly fall between none and a few percentage points	Moderate and developing; local applicant counts may capture attraction without retention
Does it save money?	Average district operating savings are often about 0.4% to 2.5%; maximum estimates near 5.4%	Fairly consistent; cost categories and avoided capital needs vary
Does it improve behavior?	Some districts report large reductions; multi-state evidence is thinner	Low to moderate; self-report and concurrent reforms are common
What happens on the fifth day?	Most surveyed rural students were at home or with family; formal childcare use was low	Strong description of surveyed places, weak evidence of the value of caregiver time
Does community safety change?	Colorado studies report increases in juvenile crime in some settings, especially property crime; newer work finds effects concentrated in nonrural areas	Moderate, context-specific, should not be generalized to every district

Achievement: preference and learning can point in opposite directions

The broadest recent synthesis by NWEA describes a recurring academic cost equivalent to about two to seven weeks of learning in a year, while emphasizing wide variation. Its most useful summary is not a verdict but a warning: the calendar is a “tradeoff, not a silver bullet.”⁶⁹

A multi-state analysis of NWEA MAP data from 2009 through 2019 examined kindergarten through eighth-grade students in six states. It estimated an average spring effect of about -0.03 standard deviations in mathematics, not statistically significant in the principal specification, and -0.07 in reading, which was significant. In nonrural settings, estimated effects were larger, around -0.08 in math and -0.11 in reading. Within-year growth estimates were approximately -0.05 and -0.06.⁷⁰

An Oregon study estimated achievement reductions around -0.033 to -0.059 standard deviations.⁷¹ A separate study found that low-hour four-day weeks generated the most negative results, while

⁶⁹ NWEA, [“What the Research Tells Us About Four-Day School Weeks”](#), February 24, 2026, accessed July 18, 2026. The article synthesizes scale, academic effects, instructional time, attendance, staffing, cost, and preference research.

⁷⁰ Emily A. Morton, Paul N. Thompson, and Megan Kuhfeld, [“A Multi-State, Student-Level Analysis of the Effects of the Four-Day School Week on Academic Achievement and Growth”](#), *Economics of Education Review* 100 (2024).

⁷¹ Paul N. Thompson, [“Is Four Less Than Five? Effects of Four-Day School Weeks on Student Achievement in Oregon”](#), *Journal of Public Economics* 193 (2021).

schedules at or above about 32 weekly hours often did not differ significantly from five-day comparisons.⁷²

The 2025 HEDCO Institute review considered eleven causal studies. Its plain-language answer was: “It depends, but probably not.”⁷³ The review found negative pooled effects, with important differences by grade and place. Rural kindergarten through eighth-grade settings tended to show lower math and reading performance. Some rural high-school studies found improved math or graduation but increased chronic absence. Nonrural high schools generally showed more negative math, graduation, or absence results. The review also identified major unanswered questions about instructional hours and fifth-day supports.

Texas’s state evaluation compared 137 four-day campuses in 76 districts with matched five-day campuses. It found reading-language-arts proficiency roughly six to eight percentage points lower in grades six through eight and math proficiency about five to eight points lower in grades four through six.⁷⁴ The report properly cautioned that COVID disruption, testing redesign, schedule classification, and unmeasured district differences limit causal interpretation.

The family preference evidence is not invalidated by these estimates. It answers a different question. In RAND’s Idaho, New Mexico, and Oklahoma sample, 73 percent of parents were very satisfied and another 16 percent mostly satisfied. Eighty-four percent would choose the schedule again. Eighty-five percent of surveyed high-school students liked it a lot, and 95 percent would choose it. Students in kindergarten through sixth grade received about 89 more minutes of sleep across the school week; older students showed no meaningful sleep gain.⁷⁵

The correct statement is therefore two sentences: surveyed families in established rural four-day communities strongly preferred the schedule, and matched students generally accumulated academic growth more slowly. A reader must decide how much each sentence weighs.

Attendance, behavior, and graduation

Attendance is one of the most repeated district rationales and one of the least reliable general claims. Removing one possible absence day can mechanically change counts, definitions, and exposure. A

⁷² Paul N. Thompson and Jason Ward, [“Only a Matter of Time? The Role of Time in School on Four-Day School Week Achievement Impacts”](#), *Economics of Education Review* 86 (2022), article 102198.

⁷³ HEDCO Institute for Evidence-Based Educational Practice, University of Oregon, [Does a Four-Day School Week Benefit Students?](#), June 2025.

⁷⁴ Texas Education Agency, [Four-Day School Week Study, 2022-23](#), 2023.

⁷⁵ M. Rebecca Kilburn et al., RAND Corporation, [Does Four Equal Five? Implementation and Outcomes of the Four-Day School Week](#), 2021. The study combined district data, surveys, interviews, site visits, and matched achievement analysis in Idaho, New Mexico, and Oklahoma.

weekly rate may look stable while chronic absence changes. Most multi-state evidence finds little or no average attendance improvement. Some settings show worse chronic absence, especially at the high-school level.⁷⁶⁷⁷

Local behavior reports can be dramatic. Martensdale-St. Marys, Iowa, reported secondary discipline incidents falling roughly 75 percent after adoption. Saydel, Iowa, reported behavior calls declining around 50 percent and English-language-arts performance increasing about ten percentage points.⁷⁸ These are important signals, but they are district reports in a short post-adoption window. Culture initiatives, staffing, student composition, test changes, and recovery from pandemic disruption may contribute.

Graduation findings are similarly heterogeneous. Rural high schools in some studies improved, while nonrural results were less favorable. A district should therefore publish cohort graduation, course failure, credit recovery, dropout, and chronic-absence data together. Reporting one positive measure invites a false verdict.

Teacher recruitment and retention

The four-day week is often marketed to applicants as a benefit that costs less than a large salary increase. Local stories make the claim plausible. Independence, Missouri, reported a 360 percent increase in applicants, a fully staffed opening, retention rising from 81 to 90.8 percent, and incoming teachers with more experience. In a district survey that reached 139 of 430 applicants, 27 percent identified the calendar as the most important reason to apply and 44 percent described it as a positive influence.⁷⁹⁸⁰

Those results are real local administrative evidence with important limits: low survey reach, one district, a short time horizon, and other simultaneous changes. Causal multi-state research is less optimistic.

Studies in Arkansas, Colorado, Missouri, Oregon, and Oklahoma generally find no statistically robust overall retention improvement or changes around one to three percentage points, small beside ordinary

⁷⁶ NWEA, [“What the Research Tells Us About Four-Day School Weeks”](#), February 24, 2026, accessed July 18, 2026. The article synthesizes scale, academic effects, instructional time, attendance, staffing, cost, and preference research.

⁷⁷ HEDCO Institute for Evidence-Based Educational Practice, University of Oregon, [“Does a Four-Day School Week Benefit Students?”](#), June 2025.

⁷⁸ Iowa Public Radio, [“Pass or Fail: Midwest Families and Districts Are Learning from the Four-Day School Week”](#), August 26, 2025. The report profiles Martensdale-St. Marys, Saydel, Clearwater R-1, and Washington Community School District.

⁷⁹ Jodi Fortino, KCUR, [“Independence Attracted More Teachers Thanks to Four-Day School; a Missouri Law Could End It”](#), October 21, 2024.

⁸⁰ Independence School District, [“Four-Day School Week”](#), accessed July 18, 2026. District-published staffing, applicant, accountability, care, and schedule figures are treated as local administrative evidence.

annual teacher turnover of roughly 12 to 17 percent.⁸¹ A Colorado study found a small negative and statistically insignificant retention result and no clear attendance advantage.⁸² A 2026 Missouri working paper found no consistent recruitment or retention benefit despite widespread local belief.⁸³

A Missouri and Oklahoma study covering 2009-2019 found no significant overall retention effect from adoption. It did find that heavy neighboring-district adoption could increase turnover, possibly because teachers could move to another four-day employer. At the extreme model value where every neighboring district within thirty miles had adopted, predicted turnover rose 15.76 percentage points. That extreme exposure estimate should not be presented as the normal effect.⁸⁴

The balanced conclusion is that a four-day calendar can be a useful recruitment message in a particular labor market. Evidence does not show it is a dependable national retention strategy. The comparison must include higher pay, manageable workload, housing, leadership, class size, and the possibility that neighboring districts will copy the benefit.

Finance: one day off is not twenty percent saved

The calendar removes 20 percent of regular attendance days but not 20 percent of district cost. Teachers may work nearly the same annual hours. Buildings still incur debt, insurance, maintenance, and base energy loads. Buses are owned or financed. Technology, administration, special education, and curriculum continue. The most avoidable expenses are hourly food service, substitute use, utilities at the margin, and some transportation.

National summaries place average operating savings around 0.4 to 2.5 percent, with an upper estimate around 5.43 percent.⁸⁵ NWEA's recent synthesis describes an average near 2 percent or about \$300 per student.⁸⁶

Oklahoma provides a caution against confident local projections. In a cohort of sixteen districts adopting around 2011-12, nine spent more after adoption and seven spent less. Aggregate category changes included utilities increasing about \$4,523, food service declining about \$2,714, transportation declining

⁸¹ NWEA, [“What the Research Tells Us About Four-Day School Weeks”](#), February 24, 2026, accessed July 18, 2026. The article synthesizes scale, academic effects, instructional time, attendance, staffing, cost, and preference research.

⁸² Dan Goldhaber et al., CALDER Center, [“The Impacts of Four-Day School Weeks on Teacher Recruitment and Retention and Student Attendance”](#), accessed July 18, 2026.

⁸³ Andrew Camp et al., [“The Effects of the Four-Day School Week on Teacher Recruitment and Retention”](#), CALDER working paper, 2026.

⁸⁴ Paul N. Thompson, [“Four-Day School Weeks and Teacher Mobility: Evidence from Missouri and Oklahoma”](#), *Economics of Education Review* 109 (2025), article 102708.

⁸⁵ National Conference of State Legislatures, [“Four-Day School Week Overview”](#), updated 2025, accessed July 18, 2026. NCSL summarizes research estimating roughly 0.4 to 2.5 percent average savings and a maximum estimate of 5.43 percent.

⁸⁶ NWEA, [“What the Research Tells Us About Four-Day School Weeks”](#), February 24, 2026, accessed July 18, 2026. The article synthesizes scale, academic effects, instructional time, attendance, staffing, cost, and preference research.

about \$1,971, and support-staff spending increasing about \$8,542. The state health-impact review found no conclusive savings.⁸⁷ A peer-reviewed Oklahoma study estimated about a 2.03 percent reduction in noninstructional and support spending, consistent with modest rather than transformative savings.⁸⁸

The finance test should be annual and net:

net district savings = avoided recurring cost – new recurring cost – annualized transition cost

A social-cost test adds family childcare, extra meals, added household driving, lost work, public-safety response, and any reduced services. Most district savings estimates do not.

Childcare and parental work

RAND found that fewer than 4 percent of surveyed families reported fifth-day time in formal childcare, a government-run location, or another uncommon location. More than 90 percent of younger children were primarily at home; fewer than 1 percent were reported home without adult supervision. Families often relied on a nonworking parent, flexible shifts, self-employment, or extended family.⁸⁹

Those results rebut the assumption that every rural family buys commercial care. They do not establish that care is costless. A grandmother's time, a parent's reduced shift, a teenager's sibling care, and an employer's accommodation may never appear on an invoice.

A working paper using Colorado, Idaho, Oklahoma, and Oregon data estimated that as the share of nearby enrollment on four-day schedules rose from zero to 25 percent, employment among mothers whose children were all ages five through thirteen fell about 7.6 percentage points, or 11 percent. Estimated effects were concentrated among college-educated married mothers; results for single mothers and fathers differed.⁹⁰ Because the paper is not peer reviewed and measures area exposure rather than a simple district switch, it should be treated as suggestive, not final. It nonetheless identifies a burden district surveys often miss: a family can prefer the schedule after rearranging paid work, while the economic cost remains.

⁸⁷ Oklahoma State Department of Health, [Four-Day School Week Health Impact Assessment](#), 2017.

⁸⁸ Emily Morton, [“Effects of Four-Day School Weeks on School Finance and Achievement: Evidence from Oklahoma”](#), *Educational Researcher* 50, no. 1 (2021).

⁸⁹ M. Rebecca Kilburn et al., RAND Corporation, [Does Four Equal Five? Implementation and Outcomes of the Four-Day School Week](#), 2021. The study combined district data, surveys, interviews, site visits, and matched achievement analysis in Idaho, New Mexico, and Oklahoma.

⁹⁰ Jason Ward, [“The Four-Day School Week and Parental Labor Supply”](#), working paper, accessed July 18, 2026. The paper had not been peer reviewed as of this review.

Independence offers paid Monday care from 6:30 a.m. to 6:00 p.m., including two meals and a snack, at approximately \$30 for kindergarten through eighth grade and \$40 for prekindergarten.⁹¹ The design is unusually explicit. Yet a working family's annual cost can exceed \$1,000 per child across a school year. Capacity, transportation to care, eligibility, and participation matter as much as the posted program.

The family-work question cannot be answered by "childcare seats used." Districts should ask whether an adult changed days, hours, job, shift, leave, commute, or reliance on unpaid relatives. They should report the result by child age, income, disability, single-parent status, and distance from care.

Meals, special services, and the fifth-day safety net

For a student receiving school breakfast and lunch, the fifth day can remove two predictable meals. Some districts provide take-home food, pickup sites, or care-day meals. Others rely on local nonprofits or do not replace the service. Oklahoma's health-impact review treated food access as a central concern, not a peripheral one.⁹²

The same applies to speech, occupational therapy, counseling, nursing, English-language support, and special education. A longer day is not necessarily interchangeable with a fifth contact day. Young children may fatigue. Related-service providers may be unable to fit mandated minutes into four crowded days. Conversely, a protected fifth day can support appointments, intensive intervention, or teacher collaboration if the district actually funds and staffs it.

A serious proposal must publish a fifth-day service map before the vote. It should identify provider, location, hours, price, capacity, meals, transportation, disability access, registration priority, and what happens when capacity fills. "Community partners may help" is not a program.

Student safety and unsupervised time

An early Colorado study estimated a roughly 20 percent increase in juvenile crime after four-day adoption, with the strongest effect in property crime.⁹³ A 2026 update found increases concentrated in nonrural or larger-agency settings for property and violent offenses, while some drug and alcohol incidents on school weekdays declined.⁹⁴ These results do not mean a rural district should assume a 20 percent crime increase. They show that exposure time and community context belong in the evaluation.

⁹¹ Independence School District, "[Four-Day School Week](#)", accessed July 18, 2026. District-published staffing, applicant, accountability, care, and schedule figures are treated as local administrative evidence.

⁹² Oklahoma State Department of Health, "[Four-Day School Week Health Impact Assessment](#)", 2017.

⁹³ Stefanie Fischer and Daniel I. Argyle, "[Juvenile Crime and the Four-Day School Week](#)", *Economics of Education Review* 64 (2018): 31-39.

⁹⁴ Rafiuddin Najam and Paul N. Thompson, "[Impacts of the Four-Day School Week on Juvenile Crime](#)", *Journal of Policy Analysis and Management* 45 (2026), article e70101.

Safety can also improve. Students may have one fewer commute in bad weather, more daylight for appointments, and more family supervision. Older students may work or participate in organized activities. The correct metric is not a generalized fear. It is fifth-day location, supervision, incident rate, emergency response, and program participation, disaggregated by age and neighborhood.

Detailed district and state cases

Place	Adoption and status	District judgment	Family or community judgment	Measured or reported result	Reader status
27J Schools, CO	2018, continuing	Recruitment, planning, and cost tradeoff accepted	Nearly 5,000 survey responses; about 78% favorable; strong student preference	Preliminary external work raised achievement, housing, and retention concerns; district cites graduation and staffing gains	Mixed, durable
Independence, MO	2023, retained by voters in 2025	Reports stronger applicants, retention, and state performance score	Voters kept schedule; some parents report severe care burden	Strong local staffing association; causal attribution uncertain	District and majority-community positive, family mixed
Cartwright Elementary, AZ	2023-24 to 2025-26; return to five days in 2026-27	New board majority prioritized academics and transition	Former superintendent said families overwhelmingly preferred four days; staff survey also favored it	Vacancies reportedly fell from 28 to 3; academic causal evidence not published	Institutional reversal despite preference
Webster County, KY	About 2004-2014; returned to five	Early gains and savings later gave way to score concerns	Parents mostly liked four days; little opposition to return	Early test gains reportedly reversed; state warning helped trigger return	Early success, later failure
Chattooga County, GA	2010-2019; returned to five	Initially cited attendance, discipline, and test gains; later board cited poor tests	Strong community opposition at reversal hearing	Early self-report positive; later performance concern	Reversed after a decade
Peach County, GA	Recession-era temporary adoption	Filled about \$1 million shortfall and avoided layoffs	Churches and youth groups offered low-cost care	District self-reported attendance, substitution, and graduation gains	Fiscal emergency case, limited independent evidence
Jasper ISD, TX	2022-2024; returned to five	Board reversed 4-3	Public family evidence located is limited	Short duration; district causal evaluation not located	Reversal, evidence thin
Martensdale-St. Marys, IA	2024-25 onward	Superintendent reports cultural and discipline	Families adapted; fifth-day supports remain important	Self-reported discipline down about 75%; about \$15,000 savings	Promising local report,

Place	Adoption and status	District judgment	Family or community judgment	Measured or reported result	Reader status
		improvement			unproven
Saydel, IA	2024-25 phased adoption	Reports academic and behavior improvement	Some families cannot afford care; relatives and work changes fill gaps	Self-reported ELA +10 points, behavior calls -50%	Promising, family burden mixed
Clearwater R-1, MO	2024 considered, rejected	Board stayed at five after public deliberation	Parents questioned learning and care	No implementation result	Deliberative rejection
Washington CSD, IA	2025 considered, rejected 5-0	Called it an incomplete response to staffing problems	Surveys nearly split; care, food, special-service concerns	No implementation result	Deliberative rejection
Casa Grande Elementary, AZ	2022-23 onward	Reports curriculum redesign and recruiting benefit	Community partners provide some care	180 days reduced to about 154; post-adoption causal evidence limited	Continuing, evidence incomplete
Jerome, ID	Approved 2026 for 2027-28	Superintendent reported staffing and family-life rationale	Roughly two-thirds parent and staff support reported; public dissent remains	No outcome yet	Prospective
Floresville ISD, TX	Hybrid 2025-26	Approved after study and survey	Reported 66% parent and 82% staff support; off-Friday care and meals planned	No mature outcome	Prospective hybrid
Ponder ISD, TX	2025-26	Five days first nine weeks, then four; longer days	Friday care planned through fifth grade	No mature outcome	Prospective staged design
Texas statewide	181 districts in 2024-25	Rapid locally driven expansion	Public family data not centralized	2023-24 participants disproportionately rural; state study found lower proficiency in several grades	Expansion with caution
Oklahoma 16-district cohort	Around 2011-12 onward	District rationales included cost and staffing	Health review found food and care concerns	Nine spent more, seven less; no conclusive aggregate saving	Fiscal claim weakened
Missouri statewide	About 178-179 districts in 2024-25	Strong rural institutional adoption	Public support substantial but not uniform	State and research evidence does not show consistent staffing benefit	Popular, outcome mixed
Minnesota reversal cohort	By 2014-15	State ordered seven of eleven back; another returned voluntarily	District-specific family evidence varies	State oversight found concerns sufficient for reversals	State-directed reversal
Multi-state reversal record	Through 2018	Districts in Michigan, Montana, South	Reasons included learning, finance, or	Historical documentation is uneven	Durability is not

Place	Adoption and status	District judgment	Family or community judgment	Measured or reported result	Reader status
		Dakota, and elsewhere returned	community fit		assured

27J Schools, Colorado: durable preference and an acknowledged tradeoff

27J, serving the Brighton area, adopted a Tuesday-through-Friday calendar in 2018. Elementary schools generally run about 7:45 to 3:30 and secondary schools about 8:30 to 4:30.⁹⁵ In a district survey with nearly 5,000 responses, approximately 78 percent of overall respondents viewed the schedule favorably. The district later reported that 77 percent of students said they received more sleep and 84 percent preferred the four-day calendar.⁹⁶

The district initially expected roughly 1,000 students in Monday care at about \$30 per day; later participation was reported below 300. Low uptake can indicate successful informal arrangements or a program families could not or did not want to use. It does not value household time.

Preliminary external research reported negative achievement, home-value, and teacher-retention associations. The district disputed the interpretation and pointed to graduation and turnover improvements. Superintendent Chris Fiedler supplied the most honest summary: “It is a total tradeoff.”⁹⁷

District judgment: continued success. Family judgment: strong majority preference, not unanimity. Measured result: contested, with favorable local administrative trends and concerning external estimates. Reader’s question: how much causal uncertainty is acceptable after eight years, and what result would trigger reconsideration?

Independence, Missouri: a public reauthorization with a childcare invoice

Independence adopted a four-day calendar in 2023. District reporting showed its state annual performance score rising from 70.1 in 2022 to 76.4 in 2023 and 80 in 2024, retention rising from 81 to 90.8 percent, and new-teacher experience rising from 4.41 to 8.55 years.⁹⁸ The district linked the

⁹⁵ 27J Schools, [“Four-Day School Week Overview”](#), accessed July 18, 2026.

⁹⁶ 27J Schools, [“Schedule Change Survey Results Are In”](#), accessed July 18, 2026.

⁹⁷ Erica Meltzer, Chalkbeat Colorado, [“What Happened After 27J Adopted a Four-Day School Week?”](#), February 7, 2023.

⁹⁸ Independence School District, [“Four-Day School Week”](#), accessed July 18, 2026. District-published staffing, applicant, accountability, care, and schedule figures are treated as local administrative evidence.

schedule to recruitment and continued the model. In November 2025, voters chose to retain it, giving the case an unusually direct legitimacy measure.⁹⁹

The family distribution remained uneven. Monday care runs from early morning to evening and includes meals, but costs roughly \$30 for school-age children and \$40 for prekindergarten. Parent Brandi Prunte compared the disruption to being “back in the COVID shutdown.”¹⁰⁰ Other families valued appointments, rest, and time together.

District judgment: success. Community judgment: electoral majority success, with a real dissenting minority. Measured result: strong before-and-after staffing and performance associations but no clean proof that the calendar caused them. Reader’s question: does voter reauthorization settle legitimacy while leaving the achievement and family-cost questions open?

Cartwright Elementary: a reversal that families did not demand

Cartwright Elementary School District in Phoenix used a four-day week from 2023-24 through 2025-26. It will return to five days in 2026-27 after a 3-2 board vote. Supporters of the return emphasized academic continuity and transitions. The former superintendent said families overwhelmingly preferred four days, and a reported staff survey suggested around 60 percent might not return or would consider leaving under five days. “They said having that extra day was a blessing,” she said of families.¹⁰¹

The district had also reported teacher vacancies falling from 28 to 3 after adoption.¹⁰² That association is striking but not sufficient to prove causation. The board’s reversal shows that institutional judgment is not fixed: one board can define success as staffing and preference, another as five-day academic continuity.

District judgment: divided and ultimately reversed. Family judgment: reported majority preference for four days. Measured result: favorable staffing association, insufficient public causal academic evaluation. Reader’s question: what evidence justified overriding family and staff preference, and was that evidence published before the vote?

⁹⁹ KCTV5, [“Independence Voters Elect to Keep District’s Four-Day School Week”](#), November 5, 2025.

¹⁰⁰ Associated Press, [“For Families in Four-Day School Districts, the Fifth Day Can Bring Relief or Strain”](#), accessed July 18, 2026.

¹⁰¹ ABC15 Arizona, [“Cartwright School District Weighing Option of Going Back to Five-Day School Weeks”](#), 2026, accessed July 18, 2026; and FOX 10 Phoenix, [“Cartwright School District Returning to Five-Day Week”](#), 2026.

¹⁰² FOX 10 Phoenix, [“Arizona School Districts Filling More Vacant Teacher Positions as New School Year Begins”](#), accessed July 18, 2026.

Webster County: the danger of declaring victory too early

Webster County used a four-day schedule for about a decade before returning in 2014. Leaders later recalled that scores rose during the first five years and that the district “saved a bunch of money.” Over time, scores fell, the initial professional-development momentum faded, and a state warning increased pressure to change.¹⁰³¹⁰⁴

Parents had generally liked the four-day week. Yet the return to five days generated relatively little opposition, while students were less pleased. The case is valuable because it does not fit a stable label. An early evaluation could have called it successful. A later one would have found loss of academic momentum.

District judgment: early success, later failure. Family judgment: preference for four days but acceptance of return. Measured result: reported gains followed by decline, without a modern causal design. Reader’s question: must a policy earn continuation anew every three to five years?

Chattooga County: a decade from optimism to reversal

Chattooga County adopted four days in 2010. By 2015, district leaders reported better attendance, discipline, and test results.¹⁰⁵ In 2019 the board returned to five days, citing weak test performance and community opposition. At a heated meeting, former student Erin Cooper asked, “Who do any of you think you are, making a decision of this magnitude?”¹⁰⁶

The comment can be read in two directions: opposition to the reversal or anger at how the decision was made. Either way, it shows that calendar identity can become embedded in family life. A later board is not merely restoring an old schedule. It is disrupting a settled social arrangement.

District judgment: positive early, negative late. Community judgment: contentious. Measured result: conflicting self-reports across time. Reader’s question: did the policy deteriorate, did expectations change, or did the district fail to preserve the practices that made the early years work?

Peach County: fiscal triage rather than a universal model

During the recession, Peach County used a four-day calendar to close a roughly \$1 million budget gap and avoid about 39 layoffs. Superintendent Susan Clark said, “There was nothing else for us to do.”¹⁰⁷

¹⁰³ Kentucky School Boards Association, [“Webster County Calendar Change: Back to Five Days”](#), accessed July 18, 2026.

¹⁰⁴ 14 News, [“Low Test Scores Mean Longer School Weeks in Webster County”](#), 2014, accessed July 18, 2026.

¹⁰⁵ Action News Jax, [“Students Go to School Just Four Days a Week in Local County”](#), 2015, accessed July 18, 2026.

¹⁰⁶ WSB-TV, [“School District Switches Back to Five-Day Schedule After Decade of Four-Day Weeks”](#), 2019, accessed July 18, 2026.

¹⁰⁷ CBS News, [“Four-Day School Weeks Gain Popularity Across U.S.”](#), accessed July 18, 2026.

The district reported improved attendance, lower substitute expense, and graduation growth. Churches and youth organizations offered care for a few dollars.

Emergency conditions matter. A calendar that is preferable to mass layoffs can be successful against that counterfactual without becoming best practice for a stable district. District and family adaptations also depended on local organizations.

District judgment: a useful emergency instrument. Family judgment: care burdens were partly buffered by community partners; representative survey evidence is limited. Measured result: district-reported gains, weak independent attribution. Reader's question: should a crisis exception remain after the fiscal crisis ends?

Iowa and Missouri deliberation: adoption is not the only evidence

Martensdale-St. Marys and Saydel reported promising early results after 2024-25 adoption. Martensdale-St. Marys estimated about \$15,000 in savings and a 75 percent decline in secondary discipline. Its superintendent said, "It changed our culture. People smile in our building." Saydel reported a ten-point English-language-arts increase and half as many behavior calls. Families in both communities used relatives, adjusted work, or paid for care, and some could not afford the available option.¹⁰⁸

The same regional reporting followed districts that declined adoption. At Clearwater R-1 in Missouri, families pressed the board on learning and care. One asked, "Are our kids going to learn what they should learn?" After a three-hour meeting the board retained five days. Washington Community School District in Iowa voted 5-0 against the change after surveys were nearly split and leaders raised childcare, food, special education, and English-learner concerns.¹⁰⁹

These are not "failed four-day districts." They are counterfactual cases. A proposal can expose community priorities, prompt discussion of pay or facilities, and be rejected because the package is incomplete.

Texas: growth, hybridization, and the missing childcare system

Texas moved from two four-day districts in 2017-18 to 181 in 2024-25. In 2023-24, 129 of the 156 identified districts were rural, 23 were towns, and four were suburban. The average four-day district

¹⁰⁸ Iowa Public Radio, ["Pass or Fail: Midwest Families and Districts Are Learning from the Four-Day School Week"](#), August 26, 2025. The report profiles Martensdale-St. Marys, Saydel, Clearwater R-1, and Washington Community School District.

¹⁰⁹ Iowa Public Radio, ["Pass or Fail: Midwest Families and Districts Are Learning from the Four-Day School Week"](#), August 26, 2025. The report profiles Martensdale-St. Marys, Saydel, Clearwater R-1, and Washington Community School District.

served populations with about 63.2 percent economic disadvantage, 15.9 percent special education, and 8.7 percent limited English proficiency.¹¹⁰

In 2024-25, researchers classified 145 districts as full four-day and 36 as hybrid. Hybridization matters. Floresville ISD reported 66 percent parent and 82 percent staff support for a 2025-26 hybrid calendar and planned care and meals on off Fridays.¹¹¹ Ponder ISD scheduled five days for the first nine weeks, then four longer days, with Friday care through fifth grade.¹¹²

These designs may preserve intensive beginning-of-year instruction or reduce the number of care gaps. They also make the label less informative. The calendar must be evaluated by actual days, hours, off-day frequency, service package, and subgroup participation.

The University of Houston census found only one full four-day district publicly offering paid off-day childcare. That should not be read as proof that 144 others abandoned children. It demonstrates the absence of a standardized district care system and the need for direct family evidence.

Oklahoma: a natural test of the savings narrative

Oklahoma's early cohort included Asher, Avant, Barnsdall, Battiest, Fort Towson, Liberty in Tulsa County, Lone Wolf, Midway, Moyers, Prue, Rattan, Sharon-Mutual, Straight, Swink, Valliant, and Wilson. The state health-impact assessment examined finance, meals, care, health, and community concerns.¹¹³

Because nine districts spent more and seven less after adoption, the cohort undermines the notion that a four-day calendar mechanically creates savings. It does not prove that none saved money. It shows that other budget changes can dominate the calendar effect, and that a projection should identify the exact positions, trips, meals, and energy loads that disappear.

District judgment: varied local adoption. Family judgment: concerns about food and care documented through stakeholder work. Measured result: no conclusive aggregate finance saving. Reader's question: should "cost saving" be removed from campaign materials unless each line item is named and audited later?

¹¹⁰ University of Houston Education Research Center, [The Four-Day School Week in Texas: Prevalence and Policy Context](#), 2025, accessed July 18, 2026. Researchers manually reviewed calendars for all 1,021 traditional districts.

¹¹¹ *San Antonio Express-News*, ["Floresville ISD Approves Hybrid Calendar with Four-Day Weeks"](#), 2025, accessed July 18, 2026.

¹¹² *Houston Chronicle*, ["Another Texas School District Adopts a Four-Day Week"](#), 2025, accessed July 18, 2026.

¹¹³ Oklahoma State Department of Health, [Four-Day School Week Health Impact Assessment](#), 2017.

Reversals are evidence, but not a single causal category

Webster, Chattooga, Cartwright, and Jasper are named reversals. Historical reviews also identify multiple Michigan districts returning, seven of eleven Minnesota districts ordered back by the state for 2014-15 with an eighth returning voluntarily, seven Montana districts dropping the schedule around 2015-16, and six South Dakota districts returning during an earlier period.¹¹⁴

Reversal can mean academic concern, state minimum requirements, a changed board, a repaired budget, family demand, or loss of a staffing advantage. Lumping all reversals as proof of failure is as weak as treating all continuations as proof of success. A reversal is a prompt to inspect the reason, the vote, and the outcome after return.

What the four-day record permits the reader to say

Four-day calendars are highly acceptable to many families who have lived with them, especially in rural communities. They can produce a valuable common weekday for appointments, planning, family time, work, or recovery. Some districts report stronger applicant pools, morale, discipline, and local performance.

The most credible multi-state evidence, however, shows slower average academic growth, modest budget savings, little reliable attendance improvement, and no consistent teacher-retention solution. Effects are less negative when weekly instructional time is maintained. Family benefits and burdens are uneven and frequently hidden in unpaid care and work changes.

The reader can reasonably judge a well-supported, high-hour rural calendar differently from a low-hour nonrural one. What the evidence does not justify is a blanket promise that four equals five.

¹¹⁴ Center on Reinventing Public Education, [What Do We Actually Know About the Four-Day School Week?](#), 2018. The review summarizes early adoption and reversal evidence across several states.

IV. Why the two policies must not be bundled

Tiered busing and a four-day week can be adopted together, but they operate through different equations.

Tiering changes peak capacity and may increase operating-day miles:

$$\text{weekly route miles} = \text{operating days} \times \text{miles per operating day}$$

A four-day week changes the first factor. Staggering changes the second. If one lowers days 20 percent while the other raises daily miles 41.1 percent, the combined weekly effect is:

$$0.8 \times 1.411 = 1.1288$$

That is about a 12.9 percent weekly increase, not a transportation saving relative to the original five-day nonstaggered baseline. This is precisely the relationship in the Jerome AM-mile forecast.

The same separation applies to student time. A four-day schedule reduces weekly exposure by removing a day. A tiered route may shorten or lengthen each operating-day ride. Reporting only weekly time can make a very long daily ride appear improved because it happens once less.

The adoption question should therefore be a two-by-two comparison:

	Nonstaggered routing	Staggered routing
Five-day calendar	Baseline or improved five-day routes	Fleet reuse with five operating days
Four-day calendar	Isolates calendar effect	Bundles calendar and tiering effects

A board should vote on each policy separately unless the district publishes all four cells. Each should have its own score, conditions, and reversal trigger. A good four-day proposal cannot repair a poor tiered-bus plan, and transportation efficiency cannot answer an academic calendar question.

V. Family impact ledger

The morning and afternoon span

Families do not experience an average bell. They experience the span from the first child's wakeup to the last child's return. A multi-school household may face an elementary pickup before 6:30, a high-school start near 9:00, and an activity dismissal after 5:00. The relevant variable is:

$$\text{family day span} = \text{latest required return} - \text{earliest required wake or departure}$$

Districts should report the median, 90th percentile, and maximum span for sampled households with children in one, two, and three school levels. That would have made the concerns in Jerome, Pender County, Bismarck, Roanoke, and Denver visible before launch.

Work and income

A schedule can affect the time an adult starts work, leaves work, refuses a shift, or remains employed. Salaried flexibility and hourly inflexibility should not be averaged away. The family survey should ask for hours and dollars, not only satisfaction.

At minimum, report:

- adults changing normal workdays, start or end times, location, or job;
- weekly paid hours gained or lost;
- unpaid leave or attendance penalties;
- new driving trips and mileage;
- paid care expense; and
- reliance on a minor child or unpaid adult relative.

The purpose is not to monetize every relationship. It is to stop calling transferred time free.

Childcare

Care availability has four components: a seat, the right hours, an accessible location, and an affordable price. A program open 8:00 to 3:00 does not solve a 6:30 to 5:30 workday. A \$30 option may be affordable for one family and impossible for another. A seat ten miles away without transportation may not be a seat.

Survey questions should distinguish “did not need,” “preferred family care,” “could not afford,” “no space,” “hours did not fit,” “transportation unavailable,” and “child could not be accommodated.” Combining all nonusers into one number hides failure.

Sibling coordination

Tiering intentionally separates school times. That can help a parent make sequential drop-offs, or make it impossible to leave younger siblings in an older child’s care. A four-day week can align siblings on the off-day or leave children in different charter, preschool, college, or employer calendars. The unit of analysis must be the household, not just the student.

Meals and health

Count meals replaced, not simply meals served on operating days. Report nurse contacts, medication timing, counseling continuity, therapy minutes, fatigue events, and physical-activity opportunities. A longer school day can create evening meal and sleep compression even when students like the extra day off.

Disability and access

Students with disabilities can experience longer specialized routes, fewer weekly therapy contacts, or off-day programs that are not physically or behaviorally accessible. Families may have less substitute care available. Evaluation should include individualized-education-program compliance, missed related-service minutes, specialized-route ride distributions, restraint or behavior incidents, and parent experience. A districtwide average cannot answer this question.

Rurality is not a proxy for one family type

Rural districts often have strong extended-family networks, long travel distances, agricultural schedules, limited commercial childcare, fewer employers, and fewer service providers at the same time. Any one of those can make four days attractive or burdensome. The national evidence is predominantly rural because adoption is. It should not be generalized to all rural households or transferred uncritically to suburbs.

Family testimony and measurement

Public comments are evidence of experience, not prevalence. A single parent's account can reveal a failure mode that an average misses. It cannot tell the reader how common that experience is. Surveys estimate prevalence only if the sample, question wording, response rate, missing groups, and weighting are disclosed.

The best practice is to pair both:

1. publish attributable or consented narrative themes;
2. publish representative quantitative distributions;
3. show who did not respond; and
4. keep a public log of changes made because of family evidence.

VI. Reader-controlled scorecards

How to use the scorecards

These instruments do not encode the author's verdict. The reader assigns the score. Before scoring, write the realistic alternative at the top. A policy can look excellent against a collapsing system and weak against a funded, feasible repair.

Use only points supported by public evidence. A forecast can earn planning points but not outcome points. A district or vendor claim can receive provisional credit if its calculation and data are published; independent or audited evidence deserves more confidence. If a measure is missing, score the evidence actually available rather than the hoped-for result.

Recommended interpretation:

Score	Reader interpretation
85-100	Strong evidence of broad success, subject to all veto checks
70-84	Conditional success; continue only with named repairs and monitoring
55-69	Materially mixed; redesign or time-limited pilot before continuation
Below 55	Evidence does not justify continuation against the stated alternative

This scale is a suggested reading aid, not a scientific cutoff. A reader may change weights before seeing the results, but should not change them afterward merely to obtain a preferred answer.

Scorecard A: staggered or tiered busing, 100 points

Counterfactual being scored against: _____

Evidence period: _____ Scored by: _____ Date: _____

Category	Maximum	Full-credit standard	Reader score
Reliability	15	At least 95% on-time by a published definition; missed pickups rare; 90th-percentile lateness improves; results stable beyond launch	____ / 15
Ride and wait time	12	Median, 90th percentile, maximum, earliest pickup, and latest drop improve or remain within public thresholds by age	____ / 12
Safety and supervision	12	Stops and walks audited; darkness and weather addressed; no unsafe capacity; incident rates published by exposure	____ / 12
Driver workforce	10	Filled shifts, vacancy, overtime, absence coverage, turnover, training, and spare capacity improve sustainably	____ / 10
True district cost	10	Recurring net cost, transition cost, capital, contract change, mileage, fuel,	____ / 10

Category	Maximum	Full-credit standard	Reader score
		maintenance, and contingencies are audited	
Family work and care	15	Representative evidence shows manageable childcare, work, sibling, meal, and activity effects; mitigation is funded	____ / 15
Student sleep and day span	10	Age-appropriate bells; family-day-span distribution and student sleep evidence are acceptable	____ / 10
Equity and disability	8	Results disaggregated; no subgroup bears disproportionate rides, walks, missed services, or family cost	____ / 8
Engagement and consent	5	Alternatives and household schedules were tested before decision; feedback visibly changed design	____ / 5
Implementation and recovery	3	Routes field-tested; data verified; help and fallback plans worked; public corrections were prompt	____ / 3
Total	100	Add only evidenced points	____ / 100

Tiered-busing veto checks

Regardless of total, mark the result “not yet acceptable” if any unresolved item is true:

- ☐ A student-location failure, systematic missed pickup, or unsafe overload remains unresolved.
- ☐ Actual pickups violate the district’s published earliest-pickup threshold without an individual family agreement.
- ☐ The district cannot produce median, 90th-percentile, and maximum ride times by age and program.
- ☐ Specialized transportation or individualized services are out of compliance.
- ☐ Family care and work burdens were never measured after launch.
- ☐ Savings exclude known added buses, contract changes, overtime, mileage, or household transportation displacement.
- ☐ A vendor grades its own performance without district verification.
- ☐ The policy is still only proposed; outcome points have been awarded anyway.

Tiered-busing reader finding

District believed it was: [] successful [] mixed [] unsuccessful [] too early

Families believed it was: [] successful [] mixed [] unsuccessful [] unknown

Measured results indicate: [] successful [] mixed [] unsuccessful [] insufficient evidence

Reader's verdict and conditions:

Scorecard B: four-day school week, 100 points

Counterfactual being scored against: _____

Evidence period: _____ Scored by: _____ Date: _____

Category	Maximum	Full-credit standard	Reader score
Instructional time and quality	18	Weekly and annual hours preserved near evidence-supported levels; fatigue, pacing, intervention, and teacher planning are evaluated	____ / 18
Academic growth	15	Multi-year growth, proficiency, course failure, and subgroup results are at least equivalent to a credible comparison	____ / 15
Attendance and completion	8	Chronic absence, daily attendance, graduation, dropout, and credit completion improve without definitional artifacts	____ / 8
Teacher workforce	10	Applicant quality, filled positions, turnover, absence, workload, and neighboring-district effects improve beyond normal variation	____ / 10
True district cost	8	Recurring net savings are audited, material, and not based on deleting services later restored	____ / 8
Family work, care, and time	14	Representative households report manageable care and work effects; costs, capacity, hours, transport, and informal care are measured	____ / 14
Meals, services, and safety	10	Fifth-day meals, supervision, disability access, therapy, counseling, and intervention are specified, funded, and used	____ / 10
Equity	7	Outcomes and burdens are acceptable across income, disability, language, age, locale, housing status, and household type	____ / 7
Consent and legitimacy	5	Families, students, and staff received complete alternatives; survey validity is published; dissent informs mitigation	____ / 5
Evaluation and durability	5	Independent or reproducible annual review, public thresholds, sunset, and reversal plan exist	____ / 5
Total	100	Add only evidenced points	____ / 100

Four-day-week veto checks

- ☐ The proposal does not publish annual and weekly instructional hours.
- ☐ The district has no plan for meals, childcare, disability access, or fifth-day intervention.
- ☐ Care is claimed as available without hours, price, capacity, location, and transportation.

- ☐ Academic results are reported only as proficiency snapshots, without growth or a credible comparison.
- ☐ The staffing claim reports applications but not filled positions, applicant quality, or retention.
- ☐ Savings are gross projections with no post-adoption audit.
- ☐ A survey reports percentages without questions, denominator, response rate, respondent groups, or nonresponse analysis.
- ☐ The first continuation vote occurs before enough outcome data exist, and no later sunset is scheduled.

Four-day-week reader finding

District believed it was: [] successful [] mixed [] unsuccessful [] too early

Families believed it was: [] successful [] mixed [] unsuccessful [] unknown

Measured results indicate: [] successful [] mixed [] unsuccessful [] insufficient evidence

Reader's verdict and conditions:

Combined-policy decision rule

Do not average the two scores. A four-day score of 90 cannot compensate for a tiered-bus score of 40, because the harms occur through different mechanisms. A cautious combined adoption standard is:

1. each policy scores at least 70 independently;
2. neither has an unresolved veto;
3. all four calendar-routing alternatives are published;
4. the family ledger includes work, care, meals, driving, and sibling schedules;
5. implementation is staged with a small pilot or shadow routing test; and
6. each policy can be reversed without requiring reversal of the other.

Family cost worksheet

Weekly family item	Before	Proposed or after	Difference	Dollar value if family chooses
Paid childcare hours	_____	_____	_____	\$_____
Unpaid adult care hours	_____	_____	_____	\$_____

Weekly family item	Before	Proposed or after	Difference	Dollar value if family chooses
Minor-sibling care hours	_____	_____	_____	\$_____
Adult paid work hours	_____	_____	_____	\$_____
Extra household driving miles	_____	_____	_____	\$_____
Extra meals supplied at home	_____	_____	_____	\$_____
Student bus and wait hours	_____	_____	_____	Not monetized / \$_____
Earliest family wake time	_____	_____	_____	Not monetized
Latest required return	_____	_____	_____	Not monetized
Total family-day span	_____	_____	_____	Not monetized

The worksheet permits a household to leave time unpriced. The purpose is visibility, not forcing every hour into dollars.

VII. Twenty-part interrogatory for a board, district, consultant, or vendor

The following are exactly twenty principal interrogatories. Each contains required subparts. They may be issued as written questions, a records request, a public-hearing checklist, or conditions in a request for proposals. “Produce” means provide the underlying document or machine-readable data, not only a slide summary.

Interrogatory 1: Legal authority and governance

- a. Identify every statute, regulation, contract term, collective-bargaining provision, state instructional-time rule, transportation entitlement, and board policy governing the proposal.
- b. State which elements require a board vote, state waiver, labor agreement, individualized-education-program review, or public hearing.
- c. Identify the official personally accountable for routing, calendar, family mitigation, special education, finance, data validation, and launch recovery.
- d. Produce the decision calendar, delegations of authority, procurement approvals, and legal review.
- e. State whether the board may approve tiering and the four-day calendar separately.
- f. Explain the reversal authority and the earliest date either policy could be ended.

Interrogatory 2: Problem definition and baseline

- a. State the problem in measurable terms, including driver vacancies, uncovered runs, on-time performance, ride distributions, academic trends, staffing turnover, budget gap, and family complaints.
- b. Produce at least three years of monthly baseline data and the data dictionary.
- c. Distinguish a chronic structural problem from a one-year launch, contractor, leadership, or labor-market problem.
- d. Identify which students and schools create the binding transportation peak.

- e. State the size of the problem if no policy changes.
- f. Identify every baseline measure that cannot be produced and explain why.

Interrogatory 3: Definition of success

- a. State the district's success thresholds before adoption for reliability, safety, ride time, learning, staffing, finance, family burden, equity, and legitimacy.
- b. Assign public weights to those dimensions and explain who chose the weights.
- c. Identify every nonnegotiable threshold that cannot be traded for savings.
- d. Define on-time, completed route, missed pickup, instructional hour, vacancy, retained teacher, childcare availability, and family satisfaction.
- e. State when a launch becomes eligible to be called successful.
- f. State what result requires repair, suspension, or reversal.

Interrogatory 4: Alternatives and counterfactuals

- a. Produce a comparison of five-day nonstaggered, five-day staggered, four-day nonstaggered, and four-day staggered designs.
- b. Price added drivers, driver wage and benefit changes, added buses, smaller vehicles, contractor options, boundary changes, attendance-zone changes, walk-zone changes, hub stops, public-transit coordination, and no change.
- c. Identify alternatives rejected before modeling and explain why.
- d. State the realistic consequence of no action, not merely the worst imaginable consequence.
- e. Use the same enrollment, fuel-price, wage, and service assumptions across alternatives.
- f. Produce sensitivity tests for enrollment, driver availability, traffic, weather, and cost inflation.

Interrogatory 5: Data provenance and reproducibility

- a. Identify every source system, extract date, field definition, exclusion, imputation, and manual correction.
- b. Produce de-identified route and calendar data sufficient for an independent analyst to reproduce totals.
- c. State whether “daily mileage” means operating-day mileage, weekly mileage divided by five, or another normalization.
- d. Reconcile every number that differs across presentations, agendas, consultant files, and public statements.
- e. Identify metrics supplied or calculated by a vendor and the district’s verification procedure.
- f. Preserve versioned models, assumptions, scripts, route files, survey instruments, and decision logs.

Interrogatory 6: Routing model and validation

- a. Produce route maps, stop lists, run chains, deadhead segments, school loading time, tier buffers, traffic assumptions, capacity assumptions, and special-transportation constraints.
- b. State the optimization objective and every penalty or constraint in the model.
- c. Identify whether the model minimizes buses, drivers, miles, cost, ride time, earliest pickup, lateness, or a weighted combination.
- d. Produce results under at least three tier orders and three buffer assumptions.
- e. Field-drive every materially changed route at the correct time of day with realistic loading.
- f. Identify routes that fail under a ten-minute delay and show downstream effects.
- g. Produce a shadow-operation or limited-pilot plan before systemwide launch.

Interrogatory 7: Driver workforce

- a. Produce driver headcount, full-time equivalents, licenses, vacancies, applicants, hires, training completion, absenteeism, overtime, turnover, substitute coverage, and reasons for exit.
- b. Separate contractor and district employees.
- c. State whether the proposal reduces peak drivers, total paid hours, split shifts, or only the vacancy count on paper.
- d. Report the length of the driver work span and unpaid intervals under each alternative.
- e. Identify wage, benefit, schedule, management, and working-condition alternatives.
- f. State how many drivers are projected and actually available at launch plus a spare margin.
- g. Report staffing results for at least three years after adoption.

Interrogatory 8: Capital and operating cost

- a. Produce five-year and ten-year cash-flow comparisons for each alternative.
- b. Separate buses, leases, depreciation, maintenance, fuel, tires, insurance, drivers, aides, dispatch, software, consulting, training, overtime, childcare, meals, utilities, and transition expense.
- c. State whether a bus reduction is a canceled purchase, sale, retired reserve, or merely reduced peak use.
- d. Reconcile operating-day miles, weekly miles, annual miles, and normalized daily values.
- e. Identify costs shifted to other district departments, families, employers, nonprofits, municipalities, or students.
- f. Require a post-launch audit using actual invoices, payroll, mileage, and contracts.
- g. State the minimum net saving that would justify the disruption.

Interrogatory 9: Ride time, waiting, and on-time performance

- a. Produce before, forecast, and actual median, 75th, 90th, 95th, and maximum rides by age, school, geography, disability, and program.
- b. Produce earliest pickup, latest drop, wait time, transfer time, and family-day span.
- c. Define on-time separately for stop pickup, school arrival, school departure, and home drop.
- d. Report the number of students beyond 30, 45, 60, 75, and 90 minutes.
- e. Report instructional minutes lost to late transportation.
- f. Publish daily route-level performance for the first sixty days and monthly thereafter.
- g. Explain every breach of a public threshold and the remedy date.

Interrogatory 10: Safety and supervision

- a. Audit each new stop for visibility, traffic speed, crossing, lighting, snow, heat, shelter, disability access, and adult supervision.
- b. Produce seat capacity, actual loads, standees, pass-bys, behavior incidents, crashes, near misses, medical events, and student-location failures.
- c. State the number and age of children waiting or walking in darkness.
- d. Identify who is legally and practically responsible at hub stops and in family-responsibility zones.
- e. Produce bad-weather and vehicle-breakdown contingencies for cascading tiers.
- f. For four-day calendars, report fifth-day location, supervision, transport, and incidents by age.
- g. State the safety vetoes that cause immediate route or calendar suspension.

Interrogatory 11: Sleep, health, and fatigue

- a. Produce proposed wake, pickup, bell, dismissal, activity, homework, and bedtimes by age.
- b. Explain why the tier order is age-appropriate and compare at least two alternative orders.
- c. Measure sleep before and after with a defined instrument in a representative sample.
- d. Report nurse visits, medication-timing problems, fatigue, behavior, mental-health contacts, and missed breakfast.
- e. For longer four-day schedules, evaluate attention and fatigue by time of day and grade.
- f. Report effects on student athletes, employed students, and students caring for siblings.
- g. State how health evidence will change bells or instructional minutes.

Interrogatory 12: Instruction and achievement

- a. Produce weekly and annual scheduled instructional minutes by grade before and after, excluding lunch, passing, noninstructional arrival, and optional time.
- b. Explain curriculum pacing, intervention, laboratory, career-technical, arts, recess, and elementary-specials changes.
- c. Report growth and proficiency in math and reading, course grades, failures, credits, advanced-course access, and subgroup results.
- d. Name the five-day or prechange comparison and justify comparability.
- e. Separate association from causal inference in every public claim.
- f. Report results for at least three post-adoption years and identify test or cohort changes.
- g. State the academic threshold for continuation or reversal.

Interrogatory 13: Attendance, behavior, and completion

- a. Produce daily attendance, chronic absence, transportation-caused tardiness, suspensions, referrals, graduation, dropout, and credit recovery.
- b. Keep denominators and definitions consistent across calendars.
- c. Explain whether fewer possible absence days mechanically alter a reported rate.
- d. Disaggregate by grade, disability, income, language, race or ethnicity where lawful, school, route, and geography.
- e. Identify simultaneous attendance or behavior programs.
- f. Do not attribute a one-year change to the calendar without a credible comparison.
- g. Publish adverse results with the same prominence as favorable results.

Interrogatory 14: Childcare, family work, and household income

- a. Survey whether any adult changes job, workday, hours, shift, location, commute, leave, or paid work because of the policy.
- b. Report paid and unpaid care hours, price, capacity, waitlists, hours, locations, transportation, age eligibility, and disability accommodation.
- c. Distinguish families who do not need care from those who cannot obtain or afford it.
- d. Report additional household trips, miles, meals, and sibling-care hours.
- e. Measure households with children in multiple schools and calendars.
- f. Disaggregate by income, child age, household type, employment type, and geography while protecting privacy.
- g. Produce the district's mitigation budget and the unmet-need plan.

Interrogatory 15: Meals and fifth-day supports

- a. State exactly how breakfast, lunch, snacks, take-home food, and dietary accommodations will be provided on the fifth day.
- b. Identify provider, funding, site, time, transport, eligibility, capacity, and actual participation.
- c. List tutoring, intervention, enrichment, library, recreation, mental-health, and health services available.
- d. Explain whether participation is optional, assigned, fee-based, or limited.
- e. Identify students unable to reach or use the services and why.
- f. Report missed special-education and related-service minutes.
- g. Compare promised capacity with realized use and unmet demand.

Interrogatory 16: Equity, disability, language, housing, and geography

- a. Conduct an impact analysis for students with disabilities, English learners, low-income students, students without stable housing, foster students, rural or remote students, and families without vehicles.
- b. Include specialized-route ride times and off-day program accessibility.
- c. Identify which group receives the earliest and latest tiers and the longest walks.
- d. Test surveys for language, disability, internet, and work-schedule access.
- e. Report benefits and burdens by subgroup, not merely support percentages.
- f. Fund a remedy where one group carries a disproportionate cost.
- g. State what inequity would stop implementation.

Interrogatory 17: Activities, employment, and interagency schedules

- a. Produce effects on athletics, arts, clubs, tutoring, faith activities, student jobs, sibling care, and family meals.
- b. Map conflicts with career-technical centers, dual enrollment, colleges, charter schools, preschools, private schools, and neighboring districts.
- c. State how late dismissal affects travel, daylight, competition, and homework.
- d. State how the off-day affects practice, games, teacher work, and facility cost.
- e. Identify students who lose a course or activity because of conflicts.
- f. Price additional activity buses, supervision, meals, and overtime.
- g. Obtain written coordination plans from affected partner institutions.

Interrogatory 18: Engagement, surveys, and legitimacy

- a. Produce every survey instrument, invitation method, response count, response rate, duplicate-control method, language, and raw de-identified result.
- b. Separate parents, students, staff, employers, nonparent residents, and voters.
- c. Report results by school, grade, household structure, bus use, income proxy, disability, language, and geography when privacy permits.
- d. Identify groups underrepresented or not reached.
- e. Present neutral alternatives with full hours, bells, costs, care, and academic evidence before asking preference.
- f. Publish how feedback changed the design.
- g. Distinguish approval of studying, piloting, adopting, and permanently continuing.

Interrogatory 19: Implementation, communication, and contingency

- a. Produce a responsibility matrix, critical path, readiness gates, training plan, route test, family-notification schedule, and escalation procedure.
- b. Prohibit simultaneous launch of avoidable major changes unless each interaction is tested.
- c. Verify contact information and deliver individualized route notices with enough time for correction.
- d. Staff a multilingual help center and publish response-time standards.
- e. Create plans for missing students, late cascading routes, vendor failure, driver absence, weather, technology outage, and childcare overflow.
- f. Define who may pause service and how families will be compensated or supported after failure.
- g. Publish a daily launch dashboard and correction log.

Interrogatory 20: Evaluation, sunset, reversal, and public reporting

- a. Establish a pre-adoption baseline, named evaluator, data schedule, public dashboard, and annual report.
- b. Separate district judgment, family judgment, and measured outcomes in every report.
- c. Require independent validation of material savings, performance, and academic claims.
- d. Set repair, suspension, and reversal thresholds before launch.
- e. Schedule a sunset or public reauthorization after enough outcome data exist, ordinarily no later than three years.
- f. Preserve the ability to reverse tiering without reversing the calendar and vice versa.
- g. Produce a transition-back plan, budget, labor schedule, notice timeline, and student-support plan.

- h. Publish unfavorable findings and missing data without delay or euphemism.

VIII. Glossary

Bell tier: A group of schools with similar start and dismissal times, arranged so buses can serve another group before or after it.

Capacity: The lawful and practical number of riders a bus can carry. Rated seats may overstate usable capacity when ages, equipment, or assigned seating differ.

Causal inference: A conclusion about what a policy changed, as distinct from what happened after the policy. Credible causal designs attempt to account for other changes and selection.

Chronic absenteeism: Missing a specified share of enrolled school days, commonly 10 percent. Calendar changes can affect the number of possible days, so definitions and denominators must be shown.

Cost shifting: Moving an expense or obligation from the district to families, employees, nonprofits, municipalities, or students rather than eliminating it.

Counterfactual: The credible alternative against which a policy is evaluated. It may be five-day nonstaggered service, added drivers, different bells, or another funded plan.

Deadhead: Bus travel without student passengers, often between the end of one run and the start of another.

Difference-in-differences: A research design comparing change over time in an adopting group with change in a comparison group. Its credibility depends on assumptions including comparable pre-policy trends.

Disaggregation: Reporting results separately for meaningful student, family, school, route, or geographic groups rather than only a district average.

District-reported: A measure published by the district and not necessarily independently audited. The label does not imply falsehood.

Double or triple run: Sequential runs completed by one driver or bus, often serving different schools or tiers.

Effect size: A standardized measure of difference, such as standard deviations, that permits comparison across tests or scales.

Externality: A benefit or cost experienced outside the decision-maker's budget, such as a parent's lost work or increased traffic.

Family-day span: Time from the earliest required wake or departure to the latest required return or supervised activity among children in a household.

Family-responsibility zone: An area in which the district does not provide conventional bus service and assigns the household responsibility for reaching school or a designated stop.

Fifth-day programming: Childcare, tutoring, meals, activities, intervention, teacher planning, or other services offered on the weekday when regular four-day classes do not meet.

Four-day school week: A regular calendar with four principal student attendance days in most weeks. Local hybrids and occasional fifth days require additional description.

Hub stop: A centralized pickup location serving students who may previously have used neighborhood stops.

Instructional hours: Time legally and practically devoted to instruction. Published totals should state whether passing, lunch, arrival, recess, advisory, or optional time is included.

Load factor: Actual riders divided by usable seats, preferably measured by trip rather than enrollment assignments.

Normalized daily mileage: Weekly mileage divided by a fixed number of days for comparison. It is not necessarily the distance traveled on an actual operating day.

Operating-day mileage: Distance traveled on a day when the route operates.

On-time performance: Share of events meeting a defined time window. The event and tolerance must be stated, such as school arrival no later than the bell and no more than five minutes early.

Percentage point: The arithmetic difference between percentages. A change from 60 to 66 percent is six percentage points and a 10 percent relative increase.

Pickup window: The permitted or communicated interval around a scheduled stop time.

Planned versus realized: Forecast outputs before implementation versus measured outputs after. They must never occupy the same outcome column without a label.

Route: A broader assignment that may contain multiple runs. District usage varies, so local definitions must be obtained.

Run: One continuous sequence of stops and a school destination or origin.

Selection bias: A distortion created when adopting districts or survey respondents differ systematically from comparisons or nonrespondents.

Standard deviation: A unit describing variation. An achievement effect of -0.05 standard deviations is modest for one year but may accumulate and may differ across groups.

Statistical significance: A probability-based statement about whether an estimate is distinguishable from zero under a model. It does not by itself establish practical importance or model validity.

Staggered or tiered busing: Coordinating different school bells so buses and drivers can serve sequential groups.

Sunset: A rule that ends a policy unless a board, voters, or another authority affirmatively renews it after review.

Survey response bias: Error arising when respondents differ from those who do not respond or when question framing affects answers.

Vendor-reported: A metric supplied by a contractor with a commercial role. It may be useful, but methods and district verification should be published.

Weekly-normalized mileage: Another term for expressing a weekly total as if spread across a standard five-day week. It should never be labeled simply “daily” without explanation.

Abbreviations

- APR: Annual Performance Report in Missouri’s accountability system.
- CTE: Career and technical education.
- ELA: English language arts.
- IEP: Individualized Education Program.
- MAP: Measures of Academic Progress.
- NCSL: National Conference of State Legislatures.
- NWEA: The education research and assessment organization formerly known as Northwest Evaluation Association.
- RLA: Reading language arts.
- SD: Standard deviation.

IX. Methods, evidence grading, and limitations

Search and inclusion method

The review covers July 2006 through July 18, 2026. Searches combined terms for four-day school week, four-day calendar, staggered bells, tiered buses, multi-tier transportation, double routes, driver shortage, start-time change, parent, survey, audit, evaluation, reversal, and district names. Priority went to official district and state documents, peer-reviewed research, university and legislative syntheses, audits, and established local reporting that included attributable family voices.

A case entered the detailed inventory when it met at least one of these criteria:

- it supplied quantitative pre- and post-policy outcomes;
- it documented a reversal, rejection, or major repair;
- it contained attributable district and family judgments;
- it tested a mechanism important to national interpretation; or
- it was directly relevant to the Jerome decision.

Cases were coded as proposed, rejected, implemented, repaired, continuing, reversed, or insufficiently measured. A proposed case was not permitted an outcome label. District, vendor, family, and independent claims were kept separate.

Evidence grades

Grade	Description	Appropriate use
A	Peer-reviewed causal study, strong audit, or transparent administrative data with reproducible comparison	Supports measured outcome inference with stated limits
B	Systematic review, official evaluation, or strong multi-year administrative report with limitations	Supports cautious generalization or strong local finding
C	District or vendor before-and-after report, representative survey, or well-sourced local investigation	Supports local judgment and hypothesis, not clean causation
D	Attributable anecdote, public comment, news snapshot, forecast, or proposal document	Reveals experience, design, or failure mode, not prevalence or outcome
U	Essential measure not publicly available or not located	Must remain unknown, not assumed favorable or unfavorable

Evidence grade is not moral rank. A parent's account may be Grade D for prevalence and still be decisive evidence that a specific child experienced a two-hour ride. A randomized or quasi-experimental average may be Grade A and still fail to describe that household.

Quote method

Quotations were kept short, attributed, and linked in footnotes. They were selected to show the range of public judgments, not to create equal numbers of positive and negative lines. A quote from a superintendent describes the superintendent's position. A quote from a parent describes that parent's experience. Neither automatically represents every member of the group.

Numerical method

Reported figures retain the source's practical precision. Derived values are identified. Jerome weekly mileage was calculated as operating-day mileage times operating days. The derived four-day nonstaggered scenario holds the current 496.55 AM miles constant on four operating days. It is a counterfactual arithmetic cell, not a district route forecast.

Percent changes use:

$$\frac{\text{new} - \text{baseline}}{\text{baseline}} \times 100$$

Thus five-day staggered mileage is $(700.68 - 496.55) / 496.55 = 41.1\%$. Four-day staggered weekly mileage is $(2,802.72 - 2,482.75) / 2,482.75 = 12.9\%$.

Limitations

First, there is no complete national historical tiered-busing registry. Second, four-day databases differ in definition and public accessibility. Third, local journalism is more likely to cover controversy than quiet adaptation. Fourth, district surveys often omit response rates or subgroup weights. Fifth, simultaneous changes make attribution difficult. Sixth, districts may remove old web pages, producing survivorship bias in the documentary record. Seventh, this review did not independently interview families. Eighth, results available by July 18, 2026 cannot evaluate policies beginning later.

The report avoids a different error as well: absence of evidence is not evidence of failure. A case with no public parent data is labeled unknown. A forecast is labeled forecast. A reported association is not rewritten as a causal fact.

X. A reader's conclusion, intentionally unfinished

The national evidence offers no single winner. Tiered busing often succeeds at its narrow engineering purpose: fewer peak buses and drivers can cover more students. Its public legitimacy depends on whether time saved in the transportation office is purchased with reasonable hours in the household. Four-day calendars often succeed at preference: many participating families and students want to keep them. Their academic and fiscal records are less favorable than their popularity.

The hardest cases are not the obvious failures. Jefferson County's opening day was unacceptable by the district's own words. A reader need not balance that conclusion. The harder cases are Bismarck, Pender County, 27J, Independence, and Cartwright, where important gains and important costs coexist.

Three rules protect the reader from a manufactured verdict:

1. never let a district average erase the tail of the distribution;
2. never let family preference erase measured learning, or measured learning erase family value; and
3. never let a combined proposal hide which policy caused which change.

The empty score boxes are the point. Success is not a public-relations adjective. It is a set of disclosed values applied to disclosed evidence, with a named alternative and a date for reconsideration.