
Improving Third-Grade Math Proficiency in Sunflower County Consolidated School District

2024 – 2025 Applied Policy Project

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Content	Technical Report



FRANK BATTEN SCHOOL
of LEADERSHIP *and* PUBLIC POLICY



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Disclaimer

I conducted this study as part of the professional education program at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. Any judgments and conclusions are solely my own and are not necessarily endorsed by the Frank Batten School, the University of Virginia, or any other mentioned agencies.

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Honor Pledge

On my honor, as a student at the Frank Batten School of Leadership and Public Policy, I have neither given nor received unauthorized aid on this assignment.

A handwritten signature in black ink, appearing to be 'C. Ruzicka', is written in the bottom right corner of the page.

Executive Summary

Early math literacy is critical for students' long-term academic achievement, postsecondary success, and economic opportunity. Nevertheless, in Sunflower County Consolidated School District (Sunflower), over 50 percent of third-graders have scored below proficiency on the end-of-year state assessment—the Mathematics Mississippi Academic Assessment Program (MAAP)—every year since 2018. This trend undermines school district goals to (a) provide effective teaching and leadership at every school and (b) ensure annual academic progress. Without intervention, Sunflower third-graders—who are predominantly Black and socio-economically disadvantaged—risk falling further behind their peers across Mississippi and the country.

Challenges barring students' success stem from geohistorical and policy shortcomings. Following a state-mandated merger in 2012, Sunflower experienced a 145.5 percent expansion to its student population—without a corresponding increase in the share of experienced teachers. The school district continues to struggle with teacher overextension due to low recruitment and high turnover. Additionally, emphasis on English instruction—reinforced by the 2013 Literacy-Based Promotion Act in Mississippi—has shifted attention and resources away from mathematics. Although Sunflower supports 30-minute remedial blocks daily, students miss sessions due to frequent transportation delays or needing to eat school-provided breakfast. Currently, there are no substitutes for the remedial blocks, while within-district coordination remains siloed across subject areas. This technical report offers three policy alternatives—weighed on their relative cost, effectiveness, and feasibility—to address these challenges:

Out-of-School Time (OST) Tutoring: This option would provide one-hour, small-group instruction to struggling third-graders three times a week for 25 weeks—totaling 75 hours annually. Leveraging a ratio of four students to one instructor, the program would recruit hourly tutors—ideally, college students from local institutions—rather than rely on current staff. OST tutoring aligns well with current intervention strategies, employing iReady diagnostics to distinguish students with the most needs and tailor individualized academic plans to them. The author also projects the policy alternative to generate the highest impact, raising the overall third-grade mathematics proficiency to 62.55 percent. While the cost-per-student is higher (\$657), OST tutoring retains the lowest total expenditure (\$122,911) among the three options. This policy alternative is expected to garner strong stakeholder buy-in, given (a) current districtwide interest in OST interventions and (b) its transportation provisions for enrolled families.

Extend the Academic Year by 20 Days: This option would require all third-graders to attend school for 20 additional days. While this extension (a) increases the instructional time designated for mathematics and (b) projects that 60.30 percent of third-graders would be proficient on the Math MAAP, the policy alternative comes with a high total expenditure (\$144,277) and tradeoffs to staff and family autonomy. Teachers, support

staff, and families are likely to resist the mandatory extension, given concerns regarding incommensurate compensation and scheduling inflexibility. Finally, the approach lacks integration with the remedial blocks, weakening overall instructional coherence.

Provide Performance-Based Compensation and Blanket Stipends for Math Teachers: The final option would provide tiered financial incentives to third-grade math teachers based on student achievement outcomes and classroom observations. This policy mirrors proven models like the Teacher Excellence Initiative, which reinforced instructional quality within the Dallas Independent School District—without significantly altering its existing educational infrastructure. This option is highly compatible with the remedial blocks and maintains the lowest cost-per-student (\$458). Nevertheless, the projected share of third-graders who would be proficient on the Math MAAP (60.30 percent) and stakeholder support are modest compared to OST tutoring.

Following this analysis, the technical report recommends that Sunflower pilot OST tutoring in the 2026-27 academic year. This policy alternative (a) ensures the highest academic gain, (b) leverages existing resources, (c) maintains strong stakeholder buy-in, and (d) incurs the least total financial expenditures. With thoughtful implementation, OST tutoring represents the most practical strategy for improving third-grade math proficiency in Sunflower.

Introduction

Early math and English literacy, developed in kindergarten and elementary school, are highly predictive of students' academic achievement across their educational careers and future success. Education economists and researchers note that skill development in these grades is crucial because the highest rate of learning occurs at this time, and more challenging concepts scaffold onto this baseline thereafter (Fiester, 2010; Dougherty, 2014; Golding, 2018). Their abilities around the school entry period determine their access to additional instructional interventions and reinforcement from teachers, as well as placement into similarly performing groups (Claessens & Engel, 2013)—otherwise referred to as performance tracking, which occurred to 24 percent of elementary school students prior to COVID-19 (Institute of Educational Sciences, 2021). Goldhaber and co-authors (2020) focus on the third grade, identifying this moment as an inflection point in the educational process that indicates later course enrollment choices, testing outcomes, and the likelihood of graduating secondary school.

The benefits of early math literacy accrue. Pundits widely recognize that achieving math proficiency in earlier grades cascades to students enrolling in postsecondary education and finding employment opportunities later on, with the goal of progressing through society as productive adults (Hanover Research, 2016; Golding, 2018). Nonetheless, there are profound discrepancies in students' opportunities to attain early math literacy. For example, rural schools do not have access to the same funding streams as their urban and suburban counterparts, so they struggle to recruit and retain high-quality teachers for math across all grade levels (Graham & Provost, 2012). The disadvantages incurred by geographical location and lack of access to resources intersect with students' gender, race, and socioeconomic backgrounds in ways that widen the achievement gap over time (Howley & Gunn, 2003; Cameron et al., 2014).

These latter points, concerning the engrained relationship between rurality and students' math capabilities, contextualize the remainder of this technical report, which addresses related challenges for third-grade students in Sunflower County Consolidated School District (Sunflower). This policy analysis delivers the following components:

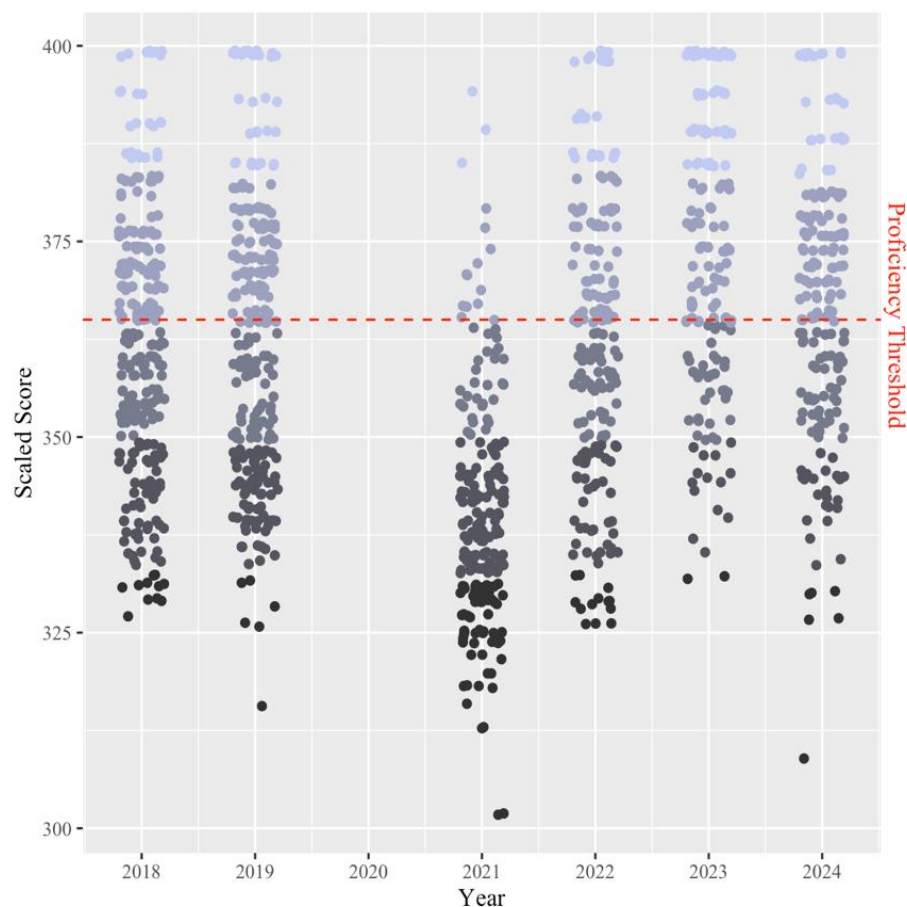
- A problem definition and background context that frame the stakes of this problem.
- A client assessment, including a discussion of their current approaches and existing gaps.
- An evaluation of three distinct policy options to confront the problem against three relevant criteria.
- A final recommendation and corresponding implementation plan based on the mentioned evaluation.
- Visual elements and numeric calculations to supplement assertions.

Problem Statement

District leaders and school-based teaching personnel in Sunflower recognize the importance of early math literacy for students’ success but struggle to support quality instruction and remediation in earlier grades. Hence, too many students in the school district are below proficient in mathematics before graduating from the third grade, predisposing them to worse outcomes in their immediate- and long-term futures.

For reference, within the last six years—2020 excluded—55.1 percent of Sunflower students were below proficient in the end-of-year state assessment, the Mathematics Mississippi Academic Assessment Program (MAAP). Figure 1 visualizes these outcomes, including the year 2018. This trend is troubling for Sunflower and its five-year strategic plan. For one, lower academic achievement reflects poorly on the second goal of “providing every school with effective teachers and leaders” to support productive learning environments. Failure to meet this objective and the resulting absence of early math literacy also compromises the primary goal of “ensuring that all students show academic [...] growth each year” (Sunflower, 2021). Without this foundation, third-graders in Sunflower risk falling behind their peers in comparable school districts, making it more challenging for them to recover and limiting their later education and career opportunities.

Figure 1. Sunflower Third-Graders’ Scores on the Math MAAP.

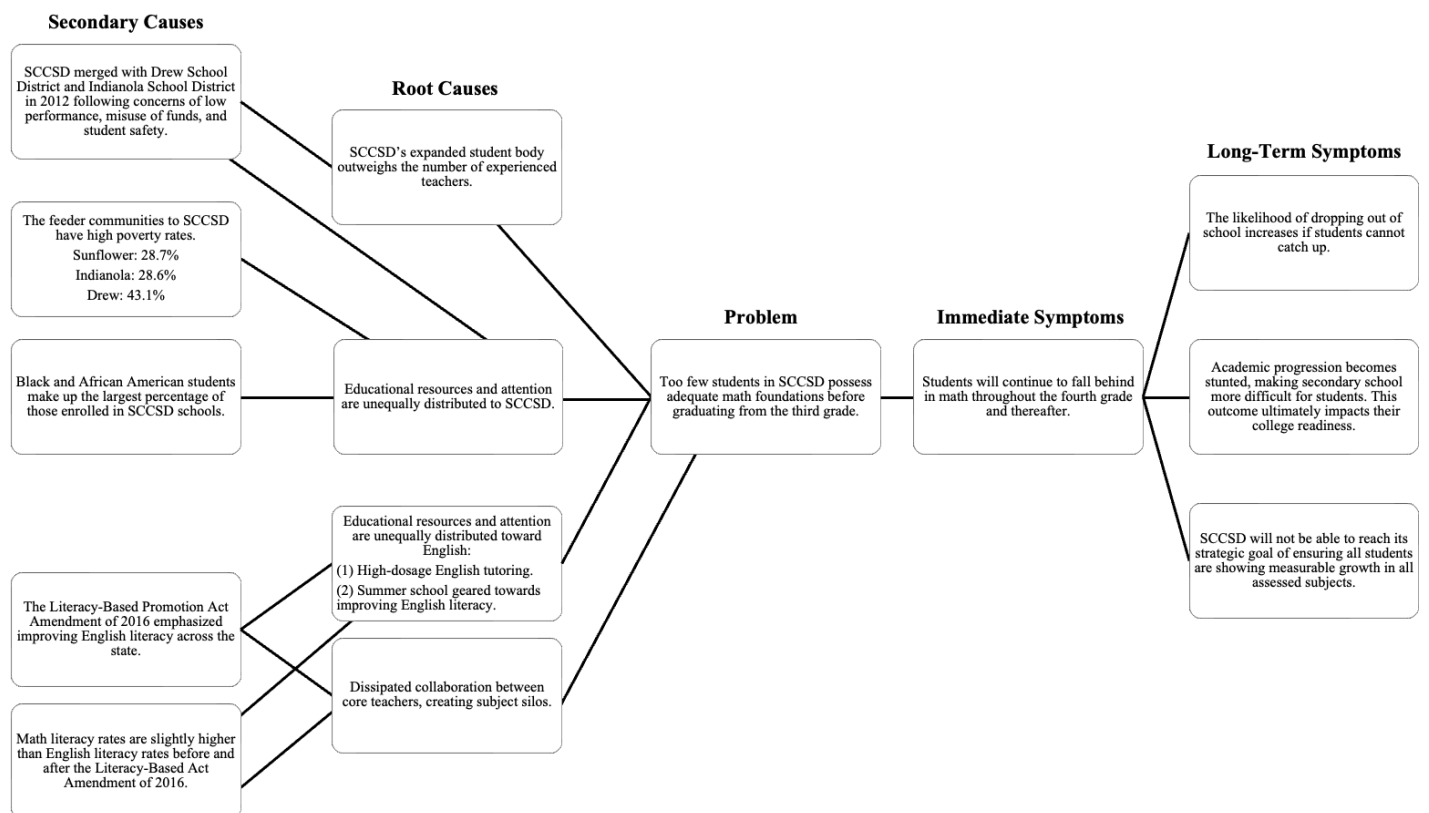


[Scores were not recorded in 2020, during the COVID-19 pandemic, due to school closures.]

Background Information

This background section highlights the distinct geohistorical and policy contexts that motivate the problem in Sunflower—Figure 2 visualizes this commentary through a root-cause analysis model. Regarding geohistorical contexts, Sunflower is located in the Mississippi Delta, a rural region nationally infamous for failing to prepare its students for educational success. One decade earlier, the Mississippi Delta comprised over 70 failing schools across 16 impoverished counties (Fitts, 2014). In a news article covering the 2017-18 school year, Betz (2018) remarked that even in Mississippi—where school districts consistently produce poor outcomes—students from the Mississippi Delta were falling farther behind. She substantiates this assertion, citing that students from the region scored an average of 16 percent lower than their peers on standardized tests for that school year. Sunflower is no exception to this pattern of underperformance. In 2012, due to concerns about low student achievement, misuse of federal and state funds, and student abuse allegations, Governor Phil Bryant signed into law the merger of Indianola, Drew, and Sunflower Independent School Districts into the current consolidated Sunflower (Wright, 2012).

Figure 2. Root-Cause Analysis Model of Low Third-Grade Mathematics Proficiency in Sunflower.



Despite the intention, the merger hurt Sunflower by expanding its student body well beyond its roster of experienced teachers—these ratios have not recovered since. Journals estimate that the student population grew by 145.5 percent following this action (Mader, 2015; Barnes, 2017). During the 2023-24 school year, Sunflower

employed (a) 8.5 percent fewer experienced teachers and (b) 17.2 percent fewer teachers with valid teaching certificates compared to state averages. Interviews with math and English teachers, as well as academic coaches, revealed that school-based teaching personnel in Sunflower still struggle with overextension and burnout today.

Sunflower students also come from impoverished families. In 2022, the poverty rate was 28.7 percent in Sunflower, 28.6 percent in Indianola, and 43.1 percent in Drew County (U.S. Census Bureau, 2022a; 2022b; 2022c). Schools' poor quality mirrors the economic realities of students' communities, as 30.0 percent of the Sunflower operating budget comes from local property taxes. Students' racial makeup adds additional nuance to this condition, as Black and African American students comprise the most significant proportion of those enrolled in Sunflower (Data USA, 2022). The racial history of the South and the disparities faced by this group both (a) contribute to the poverty issue and (b) compound it in ways where educational resources and state-level attention to students are unequally distributed to Sunflower. Race-relation historians, as well as Dylan Jones, the Director of Federal Programs in Sunflower, mark this cause as an integral contributor to low math performance (Quintana & Mahgoub, 2016). However, an intervention at this scale will likely be out of their implementation scope.

Within the last decade, Sunflower shifted its focus to improving English literacy over math. Two critical contexts contribute to this swing. According to Jones, students in Sunflower have traditionally had higher math literacy rates than English, which enabled false security between district leaders and school-based teaching personnel. Note that this difference has always been minor, and both English and math literacy rates are still well below Mississippi and national averages. State legislation further formalized this consensus.

Mississippi passed the 2013 Literacy-Based Promotion Act to ensure that students are at a basic level in English standards before matriculation into fourth grade. Those who do not satisfy this benchmark in April either (a) have an opportunity to retest in May or (b) are held back the following year to continue strengthening their English foundations (RMC Research Corporation, 2019). The state, however, did not enact similar measures regarding students' math performance. Although Mississippi legislators introduced a bill with similar tenets for math improvement (Mississippi Legislature, 2025), the proposal was struck down in the 2025 regular legislative session. Therefore, as long as third-graders can pass the English MAAP, they can graduate—regardless of their math proficiency. In response, school districts across the state, including Sunflower, have overwhelmingly organized their capital resources and teaching professionals around English instruction. The de-facto transition has dissolved collaborative efforts between core teachers, yielding subject silos throughout Sunflower over the last decade.

Client Overview

Sunflower is home to more than 3,400 students across 14 school locations, five of which are elementary schools serving third-grade students. As stated previously, the majority of Sunflower pupils are students of color

and come from economically disadvantaged backgrounds, making them particularly vulnerable to educational disparities. As such, Sunflower prioritizes promoting an environment of emotional and social safety to ensure that every child—at the very least—has a protected opportunity to learn and grow (Sunflower, 2021).

Status Quo and Existing Gaps

In accordance with this mission statement, Sunflower proudly employs a multi-tiered system of support (MTSS) at every grade level to meet students' individual needs. However, as mentioned, school-based teaching personnel agree that the biggest priority for third-grade students is to ensure they are equipped to pass the English MAAP by the testing season in April. Motivated by the strict provisions of the 2013 Literacy-Based Promotion Act, this emphasis becomes systematically disproportionate. It permeates Sunflower through (a) the implicit top-down messaging from district and school-location leaders and (2) the distribution of supplies and daily efforts. The following discussion summarizes common themes from interviews with the stakeholders closest to this problem, academic coaches and teachers.

Academic coaches maintain two primary responsibilities in Sunflower: (a) collaborating with teachers and teacher aides in all subject areas—including elementary history, science, English, and mathematics—to improve their instructional practices and (b) partnering with external education consultants to maximize student outcomes. Regarding the former responsibility, academic coaches lead professional learning communities with school-based teaching personnel so they can voice their concerns and circulate tested strategies to address them. This process seeks to foster teacher-based leadership across Sunflower while also establishing unified instructional cultures within each school. Although the professional learning communities are open to each elementary subject area, regard for English often commands these sessions due to the stressors incurred by the English MAAP. Similarly, academic coaches find that their individualized coaching caters to enhancing English instruction over the other subject areas. Meanwhile, Sunflower teachers and teacher aides support high-dosage, 30-minute intervention blocks every morning of the week—before their regular instructional periods—to address gaps in students' academic performance. However, similar to the professional learning communities and individualized coaching sessions, English instruction and remediation tend to dictate these intervention blocks.

During one interview, a third-grade math teacher—who transferred from Jackson Public School District in 2022—raised an intriguing proposition concerning the absence of after-school tutoring options in Sunflower. Follow-up interviews with Jones revealed that after-school tutoring options required too much coordination between schools and families in the past—students designated for these supports often missed sessions when parents forgot they needed to stay late. This misalignment frustrated teachers, teacher aides, and hourly tutors, who adjusted their schedules to assist struggling students. Sunflower opts to borrow mandated time from every student instead. Nonetheless, the assumption that leveraging regular hours maximizes tutoring support does not hold perfectly in practice. Many students arrive late to the remedial block, as buses are behind schedule or students

need more time to eat school breakfast—a service provided to over 90.0 percent of Sunflower students because they qualify for free and reduced-price meals. There may then be a missed opportunity to implement out-of-school time tutoring, similar to other Mississippi school districts.

Criteria

This evaluation examines the cost, effectiveness, and feasibility of three distinct policy alternatives to improve third-grade math proficiency in Sunflower. The primary objective is to elevate one option for Sunflower to pursue as a single-year pilot program in the 2026-27 academic year, dated two years out from the 2024-25 school year. Jones supports these blanket characteristics, as the school district will not make a multi-year investment without measurable results—Sunflower is preparing contingencies for potential cuts from the federal government. This timing offers Sunflower sufficient time for program ideation, personnel training, intervention rollout, and data collection, aligning with best practices for mid-scale pilot programs (Regional Educational Laboratory of Appalachia, 2021). These policy alternatives include *(a) introducing out-of-school time tutoring, (b) extending the academic year by 20 days, and (c) providing performance-based compensation and blanket stipends for third-grade math teachers.*

The technical report contextualizes these policy alternatives by first inspecting the status quo. The daily, 30-minute remedial blocking is not considered a policy alternative but rather a baseline from which to stack the pilot programs, for the client expressed not wanting to eliminate the current approach. Scaled scores for its criteria are, therefore, not included in the outcomes matrix. The evaluative criteria for the pilot programs are as follows:

(Monetary Cost): This criterion weighs the total direct and indirect expenses per student incurred by the school district implementing one of the three policy alternatives. Cost calculations are premised on personnel and resource requirements from comparable programs and adjusted to the salary schedules and market conditions in Sunflower. Final cost projections account for an annual 4.5 percent inflation rate, which the Federal Reserve (2025) sets as a benchmark for budgeting public initiatives.

(Effectiveness): This criterion considers the estimated share of third-graders who would be proficient in the Math MAAP, given adoption of the status quo combined with each policy option. For policy alternatives with identical proficiency levels, the author breaks the criterion down further to regular and advanced proficiency percentages to differentiate between outcomes. These analyses privilege impact estimates from randomized controlled trials, quasi-experimental studies, and meta-analyses, with findings adjusted to reflect program modifications for the proposed options in Sunflower.¹ The referenced literature offers robust evidence

¹ The author converted impact estimates from standard deviations to point gains on the Math MAAP. They cumulated Sunflower third-graders' outcomes in the control year before the adoption of the status quo (2018) and calculated a standard deviation value (17.19 points), which was

attributing improvements in early math achievement—kindergarten through fourth grade—to the programs themselves.

(Feasibility): This criterion gauges the likelihood that Sunflower stakeholders—service providers and recipients—would support an alternative. The technical report delineates feasibility through two measures: (a) stakeholders’ perceived buy-in during the program ideation and rollout phases and (b) the extent to which the alternatives are compatible with the daily, 30-minute remedial blocking. Accordingly, the author does not warrant a feasibility assessment for the status quo.

Alternatives and Evaluation

Status Quo: Maintain the Current Remedial Blocks

Sunflower requires students to attend a 30-minute remedial block five times per week to strengthen their performance in weaker subject areas. As the first tier of their MTSS, the intervention targets every elementary, middle, and high school student rather than only those who are struggling in school. Interviews with school-based teaching personnel indicated that third-graders generally dedicate two of these 30-minute sessions to math. Each term, students take proficiency screeners on iReady software, which generates an individualized academic plan entailing virtual lessons, workbooks, and games based on their skill level. Teachers leading the remedial blocks leverage a blend of one-on-one iReady programming on Chromebooks and small-group instruction to maximize outcomes by the end of the academic year. The latter strategy may include rotating students through activity stations or having them work out math problems in front of their peers.

Monetary Cost

The author considers the costs incurred by maintaining the daily, 30-minute remedial blocks through both the 2025-26 and 2026-27 academic years. Unlike the following three policy alternatives, the status quo does not require a gap year for program ideation and staff training—the latter component is an ongoing responsibility that occurs every academic year for the curriculum coordinator, academic coaches, and teachers. As such, the author projects the cost of (a) preparing administrative and school-based teaching personnel and (b) providing direct instruction to be \$31,968—or **\$171 per third-grader**—at the highest estimate. This value reflects adjustments against a two-year inflation rate, as mentioned in the criterion description. Further, it excludes any fixed costs that Sunflower has already expended, given that Chromebook acquirement happened once, and the three-year service

multiplied against the impact estimates for each policy option. Say a policy alternative yielded a 0.15 standard deviation increase in students’ math achievement. The author would multiply this effect size against the standard deviation value to get a 2.58 point gain on the Math MAAP. They then added the point gain associated with each policy alternative to students’ Math MAAP scores in the control year and re-calculated the total share of third-graders who would meet proficiency standards.

subscription with iReady extends through the 2026-27 academic year. Refer to Appendix A for more precise cost calculations.

Effectiveness

The author employed an interrupted time series analysis to assess the remedial blocks' impact on third-grade Math MAAP scores. This design leverages 2019 as a cutoff to compare third-graders' performance before and after program implementation. The author also incorporated year- and school-fixed effects to account for differences across time and schools, along with a control for students' disability status. With an estimated gain of 6.52 points per student attributed to the morning intervention blocks, approximately **58.05 percent** of Sunflower third-graders would be proficient in mathematics each academic year. This value offers a reference point for the three following policy alternatives.

Although the analytic model lacks some context—such as information on students' gender and race, as well as more longitudinal data prefacing the 2019 cutoff—due to missing data from Sunflower, the author confirmed their findings against two comparisons. For one, the 58.05 percent mathematics proficiency rating is reasonably close to that of third-graders' outcomes between 2019 and 2024 (54.33 percent)—excluding 2020 because Mississippi did not administer the Math MAAP that year, and 2021 due to the achievement volatility resulting from the COVID-19 pandemic. The author also compared the effect size of the remedial blocks (0.37 standard deviations) against Nickow and peers' (2020) meta-analysis, which associated high-dose, during-day mathematics tutoring with a 0.38 standard deviation increase in elementary students' performance. Appendix E covers this evaluation in further detail.

Alternative 1: Introduce Out-of-School Time Tutoring

The Mississippi Department of Education (2022) describes high-dosage tutoring as additional guidance streamlined with during-day academic instruction. The agency urges that implementing high-dosage tutoring can (a) add approximately 2.5 years of learning and (b) reduce students' failure rate by at least 60.0 percent (pp. 5-6). As noted, Sunflower leverages this intervention via its MTSS model but lacks robust out-of-school time (OST) tutoring options similar to other Mississippi school districts. Therefore, Sunflower might consider OST tutoring a viable strategy for increasing third-grade math proficiency rates.

This policy alternative proposes that Sunflower implement OST tutoring across each of its elementary schools in the 2026-27 academic year to provide small-group instruction—one instructor to four students—for third-graders not projected to meet proficiency on the Math MAAP, as determined by the iReady screener in the Fall term. Structured support from academic coaches and hourly tutors would occur for an hour per session, three sessions per week, for 25 weeks—totaling 75 hours annually. This structure hinges on suggestions made by the Institute of Education Sciences (Fong, 2021) and the Center for American Progress (Shoemaker, 2024).

Referencing numbers from 2018—which had the largest third-grade population and highest determined need—141 Sunflower third-graders would be enrolled in the program. Maintaining the suggested tutor-student ratio would thereby require 36 hourly tutors.

While licensed teachers would make the most effective facilitators, relying on them would place an undue burden on their existing responsibilities (Robinson et al., 2021). Sunflower could, therefore, leverage its existing partnerships with local post-secondary education institutions—Delta State University, Mississippi Valley State University, and Mississippi Delta Community College—to recruit hourly tutors among education majors and other relevant degree-awarding programs (Mississippi Valley State University, 2018; Patton, 2019). To address past transportation challenges between the elementary schools and students’ guardians, Sunflower would ensure busing availability for all students enrolled in the pilot program.

Monetary Cost

Unlike the status quo approach, calculating costs for OST tutoring requires different projections for the 2025-26 and 2026-27 academic years. Year one involves (a) planning by district administrators and (b) training the five academic coaches and 36 hourly tutors, while year two only includes delivering the OST tutoring. Meanwhile, to address transportation as a barrier to accessing OST tutoring, the author accounts for transit costs for all 141 enrolled third-grade students. Sunflower owns conventional flat-face cowl yellow buses with a maximum 77-seat capacity (Mississippi Department of Education, 2023). Given that the 141 third-graders are evenly distributed across the five elementary schools in the school district, one bus per location is sufficient. This evaluation also includes the cost of state-mandated driver training, which totals four hours per academic term (Mississippi Department of Education, 2012). Training and service delivery on the transportation side would all occur in the second year.

Hence, OST tutoring would cost \$122,911—or **\$657 per enrolled student**—to implement. Note that this policy alternative pertains only to third-graders with greater educational needs, which results in a slightly higher cost per student—despite incurring the lowest total expenditure among the three options. Refer to Appendix B for a more thorough breakdown of the cost calculations.

Effectiveness

Popularized by policymakers throughout the late 1990s and early 2000s, OST tutoring premises on the belief that providing disadvantaged students with more time and opportunities can improve their learning. Lauer and colleagues (2006) assessed this claim in their meta-analysis of 35 studies examining the efficacy of OST tutoring on math and reading outcomes—though only two studies explicitly focused on rural school districts. That said, 27 of the studies (1) establish treatment and control conditions through randomization or (2) match student groups based on their demographic characteristics, enabling the researchers to derive robust causal estimates.

They concluded that after-school programming increased math achievement by 0.16 standard deviations, while summer school accomplished an increase of 0.09 standard deviations—both values being statistically significant. Lauer et al. (2006) determined that after-school programs are more effective than the latter because they provide continuity for topics reviewed during regular school hours.

Heinrich and colleagues (2014) expanded upon the meta-analysis by evaluating OST tutoring programs in Chicago, Dallas, Milwaukee, and Minneapolis, using a quasi-experimental approach. Focusing on elementary and middle school students, they found that those who received around 80 hours of OST tutoring saw an average gain of 0.14 standard deviations in their math performance. Nonetheless, given several concerns about this study, the author opted for the higher effect size of the two (0.16 standard deviations). For one, Heinrich et al. (2014) only found significant effects in Chicago Public Schools—the district with the largest student population and the lowest tutor hourly rates. This outcome prompts concern for the generalizability of their findings to resource-constrained circumstances. Moreover, their focus on urban school districts breaks from the rural setting inherent to Sunflower, where limited staff availability, transportation barriers, and smaller student samples matter.

In implementing OST tutoring, Sunflower could see an average gain of 2.75 points for students who would have failed to meet mathematics proficiency otherwise. Combined with the remedial blocks, the author projects that **62.55 percent** of Sunflower third-graders would be proficient in the Math MAAP. For additional details on how the author translated the standard deviation benchmark into point gains and proficiency estimates, please consult the effectiveness criterion description and Appendix E.

Feasibility

Academic coaches and teachers are likely wary about overcommitting to more responsibilities at school. However, this assumption is not complete. Interviews with teachers transferring to Sunflower from neighboring school districts suggest that staff support OST tutoring for students. In fact, they view the absence of this program as a missed opportunity to assist struggling third-graders. The author addresses these concerns by substituting licensed teachers with hourly tutors, placing the instructional onus on those actively seeking an additional stream of income rather than straining current staff.

Hence, the foremost barrier to implementing OST tutoring lies in effective communication with students' families—ensuring they are informed about when and where it occurs and which students are expected to attend—as well as coordinating transportation to guarantee students can return home safely. To address this challenge, the author proposes school-provided busing in lieu of relying on parent pickup or students walking home. Providing this service signals that Sunflower is not just mandating programming but is investing substantial resources to make it accessible for the students who need it most. The author thus concludes that OST tutoring would garner **high stakeholder buy-in**.

This policy alternative is also ***highly compatible*** with the remedial blocks. The iReady program would be the connective strand between the two interventions, helping to (a) identify which third-graders are not on track to meet proficiency on the Math MAAP and (b) align during-day instruction with after-school remediation. By sharing diagnostic data with hourly tutors, Sunflower can guarantee that each session targets skill gaps where students require the most guidance. This approach promotes instructional continuity—one of the most crucial elements of OST tutoring—while avoiding the need to develop data-sharing capabilities from the ground up.

Alternative 2: Extend the Academic Year by 20 Days

Scholars have examined longer academic calendars since the 1980s. Policy adoption, however, has only recently gained traction in school districts like Richmond Public Schools (Kamras & Cooper, 2024) and the School District of Philadelphia (Simon, Kenworth, & Wright, 2024). The impetus is to increase instructional time to mitigate potential learning loss that occurs during Summer intermission and other disruptions—most recently, to address the COVID-19 pandemic. This policy alternative follows in practice, prompting Sunflower to enroll all third-grade students in a 20-day extension program in the 2026-27 academic year. In this model, all five elementary schools would start 20 days before the traditional 180-day calendar and continue through its end, resulting in a 200-day school year. Each of the extension days would focus exclusively on mathematics instruction, thereby supporting a limited three-hour, thirty-minute schedule that mirrors current summer school programming in Sunflower.

The universality of this policy alternative implies that third-grade math teachers and students cannot (a) transfer laterally between elementary schools to avoid the pilot program or (b) withdraw from it without leaving Sunflower. Recognizing this potential challenge, the client suggested the following compensation packages to incentivize involved staff:

- **Bonus Compensation Rates:** Equating to a salary increase of 3.00 percent for administrative and support personnel, and 5.00 percent for third-grade mathematics teachers.
- **Flat-Rate Stipends:** Stipends worth \$200.00 for pre-service training and \$1,500.00 for service delivery.

Sunflower would also provide nutritional services and busing for enrolled students and their families.

Monetary Cost

In year one, costs are driven by program planning and pre-service training. Sunflower personnel involved in this phase include the Director of Federal Programs, the curriculum coordinator, one principal and academic coach per elementary school, and 12 math teachers—an increase of three teachers from the 2024-25 academic year for a buffer. Intervention ideation would require a substantial 60 hours, while training reflects the summer school preparation plan of 16 hours. Meanwhile, the expenses shift to service delivery and operational support in year two. In particular, transit costs would increase, given that all 267 third-graders would require busing. The

author, therefore, doubled the number of bus operators who would pick up and drop off students. Each school location would also employ one child nutritional staff member and two janitors, who would rotate in two-hour shifts to cover both in- and after-school cleaning needs. Note that the costs for breakfast and lunch are excluded due to federal reimbursement for low-income students.

Altogether, extending the academic calendar by 20 additional days would cost Sunflower \$144,277—or **\$540 per third-grader**—to implement. This finding reflects the respective compensation packages suggested by the client. Appendix C details these calculations more thoroughly.

Effectiveness

Pischke (2007) investigated the impact of extended instructional time on students' achievement. The study exploited variations in the German academic calendar following a 1964 reform, transitioning schools from a Spring- to Fall-semester start. Within two years, most German states opted for two shorter school years for students—condensed by two-thirds of the previous academic calendar—while others prolonged the reform. Comparing these groups revealed that enrollment in shorter academic calendars made students 24 percent more likely to repeat a grade.

Fitzpatrick et al. (2011) provide contexts that are more relevant to Sunflower. These researchers focused on kindergarteners and first-graders across the United States, referencing data from the 1998-99 Early Childhood Longitudinal Study. The study leverages school districts' assignments—effectively random, as the decisions were arbitrary—to math and reading assessments at the beginning and end of the school year to establish pre-post measures. Fitzpatrick et al. (2011) found that an additional school day increased math scores by 0.005 standard deviations for kindergarteners and 0.007 standard deviations for first-graders. Both results were statistically significant. Hayes and Gershenson (2016) replicated these outcomes while observing that students in the tenth percentile of baseline math achievement saw smaller gains than their peers. This result suggests that extended instructional time alone may not be enough for the most disadvantaged students, which is a reality for Sunflower students. These studies provide appropriate benchmarks for estimating the effectiveness of this policy alternative. Their emphasis on (a) nationally representative, longitudinal data, (b) early elementary school outcomes, and (b) students' baseline performance make them relevant and realistic for this underperforming, rural school district.

Using the lower estimate of 0.005 standard deviations—even as it pertains to kindergarteners rather than third-graders—yields a conservative estimate for the policy alternative. The author multiplied this effect size by the 20 additional days, resulting in an estimated impact of 0.10 standard deviations. Afterward, they translated the value to a gain of 1.72 points on the Math MAAP, following the methods outlined in the effectiveness criterion description and Appendix E. When combined with the remedial blocks, **60.30 percent** of third-graders would be proficient in the Math MAAP. While this percentage mirrors that of the following policy alternative, the share of students who would meet basic proficiency (37.45 percent) and advanced proficiency (22.85 percent) differs.

Feasibility

Given the lack of opt-out flexibility, the universality of this policy alternative may warrant pushback from school-based teaching personnel and third-graders' families. Academic coaches and teachers may be concerned about cutting into the Summer intermission, especially if they consider the proposed financial incentives to be disproportionate to their contract obligations—impacting staff morale or even retention. Operational support staff, such as nutrition staff and bus drivers, may also seek to negotiate their hourly pay to accommodate modifications determined outside their input. Likewise, families may resist the mandate if it obstructs their routines, planned vacations, or childcare arrangements—particularly in a rural context where these amenities are already insufficient. While providing free and reduced-priced meals and transportation helps to mitigate some concerns, these measures may fall short of addressing broader tensions associated with mandating universal attendance. Therefore, extending the academic calendar by 20 additional days would yield low stakeholder buy-in.

This alternative is not compatible with the status quo, as it would drastically disrupt the existing academic calendar and—once again—interfere with staff contracts organized around the 180-day school year. Moreover, the 20-day extension would lack integration with the remedial blocks embedded in the regular academic year—aside from generating student performance benchmarks earlier in the term. Because the program operates external to current measures, it risks becoming a standalone initiative with limited instructional continuity.

Alternative 3: Provide Performance-Based Compensation and Blanket Stipends for Third-Grade Math Teachers

Sunflower could (a) provide performance-based incentive pay to teachers who have proven effective in raising students' math outcomes and (b) disburse one-time stipends to all third-grade math instructors to raise their morale. The third policy alternative is modeled on initiatives in low-performing school districts aimed at improving student achievement through enhancing teacher quality and staff composition—though the former focus matters more for the pilot program. These programs include the Talent Transfer Initiative (Glazerman et al., 2013), the Teacher Incentive Fund (Wellington et al., 2016), and the Teacher Excellence Initiative (Hanushek et al., 2023; Morgan et al., 2023).

The Teacher Excellence Initiative (TEI) provides a comprehensive program account to work from. Here, Dallas Independent School Districts (ISD) paid teachers in select schools a \$2,000 blanket bonus and grouped them into performance categories for additional compensation: exemplary (\$10,000), proficient (\$8,000), progressing (\$6,000), and unsatisfactory (\$0) performance. Although the agency did not disclose its funding source, the program appears to have used reallocated within-district funds. Given the limited funding in Sunflower, the author proposes reducing the maximum stipend amount from \$10,000 to \$2,000—aligning with a flat incentive payment offered before the COVID-19 pandemic. Mirroring the 80 percent decrease in the other categories, proficient and progressing teachers would receive stipends of \$1,600 and \$1,200, respectively.

TEI determined teacher effectiveness—value-add to end-of-year assessments and instructional quality, measured by classroom observations—in the first year while awarding stipends in the second, enabling Dallas ISD to assess program impacts throughout the payout year. Sunflower would follow a similar structure, referencing year-one performance to determine year-two payments. Altogether, the third policy alternative would establish an external pressure for math instruction, mirroring the accountability measures that exist for English through the 2013 Literacy-Based Promotion Act.

Monetary Cost

Costing the third policy alternative begins with estimating administrative expenses for year one, including (a) planning time for district administrators, (b) training five principals and five academic coaches to conduct classroom observations, and (c) implementing those observations. Personnel counts and staffing hours for each identified task are grounded in client-provided numbers. Meanwhile, calculations for year two mirror the performance-based pay structures of TEI noted above—again, reduced by 80 percent to accommodate budget constraints specific to Sunflower. The distribution of teachers across the performance categories—one exemplary teacher, seven proficient teachers, three progressing teachers, and one unsatisfactory teacher—is broadly based on the 2018 Math MAAP outcomes. While this classification is rudimentary compared to the proposed evaluation system—incorporating value-add to students’ mathematics achievement and classroom observations—it offers a provisional framework for estimating expenses. Implementing performance-based compensation and distributing flat-rate stipends for third-grade math teachers would, therefore, cost Sunflower \$122,356—or **\$458 per student**. Refer to Appendix D for detailed calculations.

Effectiveness

In designing this policy, the author primarily referred to TEI in Dallas ISD because it targeted schools with high poverty rates and low-performance outcomes, similar to Sunflower. Moreover, its accomplishments did not result from significant education infrastructure investments but from welcomed changes in how personnel were evaluated and compensated—adjustments that a constrained district like Sunflower can plausibly make. Sunflower, however, should note that Dallas ISD (a) is an urban school district substantially bigger than itself and (b) was interested in teacher recruitment and retainment, in addition to the instructional quality component.



That said, this program underwent several rounds of rigorous evaluation within the past decade—the most relevant publication being Hanushek et al. (2023). Here, Hanushek and co-authors established a comparison condition to Dallas ISD by weighting characteristics—like teacher and student demographics—from neighboring Texas school districts that did not adopt the initiative. Dubbed the synthetic control, this comparison condition provided a counterfactual prediction for what would have occurred had Dallas ISD not adopted the performance-based compensation program. This methodology enabled the researchers to isolate a reasonably causal impact from the policy on students’ math achievement—an increase of 0.20 standard deviations.

Keeping with the 80 percent reduction applied to the performance-based compensation packages, the author also reduced the 0.20 standard deviation effect size by a factor of eight, resulting in an estimated impact of 0.04 standard deviations on elementary math achievement. Relying on the methodology outlined in the effectiveness criterion and Appendix E, this effect size yielded a gain of 0.69 points on the Math MAAP. The author applied this increase to all third-grade scores in 2018—the control year, also defined by Appendix E. Following these adjustments, **60.30 percent** of third-graders would be proficient in the Math MAAP. While this total proficiency rating mirrors that of the previous policy alternative, the distribution of students comprising basic proficiency (42.70 percent) and advanced proficiency (17.60 percent) varies.

Feasibility

This policy alternative is likely to receive **moderate stakeholder buy-in**, particularly among third-grade teachers who view the financial packages as recognition for their effort and commitment—rather than fixed credentials or experience levels. However, this sentiment hinges on the fairness and transparency around which Sunflower administrators would measure teachers’ value-add and instructional quality. If the proposed evaluation framework is communicated clearly and developed in collaboration with academic coaches and teachers, it would be seen as equitable. Still, because this option only applies to third-grade math teachers, it may trigger feelings of resentment among instructors who do not have the opportunity to earn performance-based pay.

This policy alternative is **highly compatible** with the current remedial blocks. It bolsters the instructional

	Evaluative Criteria				Overall Assessment
Policy Alternatives	Monetary Cost	Effectiveness		Feasibility	
Introduce OST Tutoring	<u>Highest</u> (1) \$657/Student	<u>Highest</u> (3) 62.55 Percent Proficient		Stakeholder Buy-In High	<u>Highest</u> (3) High 7
				Compatibility High	
Extend the Academic Year by 20 Days	<u>Middle</u> (2) \$541/Student	Proficient 37.45 Percent	Combined	Stakeholder Buy-In Low	<u>Lowest</u> (1) Low 5
		Advanced Proficient 22.85 Percent 	<u>Middle</u> (2) 60.30 Percent Prof.	Compatibility Low	
Provide Performance-Based Compensation and Blanket Stipends for Math Teachers	<u>Lowest</u> (3) \$458/Student	Proficient 42.70 Percent	Combined	Stakeholder Buy-In Moderate	<u>Middle</u> (2) Moderate-High 6
		Advanced Proficient 17.60 Percent 	<u>Lowest</u> (1) 60.30 Percent Prof.	Compatibility High	

focus on mathematics during intervention periods by tying bonus pay to students’ Math MAAP outcomes—rather

than compromising the existing infrastructure. This configuration of programs strengthens the linkage between teachers' daily tasks and long-term performance goals—all while centering accountability to students at the fore.

Recommendation

Based on the analysis presented, ***introducing OST tutoring*** emerges as the most promising option for improving third-grade math proficiency in Sunflower. This policy alternative (a) targets students with the most academic needs, (b) offers small-group supports that cohere with during-day teaching, and (c) builds upon the existing technological and instructional infrastructure within the school district. The author also projected that OST tutoring would yield the highest proficiency (62.55 percent) on the Math MAAP among all three policy alternatives. While the cost-per-student is relatively high (\$657), Sunflower should note that OST tutoring reflected the lowest total expenditure of all the options (\$122,911). Given the urgency to address gaps in early math literacy—and the budgetary and personnel considerations unique to Sunflower—this focused intervention represents the most impactful and feasible strategy for piloting in the 2026-27 academic year.

Outcomes Matrix

Implementation

Sunflower must take several steps to ensure a successful implementation of the OST tutoring pilot program in the 2026-27 academic year. The following section will outline these action items while considering tradeoffs and dependencies.

Step One: Conduct Needs Assessments & Engage Relevant Stakeholders (3-4 Months)

Surveys and Focus Groups

Sunflower must gather input from district leaders and school-based teaching personnel to determine tentative scheduling and content focus for the OST tutoring sessions. This is a good opportunity to assess whether licensed teachers would like to participate in programming. The author assumed that these staff would not be due to potential burnout—though this consideration may be unfounded in reality. Sunflower may also elicit feedback from families regarding barriers to participation, such as scheduling and transportation conflicts. Program success is highly dependent on family buy-in, so community outreach is vital.

Analyze Student Data

The Director of Federal Programs, in collaboration with the curriculum coordinator and academic coaches, should review Math MAAP scores and any other screener diagnostics to determine where in the district the

greatest need exists. OST tutoring may be more helpful to some elementary schools than others. Begin collecting information and comparing it against timed dimensions to uncover any troubling trends.

Step Two: Structure the Program (2-3 Months)

Define the Curriculum

Following the data analysis efforts, the team mentioned above should align the tutoring content with Mississippi learning standards to maximize students' achievement on the MAAP assessment. This action is also critical for fostering continuity between instructional support in the remedial blocks and after regular school hours. Remember that these interventions are not disparate from one another.

Confirm the Staffing Model

Sunflower must affirm that there is demand for hourly positions and a corresponding supply of tutors to occupy them—this is a crucial dependency for the OST tutoring option, as Sunflower will want to avoid overextending teachers' responsibilities. During this step, Sunflower may find that it needs to engage college and nonprofit partnerships to attract staff. Determining this need early on will ensure success later in the recruitment process.

Step Three: Organize a Budget & Secure Funding (4-5 Months)

OST tutoring cannot exist without a financial base. Thus, Sunflower needs to organize a thorough budget and apply for grants ahead of time—including Title I funds, Mississippi OST allocations, and nonprofit resources. Given the uncertainty around federal funding, Sunflower may have to divert to the latter two suggestions and avoid making premature investments.

Step Four: Recruitment, Training, & Program Rollout (4-5 Months)

Recruitment & Training

Effective tutors are well-prepared and equipped with instructional resources. Sunflower should recruit early to establish long-term commitment from tutors. Providing them with a cohesive program outline will enable them to organize their time and limit any scheduling conflicts, especially if they are college students. At this stage, Sunflower should provide pre-service training, whether via in-person workshops or asynchronous modules.

Program Rollout

Once Sunflower develops its tutors, it can implement the OST tutoring for third-graders. Remind tutors about their purpose and motivations, and encourage them to have fun. Academic coaches should help students transition into the program, as the assimilation process may be unfamiliar or uncomfortable.

Step Five: Monitoring (Ongoing)

Finally, the Director of Federal Programs should monitor and evaluate the pilot program while it is ongoing. Refer to the iReady screeners for (a) preliminary statistics and (b) later comparisons with students' Math MAAP outcomes. If OST tutoring is not worthwhile, Sunflower should terminate the program to eliminate unnecessary expenditures. Alternatively, program success should warrant consideration for continued investment.

Appendix A: Cost Calculations for the Status Quo

Given that the author proposes pilot programs for the three policy alternatives, he costs the status quo according to that timeline. For the policy alternatives, the 2025-26 academic year is considered the ideation and planning period, while the 2026-27 academic year would entail the actual program implementation. This classification, however, does not apply to the remedial blocks, given that this intervention is already in use and will continue from the 2024-25 academic year onward. Note that the author employs an interest rate of 4.50 percent for any future projections, as determined by the FED (Federal Reserve, 2025).

Due to staff confidentiality, the client could not provide exact salaries—only scheduled ranges—so the author calculated three cost tiers to address the uncertainty. They utilize staff numbers from the current academic year (2024-25). The low estimate assumes that all administrative and school-based teaching personnel are at the lowest end of the salary range, given a lack of experience or position-relevant skills. In contrast, the high estimate assumes the opposite, wherein these staff are maxed out on both evaluative measures. The mean estimate takes an average between the two values. This approach is practical, as Sunflower cannot accurately predict future staff members' experience levels or skill attainment.

Table A1. Year One and Two Costs.

iReady and Other Instructional Materials				
	Blanket Amount	Cost-Per-Student	Third-Grade Students	Total Cost
Chromebooks	--	\$397.56	187	\$74,343.72
iReady Screener	\$112,067.54	\$39.14	187	\$7,319.81
iReady Virtual Lessons and Workbooks	\$121,841.35	\$42.56	187	\$7,958.20
			Total	\$89,621.74

Administrative Cost [Low Estimate]							
	Salary [Annualized]	Salary [Per Hour]	Hours	Weeks	Months	Personnel Quantity	Total Cost
Curriculum Coordinator [Annual Training]	\$68,000.00	\$36.32	3	--	9	1	\$980.77
Academic Coach [Annual Training]	\$53,500.00	\$31.25	3	--	9	5	\$4,218.75
Teacher [Annual Training]	\$42,500.00	\$24.82	3	--	9	9	\$6,032.42
Teacher [Daily Instructional Time]	\$42,500.00	\$24.82	1	36	--	9	\$8,043.22
						Total	\$19,275.16
						Inflation Adjusted [4.5%]	
						Year One	\$20,142.54
						Year Two [TARGET]	\$21,048.96

Administrative Cost [Mean Estimate]							
	Salary [Annualized]	Salary [Per Hour]	Hours	Weeks	Months	Personnel Quantity	Total Cost
Curriculum Coordinator [Annual Training]	\$68,000.00	\$36.32	3	--	9	1	\$980.77
Academic Coach [Annual Training]	\$59,250.00	\$34.61	3	--	9	5	\$4,672.17
Teacher [Annual Training]	\$56,225.00	\$32.84	3	--	9	9	\$7,980.53
Teacher [Daily Instructional Time]	\$56,225.00	\$32.84	1	36	--	9	\$10,640.71
						Total	\$24,274.18
						Inflation Adjusted [4.5%]	
						Year One	\$25,366.52
						Year Two [TARGET]	\$26,508.02

Administrative Cost [High Estimate]							
	Salary [Annualized]	Salary [Per Hour]	Hours	Weeks	Months	Personnel Quantity	Total Cost
Curriculum Coordinator [Annual Training]	\$68,000.00	\$36.32	3	--	9	1	\$980.77
Academic Coach [Annual Training]	\$65,000.00	\$38	3	--	9	5	\$5,125.58
Teacher [Annual Training]	\$69,950.00	\$41	3	--	9	9	\$9,928.65
Teacher [Daily Instructional Time]	\$69,950.00	\$41	1	36	--	9	\$13,238.20
						Total	\$29,273.20
						Inflation Adjusted [4.5%]	
						Year One	\$30,590.50
						Year Two [TARGET]	\$31,967.07

resources and other instructional materials are fixed costs that the school district has already expended—Chromebook purchases occurred once, and the three-year contract with iReady extends through the 2026-27 academic year. The author, therefore, does not include the total in the calculations below.

Table A1. Final Cost Calculations.

Low Estimate	\$21,048.96 or \$112.56 per student
Mean Estimate	\$26,508.02 or \$141.75 per student
High Estimate	\$31,967.07 or \$170.95 per student [Referenced in the technical report.]

Appendix B: Cost Calculations for Alternative 1

Unlike the status quo approach, calculating costs for OST tutoring depended on calculations for the 2025-26 and 2026-27 academic years. The first year consists of (a) planning by district administrators and (b) training service providers. Here, the curriculum coordinator and academic coaches take on more of the planning, as the Director of Federal Programs is primarily concerned with program evaluation. The author uses a similar tiered costing approach, as described in Appendix A. Note that each breakdown includes a 4.5 percent interest rate—calculations for the second year of implementation compound this value accordingly.

Table B1. Year One Administrative Costs.

Tutoring Cost, Year One [Low Estimate]							
	Salary [Annualized]	Salary [Per Hour]	Hours	High-Needs Students	Students-Per-Tutor	Personnel Quantity	Total Cost
Curriculum Coordinator [Planning]	\$68,000.00	\$36.32	30	--	--	1	\$1,089.74
Director of FED Programs [Planning]	\$78,000.00	\$41.67	15	--	--	1	\$625.00
Academic Coaches [Planning]	\$53,500.00	\$31.25	30	--	--	5	\$4,687.50
Hourly Tutors [Training]	--	\$17.50	10	141	4	36	\$6,300.00
Total							\$12,702.24
Inflation Adjusted [4.5%]							
Year One							\$13,273.84

Tutoring Cost, Year One [Mean Estimate]							
	Salary [Annualized]	Salary [Per Hour]	Hours	High-Needs Students	Students-Per-Tutor	Personnel Quantity	Total Cost
Curriculum Coordinator [Planning]	\$68,000.00	\$36.32	30	--	--	1	\$1,089.74
Director of FED Programs [Planning]	\$84,500.00	\$45.14	15	--	--	1	\$677.08
Academic Coaches [Planning]	\$59,250.00	\$34.61	30	--	--	5	\$5,191.30
Hourly Tutors [Training]	--	\$17.50	10	141	4	36	\$6,300.00
Total							\$13,258.12
Inflation Adjusted [4.5%]							
Year One							\$13,854.74

Tutoring Cost, Year One [High Estimate]							
	Salary [Annualized]	Salary [Per Hour]	Hours	High-Needs Students	Students-Per-Tutor	Personnel Quantity	Total Cost
Curriculum Coordinator [Planning]	\$68,000.00	\$36.32	30	--	--	1	\$1,089.74
Director of FED Programs [Planning]	\$91,000.00	\$48.61	15	--	--	1	\$729.17
Academic Coaches [Planning]	\$65,000.00	\$37.97	30	--	--	5	\$5,695.09
Hourly Tutors [Training]	--	\$17.50	10	141	4	36	\$6,300.00
Total							\$13,814.00
Inflation Adjusted [4.5%]							
Year One							\$14,435.63

The number of hourly tutors is derived from 2018 data, which had the largest third-grade population in the past six years and the highest share of students performing below proficiency. The author divided the resulting 141 students between 36 hourly tutors, thereby maintaining the ratio of four students to every hourly tutor (Fong, 2021; Shoemaker, 2024). The second year expands upon this literature, designating struggling students to an hour of OST tutoring three days per week for 25 weeks.

Table B2. Year Two Service Costs.

Tutoring Cost, Year Two [Low Estimate]									
	Salary [Annualized]	Salary [Per Hour]	Hours	Days	Weeks	High-Needs Students	Students-Per-Tutor	Personnel Quantity	Total Cost
Academic Coaches [Service]	\$53,500.00	\$31.25	1	3	25	--	--	5	\$11,718.75
Hourly Tutors [Service]	--	\$17.50	1	3	25	141	4	36	\$47,250.00
								Total	\$58,968.75
								Inflation Adjusted [4.5%]	
								Compound One	\$61,622.34
								Year Two [TARGET]	\$64,395.35

Tutoring Cost, Year Two [Mean Estimate]									
	Salary [Annualized]	Salary [Per Hour]	Hours	Days	Weeks	High-Needs Students	Students-Per-Tutor	Personnel Quantity	Total Cost
Academic Coaches [Service]	\$59,250.00	\$34.61	1	3	25	--	--	5	\$12,978.75
Hourly Tutors [Service]	--	\$17.50	1	3	25	141	4	36	\$47,250.00
								Total	\$60,228.75
								Inflation Adjusted [4.5%]	
								Compound One	\$62,939.04
								Year Two [TARGET]	\$65,771.30

Tutoring Cost, Year Two [High Estimate]									
	Salary [Annualized]	Salary [Per Hour]	Hours	Days	Weeks	High-Needs Students	Students-Per-Tutor	Personnel Quantity	Total Cost
Academic Coaches [Planning]	\$65,000.00	\$37.97	1	3	25	--	--	5	\$14,238.75
Hourly Tutors [Service]	--	\$17.50	1	3	25	141	4	36	\$47,250.00
								Total	\$61,488.75
								Inflation Adjusted [4.5%]	
								Compound One	\$64,255.74
								Year Two [TARGET]	\$67,147.25

Finally, the author considered transit costs to provide busing for the enrolled third-grade students, given that this barrier is the main reason why OST tutoring is not an exercised option in the school district. Sunflower third-graders. The school district owns a fleet of conventional flat-face cowl yellow buses, each having a maximum capacity of 77 seats (Mississippi Department of Education, 2023). As the 141 third-graders are evenly distributed between the five Sunflower elementary schools, only one bus is needed per location. The author also considered state-mandated driver training, which is four hours of training for every academic term (Mississippi Department of Education, 2012). Training and service delivery would all occur in the second year. The table below presents these cost considerations.

Table B3. Year Two Transit Costs.

	Administrative Cost [Low Estimate]						
	Salary	Salary Per Hour	Hours	Days	Weeks	Personnel Quantity	Total Cost
Transportation Supervisor [Training]	\$61,000	\$32.59	8	--	--	1	\$260.68
Transportation Supervisor [Service]	\$61,000	\$32.59	2	3	25	1	\$4,887.82
Driver [Training]	--	\$15.00	8	--	--	5	\$600.00
Driver [Service]	--	\$15.00	2	3	25	5	\$11,250.00
						Total	\$16,998.50
						Inflation Adjusted [4.5%]	
						Compound One	\$17,763.44
						Year Two [TARGET]	\$18,562.79

	Administrative Cost [Mean Estimate]						
	Salary	Salary Per Hour	Hours	Days	Weeks	Personnel Quantity	Total Cost
Transportation Supervisor [Training]	\$67,500	\$36.06	8	--	--	1	\$288.46
Transportation Supervisor [Service]	\$67,500	\$36.06	2	3	25	1	\$5,408.65
Driver [Training]	--	\$27.50	8	--	--	5	\$1,100.00
Driver [Service]	--	\$27.50	2	3	25	5	\$20,625.00
						Total	\$27,422.12
						Inflation Adjusted [4.5%]	
						Compound One	\$28,656.11
						Year Two [TARGET]	\$29,945.64

	Administrative Cost [High Estimate]						
	Salary	Salary Per Hour	Hours	Days	Weeks	Personnel Quantity	Total Cost
Transportation Supervisor [Training]	\$74,000	\$39.53	8	--	--	1	\$316.24
Transportation Supervisor [Service]	\$74,000	\$39.53	2	3	25	1	\$5,929.49
Driver [Training]	--	\$40.00	8	--	--	5	\$1,600.00
Driver [Service]	--	\$40.00	2	3	25	5	\$30,000.00
						Total	\$37,845.73
						Inflation Adjusted [4.5%]	
						Compound One	\$39,548.78
						Year Two [TARGET]	\$41,328.48

Table B4. Final Cost

Calculations.

Low Estimate	\$96,231.98 or \$514.61 per student
Mean Estimate	\$109,571.68 or \$585.94 per student
High Estimate	\$122,911.36 or \$657.28 per student [Referenced in the technical report.]

Appendix C: Cost Calculations for Alternative 2

An extension to the academic calendar from 180 days to 200 days would also incur different costs in the 2025-26 and 2026-27 academic years. Year one costs cover program ideation and staff training, for which there is one Director of Federal Programs and Data, one curriculum coordinator, one principal and academic coach per school location, and 12 teachers—the last number being an approximation from the client that includes three more teachers than in the 2024-25 academic year. Per Jones, training for summer school programming—a proxy for the second policy alternative—is typically around 16 total hours. Note the following compensation packages suggested by the Sunflower client. These values will be relevant for both operational years:

- **Bonus Compensation Rates:** Equating to a salary increase of 3.00 percent for administrative and support personnel, and 5.00 percent for third-grade mathematics teachers.
- **Flat-Rate Stipends:** Stipends worth \$200.00 for pre-service training and \$1,500.00 for service delivery.

These costs are also presented in a tiered manner, with low-, mean-, and high-end estimates.

Table C1. Year One Administrative Costs.

Administrative Cost, Year One [Low Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Director of FED Programs [Ideation]	\$78,000.00	1.030	--	\$41.67	60	--	1	\$2,575.00
Curriculum Coordinator [Ideation]	\$68,000.00	1.030	--	\$36.32	60	--	1	\$2,244.87
Principals [Ideation]	\$63,500.00	1.030	--	\$37.09	60	--	5	\$11,461.16
Principals [Training]	\$63,500.00	1.030	\$200.00	\$37.09	16	--	5	\$3,256.31
Academic Coaches [Training]	\$53,500.00	1.030	\$200.00	\$31.25	16	--	5	\$2,775.00
Teachers [Training]	\$42,500.00	1.050	\$200.00	\$24.82	16	--	12	\$5,204.67
							Total	\$27,517.01
							Inflation Adjusted [4.5%]	
							Year One	\$28,755.28

Administrative Cost, Year One [Mean Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Director of FED Programs [Ideation]	\$84,500.00	1.030	--	\$45.14	60	--	1	\$2,789.58
Curriculum Coordinator [Ideation]	\$68,000.00	1.030	--	\$36.32	60	--	1	\$2,244.87
Principals [Ideation]	\$75,500.00	1.030	--	\$44.10	60	--	5	\$13,627.04
Principals [Training]	\$75,500.00	1.030	\$200.00	\$44.10	16	--	5	\$3,833.88
Academic Coaches [Training]	\$59,250.00	1.030	\$200.00	\$34.61	16	--	5	\$3,051.75
Teachers [Training]	\$56,225.00	1.050	\$200.00	\$32.84	16	--	12	\$6,820.89
							Total	\$32,368.02
							Inflation Adjusted [4.5%]	
							Year One	\$33,824.58

Administrative Cost, Year One [High Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Director of FED Programs [Ideation]	\$91,000.00	1.030	--	\$48.61	60	--	1	\$3,004.17
Curriculum Coordinator [Ideation]	\$68,000.00	1.030	--	\$36.32	60	--	1	\$2,244.87
Principals [Ideation]	\$87,500.00	1.030	--	\$51.11	60	--	5	\$15,792.93
Principals [Training]	\$87,500.00	1.030	\$200.00	\$51.11	16	--	5	\$4,411.45
Academic Coaches [Training]	\$65,000.00	1.030	\$200.00	\$37.97	16	--	5	\$3,328.50
Teachers [Training]	\$69,950.00	1.050	\$200.00	\$40.86	16	--	12	\$8,437.10
							Total	\$37,219.03
							Inflation Adjusted [4.5%]	
							Year One	\$38,893.88

(a) service delivery and (b) operational support costs. Keep in mind that the 20 additional days are not full-length

but, instead, are three-hour, thirty-minute days. This duration is applied to the principals, academic coaches, and third-grade mathematics teachers. Meanwhile, the operational costs for busing mirror the justification provided in Appendix B for state transportation requirements—only now, there would be double the number of bus drivers to accommodate the enrollment of all 267 students. On the other hand, there is one child nutritional staff member and two janitorial staff members per school location. Janitorial staff members would switch off every two hours, covering during-day and after-school maintenance. The author does not include the cost of providing lunch and snacks, as the federal government subsidizes this expense.

Table C2. Year Two Service Costs.

Service Cost, Year Two [Low Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Principals [Supervision]	\$63,500.00	1.030	--	\$37.09	3.5	20	5	\$13,371.35
Academic Coaches [Supervision]	\$53,500.00	1.030	--	\$31.25	3.5	20	5	\$11,265.63
Teachers [Instruction]	\$42,500.00	1.050	\$1,500.00	\$24.82	3.5	20	12	\$23,395.44
							Total	\$48,032.42
							Inflation Adjusted [4.5%]	
							Compound One	\$50,193.88
							Year Two [TARGET]	\$52,452.60

Service Cost, Year Two [Mean Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Principals [Supervision]	\$75,500.00	1.030	--	\$44.10	3.5	20	5	\$15,898.22
Academic Coaches [Supervision]	\$59,250.00	1.030	--	\$34.61	3.5	20	5	\$12,476.42
Teachers [Instruction]	\$56,225.00	1.050	\$1,500.00	\$32.84	3.5	20	12	\$30,466.38
							Total	\$58,841.02
							Inflation Adjusted [4.5%]	
							Compound One	\$61,488.87
							Year Two [TARGET]	\$64,255.86

Service Cost, Year Two [High Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Principals [Supervision]	\$87,500.00	1.030	--	\$51.11	3.5	20	5	\$18,425.09
Academic Coaches [Supervision]	\$65,000.00	1.030	--	\$37.97	3.5	20	5	\$13,687.21
Teachers [Instruction]	\$69,950.00	1.050	\$1,500.00	\$40.86	3.5	20	12	\$37,537.32
							Total	\$69,649.62
							Inflation Adjusted [4.5%]	
							Compound One	\$72,783.85
							Year Two [TARGET]	\$76,059.13

Table C3. Year Two Operational Support Costs.

Operational Support, Year Two [Low Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Transportation Supervisor [Training]	\$61,000.00	1.030	--	\$32.59	4	--	1	\$134.25
Transportation Supervisor [Service]	\$61,000.00	1.030	--	\$32.59	4	20	1	\$2,685.04
Bus Driver [Training]	--	1.030	--	\$15.00	4	--	10	\$618.00
Bus Driver [Service]	--	1.030	--	\$15.00	4	20	10	\$12,360.00
Child Nutrition Staff [Service]	--	1.030	--	\$9.00	3.5	20	5	\$3,244.50
Janitorial Staff [Service]	--	1.030	--	\$17.50	2	20	10	\$7,210.00
							Total	\$26,251.79
							Inflation Adjusted [4.5%]	
							Year One	\$27,433.13
							Year Two [TARGET]	\$28,667.62

Operational Support, Year Two [Mean Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Transportation Supervisor [Training]	\$67,500.00	1.030	--	\$36.06	4	--	1	\$148.56
Transportation Supervisor [Service]	\$67,500.00	1.030	--	\$36.06	4	20	1	\$2,971.15
Bus Driver [Training]	--	1.030	--	\$15.00	4	--	10	\$618.00
Bus Driver [Service]	--	1.030	--	\$15.00	4	20	10	\$12,360.00
Child Nutrition Staff [Service]	--	1.030	--	\$9.00	3.5	20	5	\$3,244.50
Janitorial Staff [Service]	--	1.030	--	\$17.50	2	20	10	\$7,210.00
							Total	\$26,552.21
							Inflation Adjusted [4.5%]	
							Year One	\$27,747.06
							Year Two [TARGET]	\$28,995.68

Operational Support, Year Two [High Estimate]								
	Salary [Annualized]	Bonus Rate	Flat Bonus	Salary [Per Hour]	Hours	Days	Personnel Quantity	Total Cost
Transportation Supervisor [Training]	\$74,000.00	1.030	--	\$39.53	4	--	1	\$162.86
Transportation Supervisor [Service]	\$74,000.00	1.030	--	\$39.53	4	20	1	\$3,257.26
Bus Driver [Training]	--	1.030	--	\$15.00	4	--	10	\$618.00
Bus Driver [Service]	--	1.030	--	\$15.00	4	20	10	\$12,360.00
Child Nutrition Staff [Service]	--	1.030	--	\$9.00	3.5	20	5	\$3,244.50
Janitorial Staff [Service]	--	1.030	--	\$17.50	2	20	10	\$7,210.00
							Total	\$26,852.63
							Inflation Adjusted [4.5%]	
							Year One	\$28,061.00
							Year Two [TARGET]	\$29,323.74

Table C4. Final Cost Calculations

Low Estimate	\$109,875.50 or \$411.52 per student
Mean Estimate	\$127,076.12 or \$475.94 per student
High Estimate	\$144,276.75 or \$540.32 per student [Referenced in the technical report.]

Appendix D: Cost Calculations for Alternative 3

The author first considers the costs of (a) program planning by district administrators, (b) training five principals and five academic coaches to conduct classroom observations, and (c) implementing the evaluations in year one (the 2025-26 academic year). Staff numbers and hypothetical clocked hours come from Dylan Jones, the Director of Federal Programs at Sunflower. The tables below offer three cost tiers using the same approach in Appendix A, whereby the low-, mean-, and high-end estimates vary the calculations within the client-provided salary ranges. The author also presents the contract expenditure for FixBoost, the evaluation program currently used to track classroom observations. Nonetheless, this number is not included in the final totals, as the three-year contract with FixBoost extends through the 2026-27 academic year—similar to the iReady software mentioned in Appendix A.

Table D1. Year One Administrative Costs.

iReady and Other Instructional Materials, Year One				
	Blanket Amount	Cost-Per-Student	Third-Grade Students	Total Cost
Chromebooks	\$66,894.00	\$23.37	187	\$4,369.26
			Total	\$4,369.26

Administrative Costs, Year One [Low Estimate]						
	Salary [Annualized]	Salary [Per Hour]	Hours	Weeks	Personnel Quantity	Total Cost
Director of FED Programs [Ideation]	\$78,000.00	\$41.67	20	--	1	\$833.33
Principals [Ideation]	\$63,500.00	\$37.09	20	--	5	\$3,709.11
Principals [Training]	\$63,500.00	\$37.09	10	--	5	\$1,854.56
Principals [Observations]	\$63,500.00	\$37.09	15	9	5	\$25,036.51
Academic Coaches [Ideation]	\$53,500.00	\$31.25	20	--	5	\$3,125.00
Academic Coaches [Training]	\$53,500.00	\$31.25	10	--	5	\$1,562.50
Academic Coaches [Observations]	\$53,500.00	\$31.25	15	9	5	\$21,093.75
					Total	\$57,214.76
					Inflation Adjusted [4.5%]	
					Year One [TARGET]	\$59,789.42

Administrative Costs, Year One [Mean Estimate]						
	Salary [Annualized]	Salary [Per Hour]	Hours	Weeks	Personnel Quantity	Total Cost
Director of FED Programs [Ideation]	\$84,500.00	\$45.14	20	--	1	\$902.78
Principals [Ideation]	\$75,500.00	\$44.10	20	--	5	\$4,410.05
Principals [Training]	\$75,500.00	\$44.10	10	--	5	\$2,205.02
Principals [Observations]	\$75,500.00	\$44.10	15	9	5	\$29,767.82
Academic Coaches [Ideation]	\$59,250.00	\$34.61	20	--	5	\$3,460.86
Academic Coaches [Training]	\$59,250.00	\$34.61	10	--	5	\$1,730.43
Academic Coaches [Observations]	\$59,250.00	\$34.61	15	9	5	\$23,360.84
					Total	\$65,837.80
					Inflation Adjusted [4.5%]	
					Year One [TARGET]	\$68,800.50

Administrative Costs, Year One [High Estimate]						
	Salary [Annualized]	Salary [Per Hour]	Hours	Weeks	Personnel Quantity	Total Cost
Director of FED Programs [Ideation]	\$91,000.00	\$48.61	20	--	1	\$972.22
Principals [Ideation]	\$87,500.00	\$51.11	20	--	5	\$5,110.98
Principals [Training]	\$87,500.00	\$51.11	10	--	5	\$2,555.49
Principals [Observations]	\$87,500.00	\$51.11	15	9	5	\$34,499.12
Academic Coaches [Ideation]	\$65,000.00	\$37.97	20	--	5	\$3,796.73
Academic Coaches [Training]	\$65,000.00	\$37.97	10	--	5	\$1,898.36
Academic Coaches [Observations]	\$65,000.00	\$37.97	15	9	5	\$25,627.92
					Total	\$74,460.83
					Inflation Adjusted [4.5%]	
					Year One [TARGET]	\$77,811.57

Reducing the incentive structure from the Teacher Excellence Initiative by 80 percent, the performance-based compensation in Sunflower would comprise \$2,000 for exemplary mathematics teachers, \$1,600 for proficient teachers, and \$1,200 for progressing teachers. The author relied on students' performance on the Math MAAP in 2018—the control condition—to determine rudimentary statistics for the teacher performance groupings. Note that they, once again, retain a total number of 12 teachers per request from Sunflower for a conservative buffer. They compared their findings against Morgan et al. (2023) and refined their teacher performance groupings thereafter.

Table D2. Teacher Performance Groupings.

Math MAAP Categorization According to Third-Graders' Scores [2018]							
Categories	Students	Total	Share	Number of Teachers	Teachers Per Category	Rounded	Share of Teachers
Advanced	29	267	0.10861423	12	1.303370787	1	0.08
Proficient	97	267	0.36329588	12	4.359550562	4	0.33
Passing	71	267	0.2659176	12	3.191011236	3	0.25
Basic	59	267	0.22097378	12	2.651685393	3	0.25
Minimal	11	267	0.0411985	12	0.494382022	1	0.08

Comparison to Teacher Excellence Initiative	
Categories	Share of Teachers
Exemplary	0.20
Proficient	0.40
Progressing	0.37
Unsatisfactory	0.03

Please take caution that this delineation is underdeveloped compared to the proposed grading system based on (a) teachers' value-add to students' Math MAAP scores and (b) their instructional quality. This latter approach would require more complicated metrics and performance thresholds established with insights from district administrators and school-based academic coaches. Given the limitations of this technical report in precise statistical foresight, the method presented premises its predictions on the share of students in each achievement classification and less precise rounding. The table below exhibits the direct cost of providing these performance-based compensation packages, along with the flat bonus worth \$2,000 in year two.

Table D3. Year Two Bonus Costs.

Bonus Cost [Low Estimate]			
	Bonus Amount	Personnel Quantity	Total Cost
Blanket Stipends	\$2,000.00	12	\$24,000.00
[Exemplary] Performance-Based Incentives	\$2,000.00	1	\$2,000.00
[Proficient] Performance-Based Incentives	\$1,600.00	7	\$11,200.00
[Progressing] Performance-Based Incentives	\$1,200.00	3	\$3,600.00
[Unsatisfactory] Performance-Based Incentives	\$0.00	1	\$0.00
		Total	\$40,800.00
		Inflation Adjusted [4.5%]	
		Compound One	\$42,636.00
		Year Two [TARGET]	\$44,554.62

Table D4. Final Cost Calculations

Low Estimate	\$104,344.04 or \$390.80 per student
Mean Estimate	\$113,355.12 or \$424.55 per student
High Estimate	\$122,356.19 or \$458.26 per student [Referenced in the technical report.]

Appendix E: Effectiveness, Translating Effect Sizes into Proficiency Estimates

Step 1: Determining the Remedial Blocks' Effectiveness

First, the author estimated the impact of the status quo on students' Math MAAP scores using an interrupted time series analysis. His approach leverages a policy cutoff in 2019 to compare students' Math MAAP scores before and after the implementation of the program. Note that using a year cutoff rather than a more granular threshold, such as months or days, makes the model less precise. However, given the limited access to student data, this analytic approach was the most appropriate in providing some direction for Sunflower.

To ensure the estimate was as accurate as possible, the model included both year- and school-fixed effects. Year-fixed effects account for confounding factors that might influence Math MAAP performance in a given school year, such as curriculum changes or districtwide teacher transitions. Meanwhile, school-fixed effects recognize differences between schools, like access to educational resources or administrative procedures. Additionally, the author controlled for students' disability status because those with disabilities may have different baseline math proficiency. Note that this measure was the only student demographic indicator available from the client-provided dataset. The model equation is as follows:

$$\text{Score}_{ist} = \beta_0 + \beta_1 \text{MorningBlock}_t + \beta_2 (\text{Year}_t - 2019) + \beta_3 (\text{MorningBlock}_t * (\text{Year}_t - 2019)) + \gamma \text{SPED}_i + \delta_t + \theta_s + \epsilon_{ist}$$

- **Score_{ist}** : Math MAAP scores for student *i* in school *s* and year *t*.
- **MorningBlock_t** : Binary indicator equal to 1 if the observation year is 2019 or later, and 0 for observations occurring before 2019.
- **Year_t – 2019**: Running variable centered around the cutoff year.
- **MorningBlock_t * (Year_t – 2019)**: Interaction term examining the difference in students' math proficiency before and after the morning block implementation.
- **γSPED_i** : Control variable for student *i*'s disability status.
- **δ_t** : Time-fixed effects, accounting for differences across each year.
- **θ_s** : School-fixed effects, accounting for differences between schools.
- **ε_{ist}** : Error term.

The author determined that implementing and maintaining the morning intervention blocks improved students' Math MAAP scores by an average of 6.52 points.

Step 2: Identifying Other Impact Estimates and Translating to Points on the Math MAAP

For each proposed policy beyond the status quo, the author identified their estimated impact—growth on the Math MAAP, measured in standard deviations—based on the program models that inspired them. Here, they adjusted researchers’ outcomes to accommodate any policy revisions, as Sunflower would need to scale down the empirical studies for its context. The author privileged interventions that underwent rigorous evaluation, whether through randomized controlled trials, quasi-experimental methods, or meta-analyses. If the literature provided multiple effect sizes, he prioritized the lowest estimate to err toward a conservative projection—given that hypothetical designs never fully realize their intended results.

Following this, the author converted his impact estimates from standard deviations to point increases on the Math MAAP. The author cumulated Sunflower third-graders’ testing outcomes in the control year (2018) and calculated the standard deviation from the sample (17.19 points), which he then multiplied against the impact estimation for each policy alternative. Say a policy alternative yielded a 0.15 standard deviation increase in students’ mathematics gain on the Math MAAP. The author would then multiply this effect size against the standard deviation value (17.19) to get a projected 2.58 point gain on the Math MAAP.

Table E1. Impact Estimates to MAAP Points

	Impact Estimate	Conversion to Math MAAP Points
Status Quo	0.37 **	6.52 (Universal)
Status Quo + Alt 1	0.37 + 0.16 SD (Lauer et al., 2006)	6.52 (Univer.) + 2.75 (Conditional)
Status Quo + Alt 2	0.37 + 0.10 SD (Hayes & Gershenson, 2016)	6.52 (Univer.) + 1.72 (Universal) = 8.24
Status Quo + Alt 3	0.37 + 0.04 SD (Hanushek et al., 2023)	6.52 (Univer.) + 0.69 (Universal) = 7.21

**** [Note]:** The author derived this result by dividing the 6.52 point increase by the standard deviation value (17.19) mentioned previously. The impact estimate is comparable to those found in educational research, such as Nickow and peers’ (2020) meta-analysis, which associated during-day, high-dosage mathematics tutoring with a 0.38 standard deviation increase in elementary students’ math achievement. The author attributes any error to missing contextual information in the analytical model. That said, he reviewed the findings with the client, Dylan Jones, to verify the efficacy of the morning intervention blocks. Jones confirmed that, in the first year of implementation, the Mississippi Department of Education improved Sunflower’s mathematics performance rating from an *F* to *C*—an uncommon achievement in the state.

Step 3: Projecting Changes in Proficiency Rates

The author then added the point gain associated with each alternative to students’ Math MAAP scores in the control year (2018). Then, they re-calculated the share of third-graders who would meet (a) proficiency and (b) advanced proficiency on the Math MAAP under each given policy alternative, in addition to the status quo condition. The table below provides these findings.

Table E2: Projected Mathematics Proficiency Rating and Relative Change to the Control Condition

	Proficiency Rating	Advanced Prof. Rating	Combined Prof. Rating
No Intervention	36.33%.	10.86%	47.19%
Status Quo	40.45%	17.60%	58.05%
Status Quo + Alt 1	44.94%	17.60%	62.55%
Status Quo + Alt 2	37.45%	22.85%	60.30%
Status Quo + Alt 3	42.70%	17.60%	60.30%

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