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Introduction

Accelerate is a national nonprofit launched in 2022 with a focus on scaling high-impact tutoring by funding and managing exceptional research and searching for cost effective ways to serve millions of students at scale. Research findings increasingly confirm that, on average, high-impact tutoring improves student achievement more than almost any other educational intervention - particularly in early literacy.¹ However, states and districts struggle to deliver tutoring to all high-need students because of its cost. To fully maximize impact, researchers and practitioners must better understand what works, for which students, and in what school settings. A deeper understanding of tutoring efficiency and cost effectiveness will allow tutoring to be sustained through recurring public funding. By aligning research, policy, and practice through state implementation, we turn evidence into measurable progress, helping students thrive.

The proposed EIR Expansion Grant project, the *Accelerate Regional Tutoring Initiative*, adds innovative studies of early literacy tutoring to existing research in order to deeply understand the *combined effects* of tutor type, modality, frequency, tutor-student ratio, implementation, and total cost. The goal is to provide states and districts with a practical, research-driven roadmap to more efficiently allocate resources. In collaboration with the Oklahoma State Department of Education (OSDE), Accelerate will partner with Air Reading (virtual synchronous tutoring) and Enhanced Core Reading Instruction High-Impact Tutoring (ECRI) (in-person tutoring using paraeducators) to expand access to K-5 literacy tutoring while engaging in at least two multi-armed randomized controlled trials (RCT) led by Mathematica. Accelerate will leverage its original open-source research to develop and test an innovative cost-efficiency and return-on-investment (ROI) framework for education interventions. To date,

Accelerate has worked with eleven state education agencies through state level grants and has managed over two dozen RCTs in the last three years alone. This project builds on that work.

In addition to improving student outcomes, the *Accelerate Regional Tutoring Initiative* is designed to ensure that tutoring becomes a permanent, state-funded component of public education. By identifying cost-effective solutions (defined as a tutoring portfolio that averages a cost of \$1,000 per student or less) and building sustainable systems, the project aims to help states scale tutoring through sustainable public funding. From the project's inception, scale and sustainability are embedded in every layer - through data infrastructure, state education agency (SEA) leadership, and policy alignment. This project will produce nationally relevant tools and cost-efficiency data to guide other states seeking to embed high-impact tutoring in their literacy improvement efforts. Ultimately, it will serve as the catalyst for further state-led initiatives focused on bringing evidence-based practices.

Section 1: Project Significance

1.1 Relevance to the EIR Program Priorities

Absolute Priority: Field-Initiated Innovations: Promoting Evidence-Based Literacy.

The project will directly benefit all students, but especially high-need students, through effective literacy instruction in multiple ways: (1) it includes a combination of urban and rural districts in Oklahoma; (2) high-impact tutoring will target academically underperforming students and deliver lessons aligned to the science of reading; and (3) it aligns with the focus shared by the US Department of Education and Oklahoma State Department of Education on supporting scalable solutions to improve literacy - one of the most urgent academic needs facing schools today - through evidence-driven, science of reading aligned interventions.

CPP1: Returning Education to the States. The project is championed by OSDE, ensuring that the design, oversight, and dissemination of evidence-based tutoring practices are grounded in state leadership. Based on the 2024 National Assessment of Educational Progress (NAEP), 23% of grade 4 students in the state of Oklahoma were proficient in reading, making it one of the bottom five states². OSDE is determined to marshal resources and evidence-based solutions to change that reality, including its recent \$3 million investment to support high-impact tutoring programs in Oklahoma City, Tulsa, and ten rural districts (announced on 9/18/25).

CPP2: Education Choice – High-Impact Tutoring. Through partnerships with Air Reading and ECRI, two tutoring providers with strong causal evidence of effectiveness in K–5 literacy, the project will broaden the range of proven providers available to districts and provide direct services to students who would otherwise not have access to them.

1.2 Significance of the *Accelerate Regional Tutoring Initiative Project*

The project is a collaborative initiative that empowers the Oklahoma State Department of Education to further amplify its commitment to improving early literacy outcomes by providing thousands of students (focusing on the 77% who were not proficient according to 2024 NAEP results) with direct access to proven high-quality tutoring programs (Air Reading and ECRI); generating evidence to scale an *innovative approach* to measure tutoring efficiency and return on investment; and leveraging Accelerate’s experiences implementing high-impact tutoring and research in 29 states (including 11 state education agencies) to provide the opportunity to scale.

Project Innovations. This project serves as an *extension of existing evidence* on high-impact tutoring to *explore the combined effects* on improving student outcomes in the most cost efficient way possible. First, the project interrogates the overall effectiveness of two innovative methods for delivering tutoring: (1) a virtual tutoring platform and (2) an in-person

model using paraeducators as tutors. Both have evidence of improving early literacy outcomes while aiming to lower program costs and increase access for students who need academic support. Virtual models in particular have become increasingly utilized in rural areas where access to in-person support may be less readily available. The project provides opportunities (in addition to virtual versus in-person models) to expand on the existing evidence around high-impact tutoring - namely, tutor to student ratio, tutor type, and tutoring frequency - which are all significant cost drivers of program implementation. Accelerate will track this data in accordance with its open source Data Alignment and Tutoring Assessment Standards³, a tool used by nearly 30 organizations to ensure schools, districts, providers, and platforms speak the same language, allowing for stronger program management.

Additionally, the project will use Accelerate's *innovative approach* for measuring tutoring efficiency and cost-effectiveness so that we consider not only whether the tutoring programs work, but how efficiently they generate learning gains.⁴ Even though tutoring efficacy is proven, the field lacks scalable cost-effectiveness evidence. While Accelerate has begun implementing this framework, the current sample size is small, and this project would signify a critical step toward *developing this emerging project component that needs further testing*. This framework quantifies the relationship between tutoring costs, dosage, and learning gains. Drawing on the Ingredients Method and aligned to the Institute of Education Sciences (IES) SEER Cost Analysis standards (2020), this tool captures and visualizes data on cost per student and per tutoring hour; cost per unit of literacy gain (e.g., cost per 0.1 standard deviation improvement translated into months of additional learning); and comparative ROI across sites and providers. This approach transforms the project from a traditional intervention study into a national model for evidence-based budgeting, helping states and districts see not only what

works, but what works most efficiently. It provides especially valuable information via standardized metrics for school system leaders who must make budgeting tradeoffs when they implement even successful interventions.

Exhibit 1. Definitions of Tutoring Efficiency and Cost Effectiveness (ROI)

Tutoring Efficiency	Hours of tutoring to improve student learning by one month	= Hours of actual dosage / # of additional months of learning gained by tutoring
Cost Effectiveness (ROI)	Number of additional months of learning gained by investing \$1,000 per pupil	= Hours of tutoring for \$1,000 per pupil / tutoring efficiency

As a result of this project’s successful completion, Accelerate will lay the foundation for Oklahoma to establish durable tutoring programs supported by state funding, via existing budget reallocations and/or inclusion in state funding formula. By the end of the project, Oklahoma will have the tools, policies, and evidence to expand tutoring beyond EIR support, and other SEAs will have an actionable model.

Policy Integration. The project aims to create the conditions for policy milestones to follow a deliberate trajectory from internal guidance to State Board adoption and potential legislative codification, including guidance on tutoring implementation for OSDE and policy and procurement templates for LEAs and providers. Each step builds on evidence and lessons learned from tutoring implementation and ROI analysis. Oklahoma currently ranks among the bottom five states on the NAEP grade 4 reading test. OSDE is determined to marshal resources and evidence based solutions to change that reality. This policy integration approach reflects EIR’s

emphasis on sustainability and state leadership, ensuring that tutoring becomes an enduring feature of OSDE.

Evidence-Based Budgeting. ROI findings will guide SEA legislative budget requests, enabling the creation of funding recommendations for the legislature and for LEAs.

Cost-efficiency benchmarks will help states project the fiscal impact of scaling tutoring.

State Capacity Building. State EIR project leads and the Strategic Data Project Fellow will train SEA staff to maintain data dashboards, fidelity monitoring tools, and cost-efficiency models post-grant. Accelerate will provide technical assistance during the final project year to transition all tools and data ownership to the SEA.

Alignment with Federal and Philanthropic Funding. Findings will inform future federal and state investments (e.g., Title I, ESSA Sec.1003 funds, state literacy initiatives).

Philanthropic partners will continue to support the research-to-policy bridge.

Section 2: Strategy to Scale

According to the fall 2024 School Pulse Panel⁵ issued by the National Center for Education Statistics, 45% of schools in the south region of the U.S. offer high-impact tutoring. Meanwhile, just 23% of grade 4 students in the state of Oklahoma were proficient in reading on the 2024 NAEP⁶, placing it among the lowest states in terms of grade 4 reading proficiency. This project will include the state's two largest school districts: Oklahoma City Public Schools (OKCPS) and Tulsa Public Schools (TPS). Both have had academic challenges - on the state's 2024 annual report card 27 of the 32 elementary schools in OKCPS received D or F grades. In TPS, 37 of the 46 elementary schools received D or F grades⁷. Taken together, this data reflects an ***unmet demand for broader implementation*** of proven personalized learning interventions like high-impact tutoring and a timely opportunity to maximize impact in a state where the SEA

has demonstrated its commitment to improving student outcomes but tutoring has yet to scale. Of the approximately 36,000 K-5 students in Oklahoma, over 27,000 (77%) are below proficient in literacy. The state's recent investment adds ~2,000 tutoring spots, and this EIR project would serve an additional 6,000 students over the course of the grant period as well as create *a strategy to scale in Oklahoma and a pathway for further development, adaptation, and replication in additional grades and subjects across other states.*

For scale both in Oklahoma and beyond, another significant *unmet demand* is a better understanding of the cost-efficiency and ROI of different tutoring models. When this framework is applied at scale, the resulting information would ultimately translate into an actionable playbook grounded in national evidence for states and districts to use when deciding what types of tutoring programs work best for which students within the reality of budgetary constraints. Most immediately, this project would enable OSDE to collect evidence that will inform a plan for maximizing resources at the state level. Accelerate's cost effectiveness approach⁸, grounded in findings from Nickow et. al⁹, interrogates what type of tutoring benefits which types of students so that states and LEAs can make informed decisions about how to allocate funds - aiming to achieve a tutoring portfolio at an average cost of \$1,000 per student or less (See *Exhibit 1* for additional details). This analysis will inform OSDE's future investments and create a template for other SEAs.

2.1 Management Plan and Partners

The *management plan* for this project follows a “backbone-plus-consortium” model: Accelerate serves as the national backbone organization and primary grantee, while the Oklahoma State Department of Education (OSDE) serves as the state implementation lead. OSDE will select urban and rural districts to participate and work with Accelerate to align on the

schools, grade levels, and students who will be part of the study. Accelerate will coordinate with Air Reading and ECRI to ensure fidelity to implementation of tutoring and manage Mathematica’s role in research. Accelerate will be responsible for overseeing tutoring implementation, data reporting, and policy integration to ensure that project activities are completed on time, within budget, and with fidelity to the evidence-based design. (Details about project leadership are in *Appendix B*.)

Exhibit 2. Overview of Partners

Entity	Primary Responsibilities
Accelerate	<ul style="list-style-type: none"> ● Provide overall project leadership and fiscal management ● Create and manage contracts with tutoring providers and researcher ● Set project milestones for all entities and schedules appropriate touchpoints ● Manage the open-source cost-efficiency tool and data collection standards ● Lead efforts to create and disseminate information and resources that are applicable to other entities in additional settings (e.g., districts, states) or with other populations (e.g., additional grade levels, other subjects)
Oklahoma State Department of Education (OSDE)	<ul style="list-style-type: none"> ● Lead state-level coordination of districts and schools ● Ensure tutoring aligns with the science of reading and the Oklahoma Academic Standards ● Facilitate data sharing and continuous improvement ● Support integration of findings into state tutoring policy
Tutoring Providers (Air	<ul style="list-style-type: none"> ● Deliver K-5 literacy tutoring services in participating schools ● Collect fidelity, dosage, and cost data

Reading and ECRI)	<ul style="list-style-type: none"> ● Train tutors and instructional staff in evidence-based literacy practices ● Identify school-based contact to monitor implementation and data collection ● Assign dedicated program managers for program implementation
Research Partner (Mathematica)	<ul style="list-style-type: none"> ● Design and implement student-level RCTs with both tutoring providers ● Conduct tutoring efficiency and cost-effectiveness analyses using IES SEER standards ● Collaborate with OSDE and districts to ensure data quality and compliance with research protocols
Partner Districts	<ul style="list-style-type: none"> ● Create conditions for implementation within schools ● Ensure instructional alignment and coherence with Tier 1 curriculum and tiered support structures ● Provide necessary data to measure student-level performance ● Assign dedicated program managers for day-to-day operations in schools

Each partner contributes *relevance and a demonstrated commitment* to the proposed project, further ensuring that services will be delivered efficiently and effectively.

Accelerate. Accelerate has partnered with eleven other states on tutoring projects in a similar capacity through the States Leading Recovery program - collaborating with each state’s SEA and governor’s office and working with tutoring providers and researchers to simultaneously provide direct services to students, implementation guidance to LEAs and schools, and evidence to policymakers. One result of this work is the State Field Guide¹⁰, a tool to design and implement a state-specific tutoring strategy that will provide the framework that ensures we achieve project objectives and goals on time and within budget. Additionally, as an

Accelerate state partner, OSDE will meet bi-monthly with Accelerate to support this project and to enhance efforts to scale and sustain high-impact tutoring in the longer term.

Through Accelerate’s position at the nexus of policy, research, and practice, it has successfully worked with researchers and providers to ***achieve project objectives and goals on time and within budget***. In this project, we will execute outcomes-based contracts with Air Reading and ECRI, thereby holding them accountable to achieving the agreed upon deliverables (e.g., number of students served, dosage, data collection). Both providers will provide regular reports to Accelerate’s team that align with the project objectives and join a formal Community of Practice for further accountability touchpoints and opportunities to share information about their work in OSDE with other providers. Accelerate will expand its existing contract with Mathematica to include this project and uphold the same expectations that have already been established - completion of pre-analysis plans; study design and execution; participation in Accelerate’s Research Learning Community; and adherence to timely interim and final reports. (See *Section 4: Project Evaluation* for details.)

Oklahoma State Department of Education (OSDE). Oklahoma has clearly demonstrated its state-level commitment to improving outcomes for students by using research-based, small-group tutoring aligned with the science of reading through the Oklahoma Academic Standards. In September 2025, OSDE announced a statewide \$3 million tutoring investment to accelerate literacy and student success in select rural and urban districts¹¹, signaling its interest in longer-term strategies to scale and sustain tutoring. This EIR project would complement this investment by increasing the number of students served, expanding access by integrating tutoring into the school day, and producing a rigorous evaluation that

explores implementation, efficiency, and cost effectiveness, while creating the conditions to scale and sustain high-impact tutoring via legislative action.

Districts / LEAs. OSDE identified 14 total districts interested in participating in this project. They include large urban districts (OKCPS and TPS) that serve ~14,000 elementary students and smaller rural districts (Chickasha, Duncan, Granite, Perkins-Tyron, Western Heights) that serve between 200 and 1,400 elementary students each.

Air Reading. Air Reading delivers virtual, live small-group literacy tutoring (1:2–3 student ratio) designed for scalability and rural accessibility. The impact of Air Reading was examined in an RCT of nearly 400 grade 1-6 students from six elementary schools in a rural Texas district during the spring of the 2023-24 school year. Results indicated that it positively impacted reading achievement and that impacts were similar across different demographic groups. Overall, students who participated in Air Reading scored significantly higher on the NWEA MAP reading assessment than their peers in the control group (effect size = +0.12). For students who received 40+ tutoring sessions, impacts were even stronger (effect size = +0.17)¹².

Air Reading’s approach is grounded in the science of reading and Orton-Gillingham methodology. To ensure quality and implementation fidelity, Air Reading engages in a rigorous tutor selection process that has resulted in a network of 2,000+ certified educators with bachelor's degrees, 2+ years experience, state/TESOL certification, background checks, and state-specific fingerprinting as required. They provide comprehensive training on the science of reading, curriculum use, strategies for struggling readers, and online instruction, and weekly workshops, monthly webinars, micro-trainings, and one-on-one coaching. All sessions are recorded and 10–15% are randomly reviewed weekly. At minimum, one session per tutor is evaluated weekly, and immediate feedback with daily follow-up is provided when needed.

Enhanced Core Reading Instruction High-Impact Tutoring (ECRI). ECRI builds on an existing early literacy intervention with strong research evidence by using existing school staff (paraeducators) to deliver interventions in small groups and training administrators and literacy coaches in the model to support its cost effectiveness, sustainability, and scaling in partner sites. Numerous studies demonstrate the effectiveness of the ECRI approach for improving educators’ instruction and student reading outcomes¹³, along with pilot data that demonstrated that students assigned to receive ECRI-HIT “caught up” to the same initial performance peers after one semester of intervention.

ECRI focuses on alignment between the school’s core reading program and tutoring materials. Students who demonstrate need for supplemental intervention on reading screening data receive ECRI in daily, pre-taught, 30-minute small group lessons. These lessons are available for two dozen of the most commonly used core reading programs, aligned with the science of reading instruction (i.e., use explicit, systematic instruction to introduce content), and address critical reading skills in daily lessons (i.e., phonemic awareness, fluent, accurate reading of connected text). ECRI materials can support intensified individualization during lessons (e.g., increasing practice opportunities, re-teaching based on student data).

Paraeducators receive two full days of training to deliver ECRI along with quarterly in-person coaching visits, simultaneously increasing their knowledge about the science of teaching reading and implementation skills. ECRI also engages administrators in program training to increase the likelihood it will be sustained over time.

Mathematica. Mathematica is a world-leading research organization with extensive experience designing and implementing large-scale RCTs, studying high-impact tutoring, and leading multiple successful EIR projects. Mathematica has also co-authored two widely

circulated reports^{14,15} with Accelerate, providing valuable insights about implementation, conducting rigorous research, and scale. The most recent report included findings on implementation, scaling, and research that reflect Mathematica’s unique ability to deliver project services efficiently at scale while maintaining effectiveness.

Accelerate and Mathematica will continue to collaborate on syntheses that will become more comprehensive as they increasingly consider past findings alongside new information. They will be published annually, providing another set of valuable dissemination opportunities for this project and support further development, adaptation, and replication by tutoring providers aiming to serve more students.

2.2 Knowledge Dissemination and Field Contribution

As a direct result of this project, Accelerate will leverage its existing networks to ***broadly disseminate information and resources*** from this project to support further development across Oklahoma and adaptation or replication in other states. Information and resources will be replicable and open source so that, as a result of this project, findings will be further developed and adapted to inform education research, policy, and practice across the country.

Exhibit 3. Resources and Information for Dissemination

Resource	Definition of Success
<p>Cost Analysis and ROI Tool</p>	<ul style="list-style-type: none"> ● Tool used in this project will impact at least five additional states ● De-identified dataset made publicly available through the EIR repository, enabling future secondary analyses ● Host trainings and webinars to demonstrate how the ROI model can be replicated with existing literacy programs

<p>Policy briefs and practitioner guides</p>	<ul style="list-style-type: none"> ● Highlight best practices in dosage fidelity, data integration, and cost management and present to key stakeholders at OSDE ● Implementation reports co-authored by Accelerate and Mathematica synthesizing lessons learned from this project and other relevant studies ● Host quarterly webinars based on project findings
<p>Conferences and webinars</p>	<ul style="list-style-type: none"> ● Present project findings at national conferences including but not limited to: American Educational Research Association, Association for Public Policy Management and Analysis, Society for Research on Educational Effectiveness, and the ESEA Network ● Share project findings with Accelerate’s existing networks (listed below)
<p>Media and public engagement</p>	<ul style="list-style-type: none"> ● Engage in with local, national, and trade outlets to amplify project findings and outcomes ● Use social media channels to share resources and prompt conversations

Additionally, project partners will be included in our existing network to support *further development, adaptation, and replication*. All these active networks provide opportunities to spotlight this EIR project as well as gain insights from peers in the respective domains represented.

States Leading Recovery (SLR) program. The goal of Accelerate’s SLR is to continue to build models that can be shared across the country and to create a broader coalition of 15+ states that can work together for improved outcomes. Oklahoma will join this group of states committed to scaling and sustaining high-impact tutoring.

Harvard's Strategic Data Project (SDP). Accelerate's partnership with Harvard University's Strategic Data Project represents a critical investment in building state capacity to measure tutoring implementation and impact. The first cohort of fellows created a High-Dosage Tutoring Toolkit¹⁶ that presents solutions to common challenges and provides a set of data collection strategies, tools, and best practices to bring effective high-dosage tutoring programs to as many students as possible. OSDE will select one SDP Fellow to complete a state-proposed project that strengthens infrastructure for collecting tutoring data and generate actionable insights to improve statewide understanding of high-impact tutoring.

State Tutoring Fellowship. This Accelerate network of state tutoring leaders serves as an advisory group and helps disseminate new research, implementation strategies and policy guidance. It includes 32 fellows from 20 states, including an Oklahoma education agency staff member and the director of a statewide Oklahoma education leadership organization.

Research Learning Community (RLC). Accelerate's RLC serves as a knowledge hub for tutoring research to inform decision-making among education leaders, policymakers, and philanthropic stakeholders. Through quarterly convenings, members share findings from ongoing research and evaluation studies, creating a collegial forum to exchange ideas and provide feedback on research methodologies.

Community of Practice. This Accelerate group brings together 50+ tutoring providers and leading districts. Through regular virtual meetings and an annual in-person convening, it fosters collaboration and joint problem-solving to build alignment, grow capacity, and provide research-based implementation support across all organizational levels.

Annual Convening. Accelerate's Annual Convening serves as a cornerstone event bringing together the broader personalized learning ecosystem. The convening results in

meaningful connections and actionable improvements.

School Site Visits. Accelerate will host formal implementation site visits and invite key stakeholders (e.g., policymakers, funders, media) to join. These visits will be an opportunity for both project monitoring and knowledge dissemination, including news articles, radio features, and local television stories.

2.3 Ensuring Project Success

By leveraging existing structures and competencies alongside all partners' relevant and demonstrated commitment to improving literacy outcomes for students in Oklahoma, Accelerate is confident in the success of this project. Through outcomes-based contracts, clear timelines, and coordinated efforts, Accelerate will ensure tutoring is implemented with fidelity, research remains on track with randomization and data collection, cost and time metrics are compiled so that the project is certain to capture effectiveness but also ROI; and the state partners are capturing real time information for feedback and improvement.

Continuous improvement activities will be closely coordinated with Mathematica's evaluation work to ensure data consistency and to inform interpretation of findings. Quarterly and annual reports to USED will synthesize monitoring data, lessons learned, and corrective actions taken, ensuring that program improvement and evidence-building remain tightly connected throughout the grant period in accordance with the grant guidelines.

Section 3: Project Design

3.1 Project Logic Model

The ***logic model*** centers around the overall project goals focused on academic outcomes, implementation, cost effectiveness and ROI, and state action and data infrastructure.

(See *Appendix G* for a visual project logic model as well as the organizational logic models for Accelerate, Air Reading, and ECRI that underlie the proposed project.)

<p>Goal #1: To improve early literacy outcomes in Oklahoma by expanding the number of students receiving high-impact tutoring</p> <p><u>Objective:</u> Introduce two innovative tutoring delivery systems - virtual and in-person leveraging paraeducators - and coordinate with districts and schools to ensure successful implementation and achieve academic gains</p>	
<p>Inputs</p>	<ul style="list-style-type: none"> ● Federal EIR funding ● Support from OSDE leadership to ensure alignment with strategy ● District selection ● Agreements with tutoring providers (Air Reading and ECRI)
<p>Activities</p>	<ul style="list-style-type: none"> ● Select schools for implementation ● Finalize student selection and randomization ● Work with districts to select a tutoring provider and prepare for implementation (e.g., adjust master schedule to incorporate tutoring, identifying space for tutoring, acquiring the necessary technology) ● Launch and implement tutoring, tracking session level student data
<p>Outputs</p>	<p>Students receiving tutoring in OK will increase:</p> <ul style="list-style-type: none"> ● 1,000 students in 26-27; 2,400 students in 27-28; 2,000 students in 28-29; 600 students in 29-30 (See <i>Section 4</i> for additional details.)
<p>Outcomes</p>	<ul style="list-style-type: none"> ● 80% of students targeted will achieve higher growth than district averages

Impact	<ul style="list-style-type: none"> ● Long-term improved academic outcomes for students (based on state achievement tests and/or nationally norm-referenced assessment, e.g. MAP)
<p>Goal #2: To develop a deeper understanding of what kind of tutoring works for which students, towards states being able to scale high-dosage tutoring with a portfolio approach that averages \$1,000 per student or less</p> <p><u>Objective:</u> Launch RCTs of high-impact tutoring providers to understand how modality, tutor type, tutoring frequency, and tutor-to-student ratio affect student outcomes; collect the necessary program impact and cost data to conduct Accelerate’s tutoring efficiency and cost-effectiveness analysis; and determine the ROI of the tutoring providers and specific tutoring program design characteristics in terms of student learning outcomes</p>	
Inputs	<ul style="list-style-type: none"> ● Research partner (Mathematica) ● Deidentified student data ● Research questions and study design in alignment with WWC
Activities	<ul style="list-style-type: none"> ● Develop pre-analysis plans for RCTs ● Conduct cost analysis of tutoring programs ● Calculate tutoring efficiency and cost-effectiveness (ROI) metrics
Outputs	<ul style="list-style-type: none"> ● Regular research updates to Accelerate and OSDE ● Mid-year reports describing tutoring implementation, such as dosage ● Annual final reports explaining findings to date ● Presentation and dissemination of findings to relevant stakeholders

<p>Outcomes</p>	<ul style="list-style-type: none"> ● Tutoring efficiency metric showing hours of tutoring required for one additional month of learning ● Validated ROI benchmarks showing cost per student and cost per standard deviation of learning gain ● Applied use of Accelerate’s cost analysis tool to inform evidence on programmatic costs ● Evidence on which tutoring models work for which students under which implementation conditions ● Evidence on whether tutoring differentially improves learning outcomes for students with different demographic (e.g., race, gender, poverty) and achievement characteristics, providing insight into whether tutoring differentially impacts students (i.e., sub-group/heterogeneity analyses)
<p>Impact</p>	<ul style="list-style-type: none"> ● New empirical evidence on tutoring program impacts to inform the field and support decisions related to policy and practice ● Evidence on what types of tutoring providers work, for which students, and in which school settings ● New evidence on differential impacts of cost drivers and policy relevant data on how to scale tutoring at an average cost of \$1,000 per student ● New evidence to inform and extend the extant research literature on the design, implementation, impact, and cost-effectiveness of virtual and in-person tutoring models

Goal #3: To create a national model for evidence-based budgeting, helping states and

districts understand the quality of implementation, which program generate the greatest learning impact, and which programs generate learning impacts most efficiently

Objective: Leverage and disseminate learnings from this EIR project to provide clear evidence on how to monitor implementation and measure tutoring efficiency and cost effectiveness (ROI) for state and district leaders in Oklahoma and beyond

<p>Inputs</p>	<ul style="list-style-type: none"> ● Accelerate’s cost analysis tool ● Accelerate’s Data Alignment and Tutoring Assessment Standards ● Data sharing agreements with districts ● Deidentified student data
<p>Activities</p>	<ul style="list-style-type: none"> ● Application of cost analysis tool to calculate the total costs of inputs associated with two tutoring providers ● Calculation of the cost-effectiveness (or ROI) of two tutoring programs in terms of student achievement ● Collection of student-level (de-identified) data from two tutoring providers
<p>Outputs</p>	<ul style="list-style-type: none"> ● Policy briefs and research summaries of results from cost analyses ● Practical and design guidance to the field (via e.g., webinars, op-eds) on the collection of detailed student-level data
<p>Outcomes</p>	<ul style="list-style-type: none"> ● Dissemination of findings nationally through open-access tools, policy briefs, and reports ● Multi-state policy network to continue collaboration and learning post-grant (including at least 15 state partners)

Impact	<ul style="list-style-type: none"> ● National adoption of cost analysis tool, ROI framework, open data standard
<p>Goal #4: To establish sustainable state policies and data systems to support long-term tutoring programs in OSDE that can be applied nationally at scale</p> <p><u>Objectives:</u> (1) Support OSDE in adopting policies (e.g., provider lists, procurement rules, statewide tutoring frameworks) to sustain evidence-based tutoring; (2) Work with OSDE to ensure to establish data systems that will provide consistent K–5 session-level reporting and fidelity monitoring in alignment with Data Alignment and Tutoring Assessment Standards</p>	
Inputs	<ul style="list-style-type: none"> ● Accelerate’s State Field Guide ● Accelerate’s Data Alignment and Tutoring Assessment Standards ● Model high-impact tutoring policy ● Framework for outcomes-based contracts
Activities	<ul style="list-style-type: none"> ● Include Oklahoma in Accelerate’s States Leading Recovery program ● Select an OSDE team member to participate in the Strategic Data Project Fellowship to support data reporting, evaluation readiness, and analysis of tutoring outcomes using the cost-efficiency tool ● Continue OSDE staff leadership in Accelerate’s State Tutoring Fellowship
Outputs	<ul style="list-style-type: none"> ● Capstone Strategic Data Project that includes actionable data collection and standardization practices for OSDE ● Model policy aligned with OSDE priorities ● Legislative champions to move forward state regulations and funding

Outcomes	<ul style="list-style-type: none"> ● Adoption of sustainable state funding mechanisms for high-impact tutoring (e.g., tutoring line items, outcomes based contracts), informed by ROI results ● OSDE staff trained in data management, fidelity monitoring, cost analysis
Impact	<ul style="list-style-type: none"> ● Policies and / or regulations to establish a comprehensive statewide tutoring program, aligned with model policy¹⁷ ● State funding for tutoring programs to sustain evidence-based practices beyond the EIR grant period

3.2 Milestones, Timelines, and Responsibilities

Exhibit 4 reflects activities that will be led by Accelerate, OSDE, Mathematica, Air Reading and ECRI (“providers”), and the relevant districts (LEAs). Additionally, Accelerate will ensure compliance with the EIR expansion grant reporting requirements: Annual Performance Report (APR) - every 12 months; Performance Measures Report - annually; Evaluation Report - end of grant period; Final Performance Report - 90 days post grant period; Financial Reports (SF-425) - quarterly and annually; and Site Monitoring / Ad Hoc - as requested.

Exhibit 4. Project Timeline

Milestone	Timeline & Lead
Finalize the internal team, meeting structures, implementation support partners, and others who will need to be engaged	Jan-Mar 26, 27, 28, 29 OSDE
Identify schools, collect updated letters of support, introduce key metrics and develop data collection plan	Jan-Mar 26, 27, 28, 29 Accelerate, OSDE
Configure data systems at the state, district, and school levels	Jan-Mar 26, 27, 28, 29

and collect signed data-sharing agreements (as needed)	Accelerate, OSDE, LEAs
Develop and sign outcomes-based contracts with providers	Jan-Mar 26, 27, 28, 29 Accelerate
Finalize evaluation design and IRB approval and develop pre-analysis plan for each RCT	Mar-Jun 26, 27, 28, 29 Mathematica
Adapt cost tool for research projects	Mar-Jun 26, 27, 28, 29 Accelerate, Mathematica
Tutor recruitment, selection, and onboarding	Mar-Jun 26, 27, 28, 29 LEAs, providers
Develop guidance to assist districts in scheduling tutoring during the school day	Jun-Jul 26, 27, 28, 29 Accelerate, LEAs
District and school enrollment - selection of districts/schools for inclusion in each year of study	Jul 26, 27, 28, 29 LEAs, Accelerate, providers
Identify study samples; assign students to tutoring and non-tutoring groups	Jul 26, 27, 28, 29 Mathematica, LEAs, providers
Launch tutoring - collect baseline data and ensure systems in place for implementation	Aug-Sep 26, 27, 28, 29 Accelerate, OSDE, LEAs, providers
Agree on policy milestones, using Accelerate’s 2025 Model	Jun-Jul 26, 27, 28, 29

State Policy for high-impact tutoring	Accelerate, OSDE
Share interim and overall project lessons learned and results at Accelerate’s Annual Convening that includes 100+ researchers, state and district leaders, tutoring providers, media, philanthropy, and other thought leaders	Feb 28, 29, 30, 31 Accelerate
Mid-year research report describing implementation of two tutoring programs	Mar-Apr 28, 29, 30, 31 Mathematica
End-of-year summative research report describing results from the evaluation study on the design, implementation, impact, and cost-effectiveness of two tutoring programs	Dec 28, 29, 30, 31 Mathematica
Twice-annual briefings on study findings (mid-year and summative) to key stakeholders	Apr/Dec 28, 29, 30, 21 Mathematica
Collect implementation data from participating districts	Ongoing Mathematica
Develop OSDE internal guidance for high-impact tutoring	Ongoing Accelerate, OSDE
Make formal recommendations to the State Board and potential legislative actions to codify tutoring standards, provider vetting, data reporting, and sustainable funding mechanisms	Ongoing Accelerate, OSDE

Present evidence from study findings at 2+ research and policy conferences (e.g., APPAM; AEFPP; AERA)	Ongoing Accelerate, Mathematica
Presentation of evidence from study findings with 30+ state tutoring leads participating in State Tutoring Fellowship	Ongoing Accelerate, Mathematica
Various knowledge dissemination efforts (e.g., earned media, webinars)	Ongoing Accelerate

Section 4: Project Evaluation

Mathematica will lead an independent evaluation that provides rigorous, credible evidence about the impacts, implementation, and cost-effectiveness of state-led high-impact tutoring in improving literacy outcomes for elementary students. The evaluation will meet What Works Clearinghouse (WWC) standards without reservations through randomized controlled trials (RCT) that measure the impacts of Air Reading and ECRI on students in grades K-5 by assigning students within schools to the tutoring model chosen by the school. The evaluation will be conducted in six urban and rural school districts across Oklahoma to assess whether the sizeable impacts these programs produced in prior studies can be replicated in different settings and sustained over time. The evaluation will directly test the effectiveness of strategies to guide the replication and scale up of both tutoring programs to other settings. The study will also measure implementation fidelity, understand how implementation relates to outcomes, and conduct a cost-effectiveness analysis aligned with IES SEER Cost Analysis Standards (2020) to quantify the ROI for tutoring programs.

4.1 Research Questions

Research Questions: Implementation Evaluation

RQ1.1. What is the impact of Air Reading and ECRI on student literacy achievement?

RQ1.2. How does the effectiveness of Air Reading differ when students receive tutoring less frequently (3 vs. 4 tutoring sessions per week)? How does the effectiveness of ECRI differ when tutoring is provided in larger vs. smaller groups of students (2 vs. 4 students)?

RQ1.3. Do the impacts of the two models vary by student or school characteristics? (e.g., gender; race/ethnicity; baseline achievement; grade level; school setting [urban vs. rural])?

RQ1.4. To what extent are any impacts of the two tutoring models sustained the year after students receive tutoring?

Data Sources (RQ1.1-4): District administrative records

Research Questions: Impact Evaluation

RQ2.1. To what extent were Air Reading and ECRI implemented with fidelity? Did each program achieve “acceptable implementation” levels?

Data Source (RQ2.1): Air Reading’s tutoring platform; ECRI’s tutor survey logs

RQ2.2. To what extent are the core aspects of implementation for each tutoring program related to any impacts on students?

RQ2.3. Does dosage vary across students with different characteristics?

Data Source (RQ2.2-3): District administrative records; Air Reading’s tutoring platform; ECRI’s tutor survey logs

RQ2.4. How do tutor characteristics shape implementation fidelity?

Data Source (RQ2.4): Tutor characteristic data from tutoring providers

Research Questions: Cost Effectiveness and ROI

RQ3.1. What are the total and per-student costs of implementing each tutoring model?

RQ3.2. Do costs differ by staffing model and delivery format?

RQ3.3. What cost components (personnel, materials, technology, training) drive differences in program costs for Air Reading and ECRI?

RQ3.4. What is the cost-effectiveness of each tutoring model?

Data Source (RQ3.1-4): Cost data collected from districts, Air Reading, and ECRI

4.2 Methods that Will Produce Evidence of Effectiveness that Meets WWC Standards

Impact study design to meet WWC standards. Mathematica will conduct two separate RCTs to measure the impact of Air Reading and ECRI on students' literacy skills. Both RCTs will be designed to meet WWC version 5.0 standards without reservations. The RCTs will provide information on the effectiveness of each program in diverse district settings across the state, which allows us to assess the effectiveness of different strategies for scale-up. The RCTs will be conducted over the course of two school years, with three districts participating in the 2027-28 school year (1 urban and 2 rural districts) and three additional districts participating in the 2028-29 school year (1 urban and 2 rural districts). Within each district, schools will have the opportunity to select whether to implement Air Reading or ECRI's tutoring (but not both).

Each RCT will have a three-arm design that focuses on a relevant scale-up strategy for each program: the Air Reading RCT will test a lower intensity version of its tutoring by comparing the effectiveness of tutoring students 4x per week (current model) vs. 3x per week over 24 weeks, and the ECRI RCT will test different group sizes, comparing tutoring provided to groups of 4 students to groups of 2 students for 24 weeks.

Within each school and grade, we will randomly assign students to one of the two treatment arms or a control group that receives the typical (i.e., business-as-usual, or BAU) literacy support provided by the school. Participating schools will provide lists of K-5 students for the study sample. Eligible students must have scored ‘below’ or ‘well below’ reading benchmarks on their most recent literacy screener assessment. Schools will be asked to nominate enough students so that an equal number can be assigned to each of the treatment arms and control group in their schools (i.e., a minimum of 12 students for Air Reading so 4 can be randomly assigned to each treatment arm and 4 can be randomly assigned to the control group). To ensure the accuracy of the impact estimates and avoid confounding factors, tutoring providers will keep implementation consistent within schools (i.e., the group size for Air Reading tutoring must be the same for the four-session group as the three-session group).

We expect the following total sample sizes across the 2027-28 and 2028-29 school years:

- 2,100 students in the Air Reading RCT, with approximately 700 students receiving tutoring 4 times per week for 24 weeks; 700 students receiving tutoring 3 times per week for 24 weeks; and 700 students receiving the school’s typical literacy support.
- 2,100 students in the ECRI RCT, with approximately 700 students receiving tutoring with a 1:2 tutor-student ratio; 700 students receiving tutoring with a 1:4 tutor student ratio; and 700 students receiving the school’s typical literacy support.

The minimum detectable effect size (MDES) for the impact of each program’s treatment arms (compared to the control group) in the first year is 0.13 for the state-approved early literacy assessment (grades K-3) described below and Oklahoma state assessment for proficiency in English Language Arts (ELA) (grades 3-5) (see *Appendix JA*). When we combine the sample across the two years, MDES for the impact of each program’s treatment arms will be 0.10 for the

early literacy assessment and state assessment. This suggests that the study will be able to detect impacts of a size that has been found in prior research on both programs. Neitzel and Storey et al. 2025¹⁸ found an impact of 0.31 SD among students who received Air Reading for a year and Boston University 2025 found an impact of 0.35 SD among students who received ECRI.¹⁹

In addition to using an RCT design, the study will take the following steps to ensure the study meets WWC standards without reservations:

Minimize sample attrition. We will conduct random assignment after selecting students and obtaining consent for participation; collect outcome data from as many study participants (who were randomly assigned) as possible, including those who move from their original study school but remain in their district; and collect outcome data for all students, regardless of whether they comply with their assigned status as is consistent with obtaining the intent to treat estimate. (For example, students assigned to one of the treatment groups will remain in that group even if they do not receive tutoring).

Reduce the likelihood of contamination. Schools will select Air Reading or ECRI but not both, and have a study point of contact available to address questions from study schools about the assignment of students to tutoring (i.e., how to address a situation where a treatment student drops out of tutoring).

Choose outcome measures that are valid, reliable and not overaligned with either intervention. By using well established measures of early literacy in grades K-2 and the state assessments for grades 3-5 we will avoid the possibility of selecting measures that would not meet WWC standards for the study design. This will yield information about the interventions' impacts on measures that educators and school leaders are already using to inform decisions.

A key goal of the study is to measure the extent to which impacts of the two tutoring programs are sustained in the year after the tutoring ends (RQ1.4). We will address this research question by following the students randomly assigned in the 2027-28 school year in the 2028-29 school year. The study sample would remain the same in 2028-29, but we would measure the students' outcomes relevant to their grade in the 2028-29 school year. We will collect outcomes from students who leave the study schools as long as they remain in the district, which will minimize attrition from the study. The MDES will be 0.16 for impacts on students' early literacy assessment and state assessment scores (*Appendix JA*). Because the study will not provide additional tutoring to these students in the 2028-29 school year, this analysis will test whether one-year impacts from 2027-28 persist under BAU conditions the next year.

The study will use valid, reliable and grade appropriate measures of students' literacy achievement. Oklahoma's *Strong Readers Act* (SRA) requires that each district assess students from kindergarten through third grade using an early literacy assessment approved by the state and administered at the beginning, middle, and end of the year. We will use the assessment that each district uses to meet this SRA requirement to measure students' literacy outcomes for the study. All of these assessments meet the WWC requirements for validity and reliability. One study district uses the Measures of Academic Progress (MAP) Reading Fluency assessment, one district uses the Star Early Learning Suite, and four districts use the Amira assessment. For grades 3 to 5, we will use the state's ELA assessment (Oklahoma State Testing Program).

Analysis Approach to Measuring Impacts. We will estimate the difference between average literacy outcomes for students randomly assigned to each treatment arm and control group within each RCT. For example, we will compare outcomes among students randomly assigned to receive the 3-session version of Air Reading to those of control group students

randomly assigned to receive business-as-usual services that year. Differences in mean outcome levels will indicate the impact of a year of the 3-session version of Air Reading. We will estimate impacts using a model and analytic sample that include students in all three experimental groups and therefore allow direct statistical tests of differences between the impacts of the two treatment arms compared to each other as well as the control group, as described in *Appendix JA*. We will estimate regression adjusted impacts to control for student characteristics such as baseline measures of achievement (see *Appendix JA* for our statistical models). Our analysis will use an intent-to-treat (ITT) framework to provide estimates of the impact of offering students each tutoring program. Students assigned to tutoring will be included in the analysis as part of the treatment group even if they did not participate in the tutoring as intended.

To measure the sustainability of initial impacts, we will follow the students who were randomly assigned in the 2027-28 school year, into the 2028-29 school year. We will conduct the same analysis described above to measure impacts of the tutoring in the year after students receive it - the only difference will be that the outcome measure included in regression analysis will be students' outcome test score in spring 2029 instead of spring 2028.

We will conduct subgroup analyses to explore which student groups benefit most from early intervention (RQ1.3) (see *Appendix JA* for details). For example, we will assess potential differential impacts for students in grades K-2 and 3-5 because fewer reading interventions, including tutoring in small groups, have impacts on reading assessment for upper elementary students such as reading comprehension. Providing this type of subgroup analysis could build the evidence base where it is most needed. We will also examine impacts by race, gender, grade level, eligibility for free or reduced-price lunch, and baseline reading levels.

4.3 Evaluation Approach that Provides Guidance for Replication

The evaluation will provide guidance about effective *strategies for replicating* Air Reading and ECRI in new settings through three primary strategies. First, the three-arm RCT study design will provide valuable information on effective strategies for replication by informing whether schools and districts can implement Air Reading at lower intensity and ECRI with higher tutor-student ratios. These strategies could make a meaningful difference in the cost of these tutoring programs, allowing states and districts to achieve scale. For example, implementing Air Reading at lower intensity reduces the cost of tutoring by one-third, substantial savings that would allow states and districts to expand the reach of the tutoring.

Second, implementing the study across a diverse set of districts provides an opportunity to learn about implementation and impacts in a variety of settings. Mathematica will analyze tutoring implementation in all four school years covered by the grant (2026-27 through 2029-30 school years), building knowledge of implementation across 8 districts in Oklahoma (6 districts from the RCTs and 2 additional districts in the first and last school years). The study includes large urban districts, small districts on the outskirts of cities, and a rural district with a large tribal community. This study design will provide useful insights on potential supports and barriers for replicating and scaling up the programs. In addition to analyzing tutoring data, we will conduct semi-structured small group interviews with staff from each district to identify key takeaways for districts seeking to replicate these programs.

Finally, the evaluation will conduct a cost effectiveness analysis of both tutoring programs from the district perspective. Information will be collected on costs incurred by districts using a cost analysis tool developed by Accelerate. The cost analysis will use the Ingredients Method to itemize all resources required for delivering each program - including

tutoring cost, district and school staff time spent facilitating the program, and any supplemental materials or supports provided by districts and schools. These costs will be linked to the impact estimates, allowing for the calculation of a cost-effectiveness ratio associated with each tutoring program compared to the BAU condition.

4.4 Design that Measures Implementation Fidelity and How It Relates to Outcomes

Mathematica will assess the fidelity of implementation for Air Reading and ECRI based on the program components that align with their logic models (*Appendix G*). *Exhibit JA.3* in *Appendix JA* describes each program’s “acceptable implementation” levels and the data sources used to document them. The main sources of data on tutoring implementation will be Air Reading’s online tutoring platform and the weekly tutoring implementation logs completed by ECRI’s tutors. Both will track session-level information (e.g., tutor, students attended, date, time, and length, and content covered in the session). We will also collect data from Air Reading on whether tutors completed the required training to become tutors and from ECRI on the extent to which tutors implement the tutoring consistent with the ECRI model using data the ECRI coaches collect using a formal observation tool during monthly observations of tutoring sessions.

The implementation data will be particularly important for assessing differences in implementation between each treatment arm. The feasibility of measuring differences in impact between the treatment arms will depend on the strength of the contrast between them. For example, data from Air Reading’s platform will be used to measure differences in the average number of sessions per week and as well as total weekly hours for students in the 3-session and 4-session arms of the tutoring. Data from ECRI’s tutor logs will be used to compare average group size for students in the 2- and 4-person arms of the tutoring. These data will also confirm

whether the approaches led to differences in other aspects of implementation (i.e., whether fewer sessions per week resulted in students working more consistently with the same tutor).

Mathematica will use the fidelity measures to explore how variation in fidelity (e.g., high versus low implementers) is associated with student outcomes. The implementation data can inform the pathway of any impacts on students. We will use implementation data as moderators and mediators of the impacts in our analyses. The most critical mediator is the number of hours of tutoring received per week per student. We will include the average number of hours of tutoring received per week as a mediator to explain how much of the impact is due to tutoring dosage. Other implementation factors may moderate the impact of tutoring based on, for example, student or tutor characteristics. Our models will include potential moderators (e.g., student gender, race and ethnicity) and baseline literacy proficiency. We can include a tutor fixed effect to determine if some tutors appear to be more effective than others for reasons we have not measured. Integrating this rich and reliable implementation data will provide important context on not only whether the tutoring programs are effective but for whom and under what conditions.

4.5 Evaluation that Produces Information to Guide Replication

The evaluation will provide a rich source of information on *findings and strategies for replicating the tutoring programs in other settings*. The three-arm RCTs will provide guidance to decision makers on cost effective strategies for implementing each program—informing decisions about the tutor-student ratio and the frequency of tutoring sessions. The study’s implementation findings will describe supports and barriers to implementing the tutoring and highlight the aspects of implementation that are related to impacts. The dissemination strategies described in *Section 2.2* above will ensure the study’s findings are accessible and tailored to a range of relevant audiences.