Quarterly Research Note

Introduction

Welcome to the first issue of the Quarterly Research Note (QRN), a research brief that reflects Accelerate's approach to continuous learning through ongoing inquiry into what educational interventions work, for which students, and under what conditions. The QRN will include a particular focus on developing a body of research evidence that identifies effective tutoring programs and practices. Our approach is framed by three questions related to the design, implementation, and impact of tutoring programs and practices: What do we know? What are we learning? What do we still need to learn?

Through this research brief, Accelerate aims to:

- Present the most up-to-date research evidence on the design, implementation, and impact of tutoring programs and practices from Accelerate's grantee portfolio;

- Promote an ongoing dialogue among key stakeholders—policymakers, educational leaders, philanthropic organizations, and education researchers—on important questions, implications, and unknowns in the tutoring field; and

- Offer thought leadership to the field around ongoing and developing research evidence on effective tutoring programs and practices.

The research evidence presented here is informed by Accelerate's commitment to:

- **Efficacy:** identifying and supporting the personalized learning interventions that improve educational outcomes for students;

- **Equity:** focusing on programs that provide additional educational support for students with the greatest academic needs; and

- **Scale:** identifying the models that are cost-effective and demonstrate the potential to improve educational outcomes for the greatest number of students.

Accelerate's Role in the Research Space

Through our partnerships with practitioners, tutoring providers, and researchers, Accelerate aims to bridge the gap between evidence and implementation. We are committed to thoughtful and rigorous program evaluation, identifying program models that lead to tangible outcomes for students most in need of personalized learning interventions.
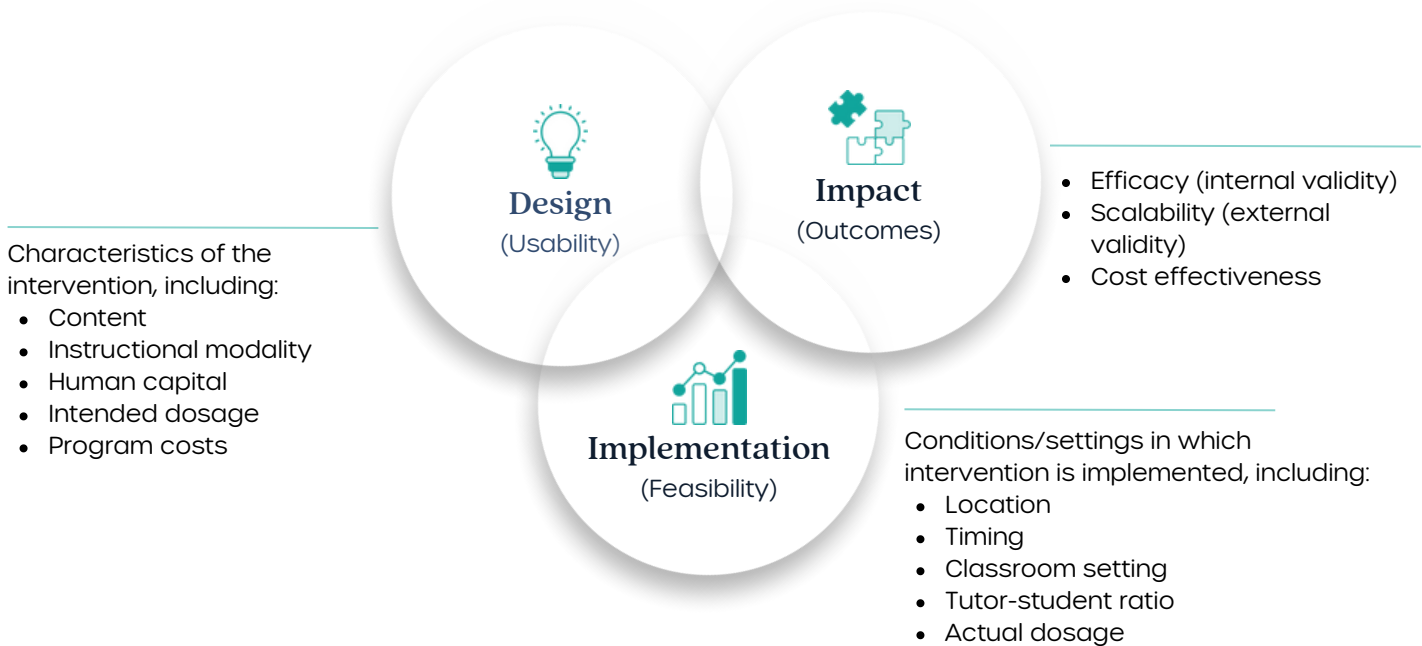
Accelerate's Role:

- Supporting the production of reliable, valid and unbiased evidence on the impact of personalized learning interventions through strategic guidance and fiscal support;

- Establishing and maintaining the highest standards for the generation of research evidence;

- Connecting research evidence to drive ongoing learning around what works in the field of personalized learning, including tutoring, to inform stakeholders in the broader research, educational leadership, philanthropic, and policymaking communities; and

- Informing and influencing the field on program design, implementation and impact.

Part Two

Accelerate's Approach to Research

Accelerate is focused on three categories of research inquiry: program design; program implementation; and program impact (see Figure 1).

Figure 1. Categories of Research Inquiry

Design (Usability)

Impact (Outcomes)

Implementation (Feasibility)

Characteristics of the intervention, including:
- Content
- Instructional modality
- Human capital
- Intended dosage
- Program costs

- Efficacy (internal validity)
- Scalability (external validity)
- Cost effectiveness

Conditions/settings in which intervention is implemented, including:
- Location
- Timing
- Classroom setting
- Tutor-student ratio
- Actual dosage

Accelerate approaches the generation of evidence for these three categories of research inquiry on a continuum (see Figure 2). This continuum moves evidence generated by Innovation grantees from descriptive, foundational evidence on program design and implementation (i.e., usability and feasibility) to correlational evidence on changes in student outcomes associated with program participation (i.e., pre-post and correlational evidence) to more rigorous evidence generated by Promise and Adoption grantees on program impact based on research designs sufficient to support causal inference, including quasi-experimental designs (e.g., regression discontinuity) and randomized control trials.

Figure 2 also maps the specific grant types that Accelerate supports — Innovation; Promise; and Adoption — to specific categories of research evidence along the evidence continuum. For Innovation grantees, Accelerate requires evidence about program design and implementation, as well as initial evidence on program efficacy via correlational research designs. For Promise grantees, Accelerate requires evidence on program efficacy, either through a well-designed quasi-experimental study (e.g., regression discontinuity — RD — design) or randomized control trial (RCT). For Adoption grantees, Accelerate aims to generate evidence on the generalizability and scalability of tutoring program impacts, by including district and school settings beyond those in which Adoption grantees have demonstrated prior evidence of program impact.

Figure 2. Research Evidence Continuum (Accelerate's Evidence Path)
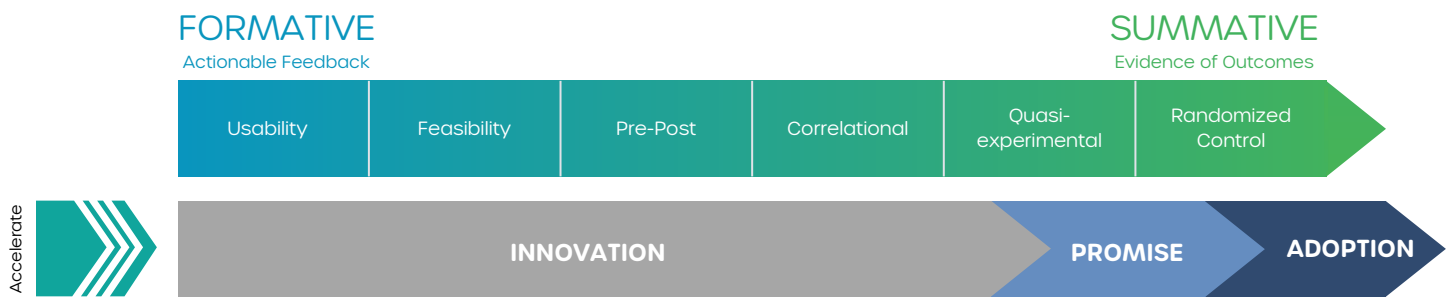
Source: WestEd

Table 1. Deeper Dive into Accelerate's Research Evidence Continuum

Usability	Feasibility	Pre-Post / Correlational	Quasi-experimental / Randomized Control
Usability relates to program design, including program content; the human capital characteristics of tutors providing instruction; and the intended dosage of the tutoring intervention (sessions/week; minutes/session; total sessions)	Feasibility relates to program implementation, including the time and location of tutoring provision, the classroom and school settings, the characteristics of the students participating in tutoring, and the actual dosage of tutoring that students receive	Pre-Post and Correlational evidence relate to program impact, and describes formative/foundational evidence on the potential impact of the program on student outcomes	Quasi-Experimental and Randomized Control Trials (RCTs) relate to program impact, and provide summative evidence on the direct effect, or impact, of the program on student outcomes

Research Roundup

High-dosage tutoring not only can produce significant gains in student achievement (Nickow et al., 2023; Guryan & Ludwig, 2023), but those gains are greater than other educational interventions, including class size reduction, extending the school day/year, and summer school (Kraft & Falken, 2021). Yet, aspects of tutoring program design and implementation, such as the availability of trained tutors and the school conditions in which tutoring is provided, can limit the impact and scalability of effective tutoring interventions.

In this first **Research Roundup,** we describe new and emerging findings on tutoring design, implementation, and impact from Accelerate's portfolio of grantees and research partners. These new findings offer novel insights into key aspects of tutoring program design and implementation. These findings also inform ongoing efforts to identify effective tutoring models and practices, the educational settings that shape their implementation, and, ultimately, their impact on student learning.

Expanding the pool of tutors

Access to high-quality instruction is critical for improving student learning and later life outcomes (Chetty et al., 2014). And yet, a limited pool of trained tutors has constrained efforts to scale tutoring beyond the 10 percent of American public-school students who currently receive high-dosage tutoring (Center for American Progress, 2024). Findings from a study of eight Accelerate-funded grantees implementing tutoring during the 2022-23 school year provides important insight and guidance on tutor recruitment and offers the following strategies for expanding the pool of tutors: (i) leveraging community-based organizations to recruit tutors locally; (ii) repurposing the role of existing school staff to provide in-person tutoring; (iii) recruiting college students who are considering a teaching career as tutors; and/or (iv) offering part-time, paid, flexible roles to recruit virtual tutors from the gig economy.

Oakland REACH, an Accelerate grantee, is a community-based organization focused on expanding the pool of eligible tutors through its Literacy Liberator Fellowship. In the 2022-23 school year, Oakland REACH recruited 16 community members to participate in The Literacy Liberator Fellowship, and 11 ultimately became early literacy tutors in Oakland Unified School District (OUSD). Yet, of the 11 fellows placed in OUSD schools in the 2022-23 school year, just five returned the following fall. Thus, while Oakland REACH helped schools tap new talent pipelines to fill tutor vacancies, a meaningful proportion of recruited tutors did not persist in those roles, with inadequate pay cited as a critical obstacle to recruiting and retaining early literacy tutors. While Accelerate supports models which promote alternative pathways into tutoring (and which can support capacity building along the tutor-to-teacher professional pipeline), low retention rates may limit the scalability of these (and similar) alternative pathways. On balance, more evidence is necessary to better understand how to increase the pool of available tutors while ensuring the delivery of effective instruction.

In districts such as Baltimore City Public Schools (BCPS), school leaders and tutoring providers have focused less on alternative pathways into tutoring and more on establishing common standards for tutor recruitment and selection. For example, tutoring providers and school leaders working in schools with multiple high-dosage tutoring programs identified differences in the expectations of tutors across providers and suggested standardizing tutor training, recruitment, and ongoing support around professionalism. Across five districts in Tennessee, the use of full-time, fully certified teachers as tutors was related to greater fidelity of tutoring implementation, including the identification and instructional targeting of student needs; coordination between the tutor and core instruction; and (for most students) achieving the targeted number of sessions per week.*

Thus, leveraging community-based organizations to recruit tutors locally may increase the pool of available tutors. At the same time, important questions remain about tutor persistence and effectiveness among locally-recruited tutors.

Supporting tutor training and development

Expanding the pipeline of tutors may address some concerns related to tutor supply. But once recruited into tutoring, research on program implementation suggests the importance of tutor training and professional development to effectively deliver high-dosage tutoring. A study of eight Accelerate-funded grantees in 2022-23 suggests the following strategies to support tutor training and development: (i) providing tutors who have limited teaching experience with a scripted curriculum; (ii) strengthening tutors' instruction by providing individualized coaching and feedback; and (iii) addressing issues of tutor attendance early in training. In BCPS, new research provides further support for these recommendations, finding that tutor support and performance evaluation can help tutors feel better integrated into the school community, while also ensuring that the tutoring sessions occur in alignment with the school's teaching culture. In Oakland, research suggests that tutoring may work best at schools where tutors are well-integrated into a coherent, school-wide approach to supporting literacy.

Establishing the school conditions for successful tutoring implementation

In addition to tutor recruitment, training, and development, research points to the importance of establishing the school conditions necessary to support successful tutoring implementation. There appears to be more between-school variation in tutoring implementation than between-district differences. The optimal school conditions build constructive relationships among multiple stakeholders — tutoring providers, school and building leaders, and teachers — and include: (i) establishing an early partnership with principals to secure their buy-in and adapt tutoring to each school's context; (ii) establishing a school-based point of contact to set up and manage tutoring logistics; (iii) communicating with teachers early to develop their support for tutoring; (iv) ensuring that schools have the space, technology, and staff needed to support tutoring; (v) ensuring that tutoring content meets the needs of students and complements or

---
* Public versions of the BCPS and Tennessee studies have not been shared but are available upon request.

supports classroom instruction; and (vi) communicating with curriculum developers about the curricular tools needed to align tutoring with classroom instruction.

In Tennessee, successful tutoring implementation was influenced by the extent of central office capacity to coordinate tutoring at the school level. For example, an extended learning coordinator position was created to support tutoring implementation across schools districtwide. In Tennessee districts, the presence of a decision-making team at the school and central office levels facilitated better integration across tutoring and core instruction. In comparison, teachers, tutors, coaches, and school leaders in Oakland reported that staffing, facilities and scheduling constraints made it difficult to optimize the work of early literacy tutors. And in Baltimore, tutoring providers identified gaps in communication with school leaders regarding tutoring program details, such as scheduling, space, and general implementation, and urged district leaders to establish school-based infrastructure to facilitate ongoing engagement between tutoring providers and schools. Importantly, establishing a consistent schedule for tutoring is necessary to maximize tutoring dosage. Moreover, school leaders reported avoiding sessions scheduled at the very beginning or end of the school day and accounting for school-year activities and other interruptions.

Dosage, dosage, dosage

The successful implementation of tutoring requires that students attend and participate in the intended number of tutoring sessions for a given program model. Among Accelerate-funded grantees implementing tutoring during the 2022-23 school year, grantees expected students to receive, on average, 3.4 sessions of tutoring per week for 43 minutes per session (totaling approximately 73 hours of tutoring for a 30-week period during the school year); across the portfolio, grantees reported that 72% of students received the intended dosage. Yet, many tutoring interventions have struggled to deliver sessions close to the intended dosage. For example, a study of learning interventions during the 2021-22 school year found that students received just 12-14 hours of math tutoring, on average, in districts that planned to offer 30-60 hours of math tutoring. In this same study, the average dosage of tutoring received by students across multiple school districts ranged from 4-10 hours.

The promise of virtual tutoring

OnYourMark (OYM), an Accelerate-funded grantee, partnered with a charter management organization (CMO) in Texas to provide early literacy tutoring via online (virtual) tutors to grades K-2 students in 12 schools. Among eligible students, the external evaluator — The National Student Support Accelerator (NSSA) at Stanford University — assigned eligible students into pairs, and within matched pairs of students, NSSA randomly assigned students into either the treatment (1:1 or 2:1 tutoring) or control (business-as-usual) conditions; among those students randomly assigned to treatment, NSSA randomly assigned half to receive 1:1 tutoring and the other half to receive 2:1 tutoring. NSSA compared the early literacy outcomes (DIBELS and MAP scores) for students randomly assigned to treatment (those students receiving either 1:1 or 2:1 tutoring) to students randomly assigned to control (students in the business-as-usual setting).

Initial evidence from this experimental evaluation suggests that 1:1 online tutoring in early literacy has the promise of improving student achievement outcomes, on the order of an additional 1-1.5 months of additional learning. And while the achievement of academically struggling students benefited more from 1:1 virtual tutoring, students receiving online tutoring in larger groups (i.e., 2:1) did not realize improvements in early literacy outcomes, suggesting the important role that student-teacher ratio and individualized support plays, particularly in the online tutoring context. This is important because virtual tutoring providers like OYM can greatly increase tutor supply when they recruit nationally and can deliver tutoring from anywhere. However, personnel costs are the main driver of price, so achieving positive outcomes with a 2:1 ratio is important for scalability.

Since this study represents among the first experimental evaluations of a virtual tutoring program, additional evidence from other educational settings is necessary to validate these initial findings, especially since 1:1 tutoring was found to improve reading outcomes for some students (low-achieving students; students in grade 1) but not others (high-achieving students; students in grade 2). OYM cites the programmatic improvements as one outcome of this initial RCT and has made adjustments to its 2:1 delivery model. Going forward, Accelerate believes it will be important to observe whether (and how) impacts on student achievement might change with updates to OYM's 2:1 delivery model and whether studies of other programs delivering synchronous virtual instruction generate similar impacts on student learning.

Part Four

Looking Ahead

In subsequent issues of the Quarterly Research Note, Accelerate will share findings from new and ongoing research studies on how the impact of tutoring (and tutoring providers) might differ across grades, subjects, and the dosage of tutoring received. We will also present new analyses and novel evidence on the efficiency of tutoring that resulted from Accelerate's funding support and technical assistance; specifically, how the dosage (in hours) of tutoring necessary to generate additional student learning might vary across tutoring providers and educational settings.

The cost effectiveness of tutoring — specifically, the dollar cost of tutoring necessary to generate additional student learning — is among the important issues that remains relatively unaddressed in the tutoring literature. In future issues of the Quarterly Research Note, we will engage with this issue to better understand how the cost effectiveness of tutoring might differ across tutoring providers and educational settings in an effort to inform stakeholders on the potential scalability of tutoring providers and tutoring interventions.

On the program impact side, the University of Chicago Education Lab, in partnership with MDRC, (UofC), an Accelerate-funded research partner, is currently engaged in a multi-year, multi-site experimental evaluation of tutoring (the Personalized Learning Initiative, or PLI) to understand what models of tutoring work best for which students in which contexts, and at the lowest

possible cost. In 2022-23, UofC randomized approximately 2,213 students in 31 schools across two sites — Chicago Public Schools and Fulton County (GA) Schools — in a three-arm study, comparing high-dosage tutoring, sustainable high-dosage tutoring (lower cost), or business-as-usual conditions. UofC continues to add district sites to its experimental evaluation; in the 2023-24 school year, approaching 14,000 students across nine district sites (charter and traditional) are participating in the PLI evaluation. We at Accelerate look forward to presenting new findings and new learnings from the PLI study on the impact of tutoring.

Thanks for reading, and stay tuned!

About Accelerate
The National Collaborative for Accelerated Learning

Accelerate is a nonprofit organization, incubated and launched by the national nonprofit America Achieves, that seeks to embed high-impact tutoring programs into public schools now and for the long term. Launched in April 2022 with an initial fund of $65 million, Accelerate funds and supports innovation in schools, launches high-quality research, and advances a federal and state policy agenda to support this work.

Accelerate is leading efforts to improve practice on multiple fronts, including as a lead technical assistance partner to the National Partnership for Student Success (NPSS). The NPSS is a joint partnership of more than 100 organizations, the U.S. Department of Education, AmeriCorps, and the Johns Hopkins Everyone Graduates Center formed to expand high-quality tutoring, mentoring, and other evidence-based support programs, with the goal of ensuring an additional 250,000 adults serve in these roles over the next three years.

Accelerate is supported by Citadel founder and CEO Kenneth C. Griffin; Arnold Ventures; the Bill & Melinda Gates Foundation; the Overdeck Family Foundation; and the Walton Family Foundation.

For more information, please visit www.accelerate.us.

Accelerate
The National Collaborative for Accelerated Learning