Addressing Educational Inequities in the Wake of the COVID-19 Pandemic

# Implementing Programs to Align, Accelerate, and Extend Student Learning

COMMISSIONED PAPER SERIES

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NATIONAL ACADEMY of EDUCATION

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NOTICE: The project and research are supported by funding from the William T. Grant Foundation. This paper was prepared for the National Academy of Education (NAEd) to inform and support the work of the steering committee for *Addressing Educational Inequities in the Wake of the COVID-19 Pandemic*, including the committee report. The opinions expressed are those of the authors and not necessarily those of the NAEd or the William T. Grant Foundation.

Digital Object Identifier: 10.31094/2025/1/1



Suggested citation: Kuhfeld, M., Woulfin S. L., & McEachin, A. (2025). *Implementing programs to align, accelerate, and extend student learning*. National Academy of Education Committee on Addressing Educational Inequities in the Wake of the COVID-19 Pandemic. National Academy of Education.

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March 2025

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## INTRODUCTION

The COVID-19 pandemic has disrupted numerous aspects of life since March 2020. Long-standing inequities in social, political, and economic opportunity widened, particularly for Black and Brown communities (Piacentini et al., 2022; Sidik, 2022). As a result of the pandemic, students needed additional opportunities for targeted instruction and extended learning time (Lewis et al., 2021). School systems needed financial and structural support to help pay down the *educational debt*[1] owed to students (Ladson Billings, 2006). The unprecedented situation needed unprecedented responses and resources.

Congress created the Elementary and Secondary School Emergency Relief Fund (ESSER) to support school systems' implementation of *learning acceleration* programs and policies (Ladson-Billings, 2021; U.S. Department of Education, 2021). Several evidence-based *academic recovery* strategies (e.g., *English Language Arts [ELA] curriculum*, *high-dosage tutoring*, *summer programs*) emerged as leading solutions among policymakers, educators, and researchers. Coalitions of stakeholders adopted these programs to align, accelerate, and/or extend learning opportunities. Many of these efforts focused on improving students' academic outcomes.

However, implementing these programs in the aftermath of the COVID-19 pandemic proved challenging. Even with strong financial support for recovery programs, districts' recovery efforts invariably ran into *evergreen implementation issues*. Districts had to implement *interventions* at an unprecedented scale to counter the negative effects of the pandemic. The evidence base supporting these intervention efforts often included smaller-scale pre-pandemic programs targeted to specific students. Research did not offer clear guidance for the scale of the pandemic's damage to school systems. Lingering effects of the pandemic (e.g., repeated outbreaks), as well as logistical and staffing issues, hindered the implementation of recovery programs.

We synthesize the evidence on COVID-19 academic recovery strategies and advance a framework to understand the factors shaping *effective* and *equitable* implementation. Three interventions implemented by many districts provide a useful case to explore implementation challenges and successes: (1) classroom-based ELA curriculum, (2) interventions occurring during the school year but outside of typical teaching and learning (e.g., tutoring), and (3) interventions occurring outside of normal learning hours (e.g., summer programs). We describe their theory of change, synthesize relevant literature, and discuss how they have been implemented to accelerate learning.

U.S. school districts implemented these interventions widely both prior to and in response to pandemic-related learning disruptions. Incorporating these programs into traditional learning opportunities and schedules has unsurprisingly surfaced evergreen implementation issues. We describe four interrelated factors (i.e., resources, context, people, and coherence) that influence the implementation of the three focal academic recovery programs. Together they form an intricate web that can either suspend or support school systems recovery efforts. Policymakers, reformers, and educators will only alleviate the educational debt owed to students through the well-coordinated implementation of equitable and effective recovery programs. Understanding these factors is especially important given the Biden administration's plans to support these efforts moving forward (The White House, 2024).

[1] For all *italic* terms, see the Glossary for definitions.

### Glossary

**Academic recovery strategies:** Programs and practices implemented to rapidly and significantly improve learning outcomes in response to the protracted effects of the pandemic on students' school experiences.

**Educational debt:** Accumulation of educational opportunities, or debt, owed to minoritized students due to our society's historical, economic, sociopolitical, and moral decisions (see Ladson-Billings, 2006).

**Effective:** In the context of academic recovery programs, effectiveness means that there is evidence programs make a positive impact on student learning.

**ELA curriculum:** Includes standards, high-quality instructional materials (HQIM), assessments, and frameworks and guidance on instruction.

**Equitable:** Equity/equitable can take on several meanings. We use it similar to educational debt. For our purposes it refers to opportunities, programs, or other experiences that offset educational debt among students.

**Evergreen implementation issues:** Challenges in implementation of academic programs that are perennial (e.g., predate the pandemic but are still relevant today).

**High-dosage tutoring:** Intensive tutoring program delivered in short sessions multiple times per week in small groups (up to three to four students).

**Interventions:** An action taken by a teacher or administrator to provide a child with extra support.

**Learning acceleration:** Systems and activities to rapidly produce positive student outcomes by raising achievement levels after COVID-19-related academic setbacks.

**Summer programs:** Academic programs offered by public schools over the summer period, including required summer school programs as well as voluntary summer programs that combine enrichment and academic offerings.

## EFFECTS OF COVID-19 ON EDUCATIONAL INEQUITIES FOR K–12 STUDENTS

Prior to the COVID-19 pandemic U.S. educational systems reflected society's pervasive racial and economic inequities. These systems provided students of color worse learning opportunities than their peers (Domina et al., 2016, 2023). Their schools had less experienced teachers (Mehrotra et al., 2021). Educators used tracking to withhold rigorous coursework and held students of color to lower academic expectations (Shores et al., 2020). The same policy actions that led to racial segregation of schools and neighborhoods created disparities in school finance (Sosina & Weathers, 2019). Behavior became another vehicle to withhold opportunity for underrepresented students; educators suspended Black students almost twice the rate of White students and referred them to law enforcement twice as often as White students (U.S. Department of Education, Office for

Civil Rights, 2021). Differences in opportunity often beget differences in outcomes. Systematic mistreatment of students of color created sizable academic disparities at entry to the K–12 school system (Kuhfeld et al., 2021; von Hippel et al., 2018) that persist into high school and beyond (Libassi, 2018; National Assessment of Educational Progress, 2019).

The COVID-19 pandemic drastically disrupted U.S. public schools for almost two years. Schools closed for in-person learning in March 2020. Many operated remotely throughout a sizable part of the 2020–2021 school year. Significant disruptions to delivering high-quality instruction in both in-person or remote settings had serious implications for students' well-being (Dawer & Woulfin, 2024). Students' mental health and behavioral challenges created formidable barriers to learning (YouthTruth, 2021).

School closures and disruptions caused students at all grade levels to suffer significant achievement setbacks, particularly in math (Betthäuser et al., 2023; Cohodes et al., 2022; Goldhaber et al., 2023; Sparks, 2022). One large national study found that students' test scores dropped approximately half a grade level in math and one-third of a grade level in reading between 2019 and 2022 (Fahle et al., 2024). Students in lower-income districts, or districts with a larger proportion of students of color, experienced greater degrees of academic setbacks as indicated by decreases in student achievement on standardized assessments (Fahle et al., 2023; Lewis & Kuhfeld, 2023). Prolonged use of remote or hybrid instruction worsened student achievement (Fahle et al., 2023; Goldhaber et al., 2023).

Increased student absenteeism presented new problems for schools (Kaufman & Diliberti, 2021). Chronic absenteeism rates grew by 13.5 percentage points between the 2018–2019 and 2021–2022 school years. The system faced an additional 6.5 million students now chronically absent (Dee, 2023). Additionally, declining school enrollment has put pressure on district budgets and prompted difficult conversations around potential school closures in many districts (Burtis & Goulas, 2023). Further challenging districts, teachers' interest in the profession waned during the pandemic. K–12 employment decreased by nine percent at the beginning of the pandemic (Bleiberg & Kraft, 2022). Almost 75 percent of public schools reported the frequent use of administrators, non-teaching staff, and short-term substitutes to cover classes (Institutes for Educational Statistics, 2022).

The disruptions particularly hurt students of color, students in poverty (particularly in rural areas), students with disabilities, and emerging bilingual students (YouthTruth, 2021). School closures limited students with disabilities' access to teaching aids and additional services (Jones et al., 2020). Many schools loosened attendance policies and softened or dropped grading policies. These decisions affected underrepresented students who are already faced with the "soft bigotry of low expectations" (Northern & Griffith, 2022).

Students of color also experienced larger than average test score declines (Blad, 2022). Between 2019 and 2022, Black and Hispanic students' math scores dropped an average of seven points in math compared to three points for White students, with similar trends in reading (NAEP, 2022). Emerging bilingual students experienced declines in both academic and English Language Proficiency (ELP) assessments (Lazarin, 2022). Similar patterns were observed on both state and benchmark assessments (Halloran et al., 2021; Lewis & Kuhfeld, 2023).

A systematically unfair education system coupled with an international pandemic

furthered a daunting educational debt. A debt owed particularly to students of color, students with disabilities, and emergent bilingual students. Just catching up to an unequal pre-pandemic baseline will require opportunities equivalent to many extra months of schooling (Lewis & Kuhfeld, 2023). We can and should aim for a system more equitable than a pre-pandemic baseline. It will take a coordinated effort from students, families, teachers, and leaders.

## HIGHLIGHTING PROMISING AND SUCCESSFUL ACADEMIC RECOVERY STRATEGIES

In this section, we discuss three types of academic recovery strategies—(1) ELA curriculum,[2] (2) high-dosage tutoring, and (3) summer programs—that have potential to improve academic outcomes at this phase of pandemic recovery. These strategies represent three of the most widely used approaches selected by districts in the aftermath of the pandemic (FutureEd, 2022). These strategies proved popular in part because it is relatively easy to upgrade existing curricular materials or provide short-term extended learning opportunities with minimal changes to school operations/schedules. Districts have to spend down ESSER funds allocated in 2021 within a few school years, and districts also have to balance future budget constraints when the ESSER funds run out, meaning that strategies that require longer term financial commitments are less appealing (e.g., increasing teacher pay, lowering student/teacher ratios, extending the school year).

These academic recovery strategies also have a strong pre-pandemic body of research demonstrating positive effects on students' test scores. We acknowledge that our primary focus on test scores in selecting evidence for academic recovery programs may overlook other educational practices that have the potential to improve students' lives.[3] However, we limit our focus to keep our review at a reasonable length. Other papers in this series direct attention toward non-test outcomes and structural reforms.[4]

Our discussion of these academic recovery strategies makes two assumptions for interested school systems. School systems' conditions of learning influence the efficacy of any policy or practice. We assume that districts have plans in place to implement supportive conditions of learning.[5] We also assume a tight coupling between the design of an intervention and its intended outcomes. If the goal is to improve traditional academic outcomes, then the design should be focused on practices and strategies that support effective instruction and scaffolding for all students as well as quality professional learning opportunities encouraging changes in classroom practice. If the

[2] Given that we are covering a lot of ground for these three interventions, we focus on ELA curriculum as an improvement strategy, recognizing the other subjects, including math, are also important. Where possible we highlight a few math-related promising programs in our discussion section.

[3] Standardized assessments and interventions may lack cultural relevance, contributing to assessment bias (Popham, 2006). For further critiques of test scores, see Au (2016, 2022).

[4] The two other papers in this NAEd series include *Building Supportive Conditions and Comprehensive Supports to Enhance Student and Educator Well-Being and Thriving*, written by David Osher, Wehmah Jones, & Robert J. Jagers (2025), and *Supporting Families and Communities in Children's Academic Thriving and Well-Being in the Wake of the COVID-19 Pandemic*, written by Ann M. Ishimaru and Sophia Rodriguez (2025).

[5] See the NAEd paper from this series, *Building Supportive Conditions and Comprehensive Supports to Enhance Student and Educator Well-Being and Thriving*, written by David Osher, Wehmah Jones, and Robert J. Jagers (2025), for more detail on conditions of learning.

goals are different (say promoting students' mental health or connection to school), the design should match.

### Strategy 1: ELA Curriculum to Align and Accelerate Learning

Curriculum—which includes standards, instructional materials, assessments, and frameworks and guidance on instruction (see Figure 1)—functions as a lever steering instructional improvement (Hopkins et al., 2013; Polikoff, 2015; Slavin et al., 2009). ELA curriculum affects student outcomes by steering teacher and leader activities. Policymakers are incentivizing and promoting the use of evidence-based ELA curriculum. In turn, district leaders are taking steps to adopt and advance high-quality instructional materials (HQIM) as a curricular reform. Consequently, teachers employ these materials to conduct evidence-based, standards-aligned ELA instruction.

#### *Continual Skirmishes Related to ELA Instruction*

The accountability policy era focused practitioners' and researchers' attention more on ELA as well as the content and pedagogy of reading instruction (Coburn et al., 2011; Slavin et al., 2009). Reformers implemented multiple policies and programs to improve classroom practice and student achievement. Among these policies include debates about the "best" way to teach reading (Pearson, 2004; Pressley et al., 2023). In the early 2010s, balanced literacy dominated educators' reading pedagogy. Balanced literacy uses a workshop model. Students conduct shared and independent reading to foster an appreciation of books and literacy. The model assumes students build reading skills in an individualized, organic manner (Duke & Del Nero, 2011; Pressley et al., 2023; Woulfin, 2016).

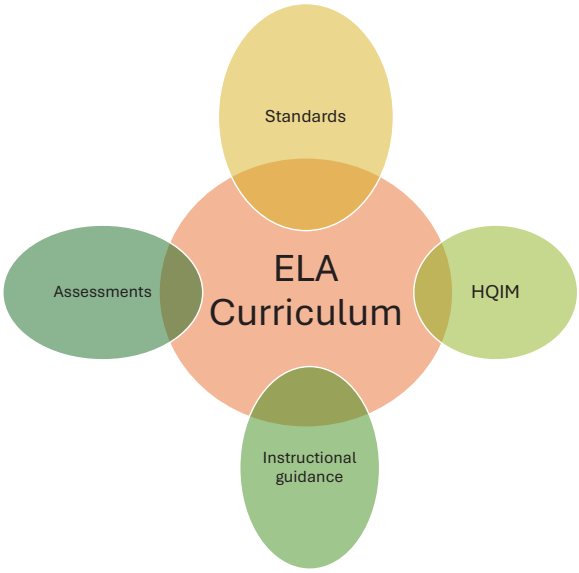


**FIGURE 1** Components of curriculum.
NOTE: HQIM = high-quality instructional materials.

However, by 2020, multiple constituents bemoaned elements and outcomes of balanced literacy, elevated Science of Reading (SoR) aligned programs and practices (Mervosh, 2023).[6] SoR reform influenced states and districts to adopt HQIM (EdReports, 2022). Various reform organizations, state educational agencies, and scholars have advanced the following criteria for HQIM: (a) standards-aligned, (b) include evidence-based practices, (c) support all learners, (d) enable progress-monitoring, (e) include implementation supports, (f) provide materials for teachers and students and (g) create coherence (Council of Chief State School Officers, 2023; Texas Education Agency, 2023; TNTP, 2022). Policy changes and vendor-developed instructional materials aim to sequentially build knowledge and cover five strands of reading (i.e., phonemic awareness, phonics, fluency, vocabulary, and comprehension).

*Role of ELA Curriculum for Coherent, High-Quality Reading Instruction*

Instructional materials play an important link between academic standards and teachers' instruction. Effective ELA instructional materials can guide classroom practice and promote coherence across schools. Functioning as one component of curriculum, instructional materials contain ideas about teaching and learning and can, therefore, transmit ideas about instruction to educators (Hodge et al., 2019). Furthermore, these materials help define what is "good" or appropriate reading instruction, and it shapes teachers' work and influences students' learning opportunities. Therefore, state leaders' decisions regarding ELA instructional materials affect the types of ideas teachers encounter about what and how to teach (Hodge et al., 2016).

The ubiquity and central position of curriculum in teaching and learning matters for aligned instruction and accelerating learning. Teachers can study and use particular instructional materials to sequence their instruction (Amplify, 2023; Woulfin & Gabriel, 2020). Here, we point to the important role of professional learning so that educators gain knowledge and skills related to using particular instructional materials. Professional development (PD) focused on current, adopted materials promote teacher learning as well as program implementation (Penuel et al., 2007). In addition, as teachers use common materials and acquire a common language regarding teaching, instructional materials can promote particular types of collaboration and collective sensemaking (Coburn, 2001; Remillard, 2005). The devil is always in the details; this maxim applies to curriculum implementation as part of academic recovery efforts.

Not all instructional materials are equally aligned to best practices. The variety and broadness of ELA instructional materials make it challenging to maintain a consistent level of quality. As an example, Wright and Neuman (2013) determined differences in how programs organized vocabulary instruction as well as the types of instructional practices promoted by programs. Their analyses identified disconnects between evidence-based reading instruction and curricular elements.

[6] SoR practices focus on systematic, explicit instruction on multiple strands of reading (i.e., phonemic awareness, phonics, fluency, vocabulary, comprehension). In addition to reformers, advocates, and practitioners, the media has recently placed substantive attention on reading achievement and how to teach reading. Media interest in literary practice further spurred interest in reading policy (e.g., Hanford's 2018 *Sold a Story*; Pearson, 2004). By 2022, 32 states and the District of Columbia had passed SoR legislation (Schwartz, 2022).

Curriculum has the ability to play an important role in improving teaching and learning within our schools. Most of the attention focuses on the content or alignment to standards, but it is crucial to consider one simple—yet easily overlooked—aspect of curriculum use: ease of access. Teachers need easy access to high quality instructional materials. They also need support in how to best use them. Despite clear evidence regarding the potential of curricula to structure reading reform efforts, many educators still have low access to ELA curriculum (Kaufman et al., 2020). Without easy access, teachers may rely on an array of lower quality instructional resources (e.g., Teachers Pay Teachers) (Polikoff & Dean, 2019).

*Evidence on How ELA Curriculum Supports Improvement Efforts*

For more than two decades, accountability policies have relied on curriculum to support changes in classroom ELA and mathematics instruction (Hodge et al., 2019; Kornhaber et al., 2014; Pak et al., 2020; Smith & O'Day, 1990). Curriculum influenced the implementation of Common Core State Standards-aligned instruction and instructional coherence in districts and schools (Kaufman et al., 2020; Kornhaber et al., 2014; Opfer et al., 2017; Pak et al., 2020). Moreover, curriculum functioned as a lever for districts to advance particular forms of reading instruction (Hodge et al., 2019; Woulfin, 2016, 2018). Recent evidence, however, shows that districts and classrooms are adopting new ELA instructional materials at slower rates than mathematics (Kaufman et al., 2020). This adoption gap highlights that teachers lack the support necessary to fully implement new, aligned forms of ELA instruction.

Multiple years of pandemic schooling have brought focus to curriculum as a tool to enhance students' learning opportunities. Policymakers, educational leaders, and other advocates are particularly focused on addressing unfinished learning and enabling systematic—and coherent—reading instruction. States like Ohio and Texas used ESSER funds to incentivize the adoption of HQIM. EdReports (2022) calculated that districts invested more than $18 billion of ESSER funds on instructional materials during 2021–2022.[7] Advocates of curricular reform highlight the tension between HQIM promoting teachers' knowledge of elements of reading instruction yet reducing educator agency in certain regards (EdReports, 2022; Kersten & Pardo, 2007; Priestley et al., 2012). Within this context, we turn attention to the evidence based on reading curricula as well as the underlying conditions enabling improvement.

Curriculum can play a role in aligning and accelerating teaching and learning (Kaufman et al., 2020; Pak et al., 2020). As an example of a popular ELA program, Core Knowledge Language Arts (CKLA) from Amplify incorporates spiraling units and lessons over a span of grade levels. This approach deepens students' background knowledge and makes connections across content areas (Amplify, 2023). This curriculum uses tenets of SoR to help build students' knowledge base for accessing and comprehending complex texts.

Ideally the curriculum will impact teachers' instruction. Working through the curriculum will help steer teachers' work and classroom routines toward the principles of

[7] In total, the federal government allocated $190 billion in pandemic aid for schools, with $112 billion provided in ESSER funds in March 2021. While funds were spent down over different periods, $18 billion represents about 16 percent of the total ESSER allocated funds.

SoR. This alignment between instructional practices and curriculum will aid districts' efforts to accelerate learning opportunities for students (see Box 1 for an example).

*Evidence on How ELA Curriculum Can Improve Student Outcomes*

Slavin et al. (2009) provide foundational evidence on the impact of basal reading programs. Compared to business-as-usual programs, high-quality beginning reading curricula in seven quantitative studies (e.g., Open Court Reading, Scholars Phonics, Reading Street) yielded mixed results. Two studies of Open Court had promising effects on student reading achievement. But other studies indicated such types of curricula only yield limited effects on student achievement (McGill-Franzen et al., 2006; Slavin et al., 2009).

**BOX 1**
**Vignette on ELA HQIM**

In Fall 2022, District X* launched Elevate Literacy as their Tier I ELA curriculum. District leaders and a committee of educators selected several programs from the state's list of approved HQIM. Next, in collaboration with central office leadership, the district's ELA director identified a set of schools to pilot the HQIM during the 2022–2023 school year. The pilot sites began using Elevate in Fall 2022; they received additional resources, including partial funding for an instructional coach and full sets of materials, to support adoption. During the pilot year, teachers and leaders from the pilot schools participated in several professional development sessions on the specific ELA program. District leaders also engaged in learning walks to observe this program in action. They used the walks to gather guidance to better shape the enactment of the curriculum across the district.

In Fall 2023, all elementary schools in District X were expected to begin using Elevate to guide ELA instruction. District leaders planned common professional learning opportunities linked to the curriculum to build efficacy with the new curriculum. The learning opportunities ranged from a summer kickoff workshop facilitated by Elevate staff to school-based PD sessions led by district instructional specialists. Principals were asked to attend both district and school-based PD sessions. In addition, district leaders wove the ELA HQIM initiative into campus leaders' professional learning opportunities. District leaders facilitated activities within principals' network meetings on how to conduct teacher observations as part of the teacher evaluation process. Instructional coaches also engaged in program-aligned PD so that their coaching activities in elementary schools could bolster teachers' skills to enact the new instructional materials.

District leaders were cognizant of the spinning wheel trap for education policies and programs. It was imperative to create coherence between the HQIM adoption and other district initiatives. District leaders revised data team meetings to focus on the implementation of Elevate. And District X's new teacher induction and mentoring program addressed how to access and interpret Amplify materials as well as how to structure the daily schedule and classroom environment to fully enact this HQIM. Thus, novice teachers received intensive, aligned messages about the ELA program to support—and accelerate—their development and student learning. District and school leaders collaborated to maintain a sharp focus on the deep, sustainable implementation of the Elevate program to help improve ELA instruction as well as student outcomes.

* All districts described in our academic recovery program vignettes represent composites of real programs implemented in one or more U.S. public school districts.

Researchers have started to gather evidence on the impact of implementing ELA HQIM and SoR aligned professional development. States that implemented these initiatives (e.g., Tennessee and Mississippi) experienced increased National Assessment of Educational Progress (NAEP) scores (Olson, 2023). Finally, evidence during the pandemic from California shows the promise of SoR reforms to improve early literacy for third grade students. Novicoff and Dee (2023) examined the effectiveness of California's Early Literacy Support Block Grant (ELSBG) initiative to promote pedagogy aligned with the science of reading. The initiative significantly increased grade-3 ELA achievement by 0.14 standard deviations (SDs), which translates to roughly 25 percent of a school year.

*Required Organizational Supports for Effective Curriculum Use*

Educator capacity is a necessary condition to transform curriculum into positive student-level outcomes. That is, educators' knowledge and skills of content and pedagogy mediates the relationship between HQIM in reading and student outcomes. There is clear evidence teachers benefit from holding deep and flexible understanding of their academic content area (Ball, 2000). Curriculum can also play an educative role in educators' shaping of knowledge, beliefs, and practices (Davis & Krajcik, 2005; Spillane et al., 2002; Stein, 2007). In particular, design features of curricula can promote educator development, and the use of evidence-based curriculum can provide teachers learning opportunities to enhance their knowledge and skills of reading instruction (Davis & Krajcik, 2005; Drake et al., 2014). With regard to the design of curricula, Drake et al. (2014) noted that:

> the focus of curriculum designers is shifting to supporting teachers' capacity to enact curriculum materials—to read, understand, and adapt available curriculum materials to meet the specific needs of the students in their classroom while remaining faithful to the materials' intended outcomes. (p. 154)

It appears important, therefore, to analyze and understand how SoR-aligned curricula, themselves, build teachers' capacity while also meeting students' needs.

Remillard (2005) highlights how teachers engage with and learn from instructional materials in the context of curriculum implementation. Notably, Remillard (2005) posits each teacher functions as "an active designer of curriculum rather than merely a transmitter or implementer" (p. 214). Thus, while districts and schools may adopt highly specified, or "scripted," curricula, teachers continue to hold discretion to enact programs, including HQIM, as tools (Dewitz & Jones, 2013; Pearson, 2007). In particular, teachers' beliefs, knowledge, and prior experiences shape their sensemaking of curricula as well as their translation of curricula into their classroom practice (Coburn, 2001; Remillard, 2005). For example, a teacher's understanding of phonemic awareness influences how they interpret activities laid out in their district's curriculum that address phonemic awareness.

Organizational structures, including routines, resources, time, and leadership inside schools, also shape teachers' enactment of instructional materials (Dewitz & Jones, 2013; Spillane et al., 2002; Valencia et al., 2006). Valencia et al. (2006) determined patterns

in how teachers in different school contexts and with different knowledge regarding literacy instruction adapted messages from reading curricula to different degrees. In addition, curriculum-aligned coaching can contribute to improving facets of ELA instruction (Matsumura et al., 2012). For example, instructional coaches can facilitate professional learning community sessions that address and explore the school's curriculum (Woulfin, 2016; Woulfin et al., 2023). As such, instructional leadership matters for aligning ELA curriculum and instruction (Coburn, 2004; Rigby, 2014).

Collaborative planning activities linked with curriculum also serve to promote educator development and gains in student achievement (Ronfeldt et al., 2015). Specifically, Ronfeldt et al. (2015) determined teacher collaboration centered on curriculum and instructional strategies was associated with increases in student reading achievement. This extends our understanding of the potential for curriculum to aid in creating a common language for educators' joint work. However, teachers actively make sense of curriculum in their context (Coburn, 2001; Spillane et al., 2002). As such, they interpret and then respond to messages about instruction contained in ELA curricular materials (Kersten & Pardo, 2007; Spillane et al., 2002). The responses of teachers and coaches vary widely—from closely following the principles and practices from their curriculum to mutating and even rejecting elements of the curriculum (Coburn, 2004; Coburn & Woulfin, 2012; Kersten & Pardo, 2007). Consequently, variability in teachers' implementation occurs after adopting ELA curricula; we explore this in greater depth in the implementation portion of the paper.

### Strategy 2: High-Dosage Tutoring

In this section, we highlight several targeted interventions (acceleration academies, online credit recovery programs, and high-dosage tutoring) that educational systems have implemented as part of the typical school calendar (in-school) or during winter/spring breaks. While many of these programs had long periods of implementation prior to the pandemic (Kraft & Falken, 2021), most of them had not been implemented at the scale seen during the last three years. The pandemic recovery period created a unique circumstance where many school systems tried to implement targeted interventions when the scale of the problem was closer to whole-school reforms.

The most common in-school interventions implemented during the pandemic all attempt to distill teaching and learning into concrete units and small groups that occur in parallel to traditional learning opportunities. One example of a common targeted intervention is acceleration academies that pair small groups of students with a certified teacher to work on targeted instruction during week-long breaks (typically spring break) from school (Schueler, 2020). One benefit of these programs is teachers typically provide the instruction which helps embed the activities during the acceleration academies within the typical content and pacing of a school year. Another common example includes the use of online credit recovery programs, often focused on older students in upper middle and high school (Heinrich, 2022). While increasingly popular during the pandemic, the evidence suggests that virtual recovery programs are not as effective as face-to-face learning opportunities (Heinrich & Cheng, 2022; Heinrich et al., 2019; Rickles et al., 2023; Viano & Henry, 2020). However, due to their life circumstances,

some students can only take advantage of virtual credit recovery programs. Face-to-face learning is preferable, but virtual is better than no programs.

The third example, high-dosage tutoring, was not only widely implemented across school systems, but also drove, and continues to receive, a great deal of attention in policy and media conversations (National Student Support Accelerator, 2023a). During the 2022–2023 school year, for example, four out of five schools said they offered at least one version of tutoring (Institute of Education Sciences, 2023). Additionally, 40 states provide funding for tutoring programs as of November 2023 (National Student Support Accelerator, 2023b). Given its popularity during the pandemic and the strong pre-pandemic evidence base supporting the use of tutoring for COVID-19 recovery efforts (e.g., Nickow et al., 2020), we focus on high-dosage tutoring as a focal case of in-school targeted supports.

### *High-Dosage Tutoring Program Components*

Experts define high-dosage tutoring as an intensive tutoring program delivered in short sessions multiple times per week in small groups (up to three to four students). Small group size is particularly important for the effectiveness of programs (Kraft & Lovison, 2024). High-dosage tutoring sessions occur during the school day by trained tutors who align tutoring content with school curricula. Robinson et al. (2021) note a number of important design elements for effective high-dosage tutoring programs, including (a) frequent meetings of at least three times per week and at least 30 minutes per session; (b) small group-size, one-to-one if possible; (c) program delivery in-person when feasible, although online under the right circumstance may be effective; and (d) continuous relationships between the tutors and students (see Box 2).

While many districts have relied on external contracts with tutoring vendors to hire tutors, some districts have also hired local tutors across a range of experience (e.g., community volunteers, high school, or college students). Peer tutoring, while less common and usually less intensive, is another, relatively low-cost, strategy that districts may explore (Bowman-Perrott et al., 2013). Additionally, recent innovations in generative artificial intelligence (AI) and the rise of interactive chatbots such as ChatGPT have increased interest in AI tutoring (Barjarin, 2024). While some prototypes (e.g., Khanmigo) have recently been rolled out, it is not yet clear how many districts are experimenting with AI tutoring.

### *Effectiveness of High-Dosage Tutoring Programs*

Pre-pandemic studies on the effects of tutoring broadly demonstrate consistent positive outcomes. Nickow et al. (2020) found overall positive effects (0.37 SD) of tutoring through a meta-analysis, noting especially strong results in early-grade literacy tutoring. Other pre-pandemic analyses yielded similar results; tutoring consistently resulted in significantly stronger outcomes for students as compared to other interventions with an average effect of 0.36 across four meta-analyses (Kraft & Falken, 2021), as well as for tutoring programs targeting students with low socioeconomic status (Dietrichson et al., 2017). Academic improvement as a result of high-dosage tutoring is associated with a variety of tutor types, including college-aged volunteers and paraprofessionals.

**BOX 2**
**High-Dosage (In-Person) Tutoring Vignette**

District Y, serving students in a large metropolitan area, partnered with a community organization to implement a tutoring program. The district recently implemented a new reading curriculum, and the tutoring program was designed to support the implementation of this new program and also serve as a COVID-19 recovery effort. The district set a goal of providing 30 minutes of small group instruction every school day for struggling readers.

Unlike most high-dosage tutoring programs, district Y's program focused on meeting the unique needs of the local community. The community organization wanted to support strong connections between the tutors and students, and so it decided to on-board individuals from the community, including parents, rather than hire a tutoring service. All tutors received a paid eight-week training focused on implementing the district's literacy curriculum. The district also provided the tutors with spaces to discuss and collaboratively work through their own experiences with the curriculum. The district and community organization decided to keep the program small in the first year of implementation, hiring a total of 15 tutors.

Preliminary evidence from the program suggests that pairing trained tutors with supports (e.g., access to instructional coaches) to help implement an evidence-based literacy program in small group settings can boost students' learning. However, the program is not without its own challenges. The living wage paid to tutors provides budget challenges, especially as ESSER funds disappear. Students in the program also experienced mixed results on test scores. Kindergarten students showed measurable improvement, but older students did not.

Tutoring programs that use better trained instructors (e.g., teachers or paraprofessionals) are more effective than programs that use instructors outside the school system (Nickow et al., 2020).

Research on the effectiveness of tutoring programs implemented following the COVID-19 pandemic has been mixed. A study of eight districts that used either voluntary or scheduled tutoring programs found null effects of the programs on student math and reading test scores in spring 2022 (Carbonari et al., 2022). However, there have been some promising examples, though usually operating at a fairly small scale. The Saga Education tutoring model implemented prior to the pandemic is an example of an effective, and potentially replicable tutoring program (Guryan et al., 2023; Morton & Hashim, 2023; Robinson et al., 2022). The program used trained paraprofessionals to provide 50-minute blocks of math curriculum that reviewed both current and previous grade material for ninth and 10th grade students. The cost of the program ranged from approximately $3,000 to $5,000 per student. However, this program has not yet reached the scale needed to assist most districts in COVID-19 recovery efforts. Additionally, Oakland Unified School District implemented an early literacy program focused on foundational skills for students in grades K–2 (Jochim et al., 2023). The district used tutors to help reach their goal of 30 minutes of small group instruction every school day for struggling readers. Although small in scope during the first year (approximately 11 tutors), the design suggests that pairing trained tutors with supports (e.g., access to instructional coaches) to help implement a research-backed literacy programs in small group settings can boost students' learning.

Students in virtual learning environments typically have worse outcomes than students in comparable in-person learning environments (Goldhaber et al., 2022; Halloran et al., 2021). However, in some settings in-person delivery of tutoring or similar interventions is not feasible. In those settings, districts can explore virtual options. Loeb et al. (2023) offer positive evidence from a small-scale randomized controlled trial (RCT) of a virtual one-on-one tutoring program for students in grades K–2. In this study, students in the treatment group were given 20 minutes of tutoring four times per week focused on foundational literacy skills from September to May. The study was implemented in 12 charter schools in the Southwest. Students in kindergarten and first grade, as well as students with low test scores at the start of the year, outperformed their peers in the control group at the end of the school year, with no difference in test scores for students in second grade. While these examples provide suggestive evidence of the positive effect of tutoring in early grade settings and were implemented as part of COVID-19 recovery efforts, given the size of the programs, it is not clear how well they can scale to larger settings (see Box 3).

**BOX 3**
**High-Dosage (Virtual) Tutoring Vignette**

It is not always possible to build a unique face-to-face tutoring program, especially for smaller school systems. Some districts have explored virtual tools to supplement students' typical in-person learning opportunities. District V, a primarily rural district, experimented with a virtual tutoring program. It did not have access to a local pool of potential tutors, and its remote location hindered its ability to hire an in-person tutoring service. The virtual delivery also reduced scheduling burdens and physical capacity constraints.

The district selected a virtual program that aligned with the district's curriculum. The program also offered clear two-way communication between tutors and teachers as well as updates on students' academic progress. Other than the delivery method, the program's design included the core principles of effective high-dosage tutoring.

The district and provider agreed to a schedule of three 30-minute sessions per week for targeted students. The program focused on foundational literacy skills from September to May. The district focused on the approximately 30 percent of kindergarten through second grade students struggling with reading. Most of the students attended at least 80 percent of the intended tutoring sessions. Connectivity issues, student illness, and unique scheduling difficulties were the most common reasons students missed sessions.

Students in kindergarten benefited from the program, but students in first and second grade did not show improved test scores. Although the district did not conduct a formal evaluation, they have a few hypotheses as to why only kindergarten students showed academic progress. The increase in academic rigor for first and second grade standards made it difficult to schedule students' tutoring sessions without missing some core academic instruction. Anecdotally they also report that kindergarten students appeared more interested in using devices to interact with tutors. The screen time was less novel for first and second grade students.

*Factors for Success of Tutoring Programs*

As with any intervention or program, it is important to consider the design of a tutoring program before beginning implementation. For example, one key element is to ensure that the tutoring program enhances or builds on current curriculum and instruction (Morton & Hashim, 2023). This could pose a particular schedule challenge when trying to implement tutoring programs at the current scale needed for COVID-19 recovery efforts (Kraft & Falken, 2021). Ensuring communication between tutors and classroom teachers can improve the coherence of the tutoring instruction.

Additionally, positive relationships with tutors can promote more than just improved test scores. A recent study found that attending tutoring programs boosted students' attendance on days in which a tutoring session was scheduled (National Student Support Accelerator, 2024).

Finally, although an often-overlooked design element of tutoring programs, it is important to create performance-based contracts between school systems and tutoring providers. In a review of district contracts with tutoring providers, many contracts were designed to send a significant portion of the funding at the signing of the contract or early in implementation and did not include provisions for program quality or attendance (DeArmond et al., 2023). Some districts are now experimenting with outcomes-based contracting. This approach requires vendors to meet desired outcomes (e.g., dosage and student achievement) before providing payment (Blad, 2023). Rather than providing the majority of the payment upfront, back-loaded contracts hold tutoring vendors accountable for student learning.

*Implementation Challenges of Tutoring Programs*

Although tutoring programs offer promise for school systems to support students struggling to recover from the pandemic, they can be challenging to implement at the scale needed in the current moment (e.g., Carbonari et al., 2022). In a study of eight districts, Carbonari et al. (2022) found that the districts struggled to implement recovery interventions as intended. None implemented the program at the scale recommended by Nickow et al. (2020). Often implementation was 30 to 50 percent of the recommended scale. Implementing tutoring programs at an unprecedented scale posed significant hiring, training, and scheduling burdens on the districts.

Additionally, districts with tutoring programs often fail to reach a significant portion of students. Many rely on a voluntary model where students have the option to attend the program. Programs that rely on students and their support systems to engage with the intervention particularly struggle to adequately engage students. In one such example, only 19 percent of students with access to on-demand tutoring ever logged into the system, let alone used it regularly—the access rate was even lower for struggling students (Robinson et al., 2022). In other examples, fewer than 2 percent of students in Philadelphia, Pennsylvania, and Fairfax County, Virginia, attended free after-school tutoring programs (Gelman, 2022; Sitrin, 2023).

Voluntary tutoring programs with lower take-up rates may lead to increased inequality as students who would benefit the most from the program struggle to attend (Robinson et al., 2022). To support students with the largest academic performance gaps

better, districts should pair high-dosage tutoring with other supports (e.g., transportation, childcare, enrichment) to ensure equitable program access (Hashim et al., 2024).

### Strategy 3: Summer Programs

Summer and community-based interventions occur outside of a regular school day. Interventions in this category take place in several different settings, including (a) district-run summer programs, (b) community-based summer programs, and (c) library-based reading programs. They can also focus on a variety of outcomes from student mental and social well-being to students' academic achievement. For example, some programs may spend the majority of their time focused on enrichment activities (e.g., arts, music, sports, and science exploration) or socio-emotional development with only a small amount of time devoted to explicit math and reading instruction. However, the evidence we review in this paper includes summer programs where at least an hour per day was spent on academic subjects.

We focus on district-run summer programs because these programs have emerged as one of the most widely implemented academic recovery strategies in the wake of the COVID-19 pandemic (FutureEd, 2022). During summer 2022, an estimated 90 percent of school districts offered summer programs with an academic focus (Lehrer-Small, 2022). It is estimated that districts' total ESSER spending on summer programs will reach $5.8 billion (about 5 percent of total ESSER funds) by September 2024 (DiMarco & Jordan, 2022). District-run summer programs remain a popular option because (a) these programs can provide instructional time without needing to change the traditional school calendar, (b) blending academics and other engaging activities in the summer can help students avoid "summer slide" (Quinn & Polikoff, 2017), and (c) district-run summer programs can provide affordable childcare opportunities for families, as well as a resource to provide meals and other services to students.

#### *Design of Summer Programs*

Summer break is a common time for districts to offer activities for students. The scope and depth of these programs vary greatly. The design of summer programs must match the limited time available, usually three to five weeks. Unlike the school year, it is difficult for a short period of time to influence several aspects of students' academic or social development. Districts have to make strategic decisions on which domains to focus (e.g., math and ELA) and how to measure whether the programs are assisting to reach desired outcomes.

Summer programs can generally be grouped into three primary categories depending on their central purpose: (1) mandatory remedial academic programs (e.g., for students that failed a grade or class), (2) voluntary academic programs that have a central focus on reviewing academic materials with potential additional enrichment activities, and (3) voluntary childcare programs whose goals are typically to provide safe and enriching care during the summer months. Any of the three program types provide students valuable experiences. Districts must decide how to use their limited resources to provide support for their intended students and outcomes. Our discussion focuses on "effective" summer programs in the second category (voluntary academic

programs). Specifically, effective summer programs have evidence they make a positive impact on student learning from high-quality research studies. Common characteristics define these programs, including manageable class sizes, curriculum aligned to students' needs, qualified instruction from certified teachers or similarly trained individuals, a strong site culture, and a way to ensure students routinely attend the program (McEachin et al., 2016).

*Effectiveness of Summer Learning Programs*

Most of the evidence about the effectiveness of summer programs was conducted prior to the pandemic and indicates that these programs can have positive but modest effects on student achievement (McCombs et al., 2019). A meta-analysis of 37 studies of summer math programs found an average effect size of 0.10 SD on student math achievement and 0.09 SD for socioemotional and behavioral outcomes (Lynch et al., 2022), while a review of 41 classroom—and home—based summer reading programs found a similar effect size (0.10 SD) for reading achievement (Kim & Quinn, 2013). Additionally, a large, randomized evaluation of voluntary summer programs in six school districts found that students who attended at least 20 days scored better on math (but not reading) assessments through the following spring (Augustine et al., 2016).

There is one study that does examine the effectiveness of summer programs during the COVID-19 pandemic. Callen et al. (2023) examined the test scores for students who attended summer programs in eight large school districts during summer 2022 and found a small positive impact on math test scores (0.03 SD) but not on reading. Most of the test score improvements in math were driven by students in elementary (rather than middle) school, though summer programs were similarly effective across student subgroups (e.g., race/ethnicity, poverty, English learner status). However, the authors note that scaling up the effects of these summer programs to get back to pre-COVID-19 math achievement levels would be extremely challenging. Only 13 percent of students in the districts participated in the summer programs in summer 2022, but the authors forecasted that the average district would need to send *every* student to a five-week summer school with two hours of math instruction for a minimum of two straight years to return to pre-COVID-19 math achievement levels.

*Factors for Success of Summer Programs*

There are a number of research-based recommendations that districts should take into account when planning effective summer programs. First, research suggests that to have an impact on student test scores, summer programs need to be scheduled for a minimum of five to six weeks with 60–90 minutes of instruction per subject/day (McCombs et al., 2014). This recommendation translates to a total of 50 to 90 hours of instruction needed for a summer program focused on both math and reading. However, it is important to note that this is rarely achieved in practice, as many districts implementing summer programs in summer 2022 lasted just a few weeks (Callen et al., 2023).

Second, much like a typical school year, high rates of attendance are essential for students to demonstrably benefit from the extended learning opportunities. Summer programs that have more enrichment activities and field trips may be more likely to

promote high attendance, but there are tradeoffs to consider with ensuring sufficient instructional time.

Third, summer programs should reflect the context, assets, and needs of young people and families in the community, which requires on-going conversations with various stakeholders in the local community (AIR, 2021).

Finally, for programs to have an impact on students' achievement, it matters who is leading the summer program (a point we will discuss more in the evergreen implementation issues). Recruiting the districts' most effective teachers and providing sufficient professional development for teachers prior to the start of the summer program is important for summer programs to successfully improve test scores (Schwartz et al., 2018) (see Box 4 for an example).

**BOX 4**
**Summer Program Vignette**

In winter 2022, District Z began planning an ambitious summer program to extend learning opportunities for students negatively affected by the COVID-19 pandemic learning disruptions. Several features of this program were notable in their ambition and scope. First, the district recruited any interested students for participation rather than targeting a narrow set of students meeting some academic eligibility criteria. Second, the district pursued a number of different recruitment strategies to ensure wide awareness of the summer program, including a text-message blast with information about the program, school marquees advertising the program, enrollment events at some schools with low initial enrollment, and tailored information sent by schools in multiple languages. Additionally, the district framed the summer programs as "summer camp"—an exciting learning and enrichment program during the summer—rather than as "summer school," which they think may have helped recruited students to opt into the program.

Third, the program was unique in the length of day in which care was provided. Elementary school programs ran from 8:00 a.m. to 5:30 p.m. Secondary (middle and high) ran from 9:00 a.m. to 4:00 p.m. The fact that care was provided for the full workday, removing the need for families to find additional childcare in the afternoons, may have helped to boost participation. Availability of district-run school buses helped promote regular attendance. Fourth, the district used credentialed teachers to lead all programs. Each teacher received one week of training prior to the start of the summer program. Finally, the district worked with community partners to provide a variety of enrichment programming in arts, music, STEM, dance, and gardening.

The district's summer program ran for 19 days in July. While the program was ambitious in scope, the average student received about 38 total hours of instruction in math and reading, far less than recommended total hours of instruction for effective summer programs (50 to 90 hours total). Students attending the program showed small but statically significant improvements in math test scores. They did not show statistically significant improvements in reading.

The program featured several enhancements to improve attendance, and yet the district struggled to recruit students and promote attendance. Technological barriers (lack of access to email, cell phone number changing) and language barriers (parents speaking languages other than Spanish and English) challenged the district's ability to reach many families. District leaders suggested that in future years teachers should share information about summer programs during March teacher-parent conferences. The district set an 80 percent attendance rate goal. Students averaged only 70 percent attendance, with Monday and Friday attendance consistently lower than the middle of the week. Parents reported external challenges that hindered consistent attendance. For example, some students needed to provide childcare for siblings or heat waves interfered with students' interest in the program.

*Implementation Challenges of Summer Programs*

Encouraging regular attendance for summer programs was a known challenge prior to the pandemic (Schwartz et al., 2018). Given the record high rates of chronic absenteeism during the school years following the COVID-19 pandemic (Dee, 2023), it is likely that promoting regular attendance in a non-mandatory summer program will be even more of a challenge now. Finding reliable transportation to and from school may be an additional challenge during summertime (Barnum, 2021). Summer programs that provide transportation options are more likely to promote regular attendance.

Some researchers and media have pointed to an urgency gap between parents' understanding of their students' current academic performance and the students' results on formative and summative assessments (e.g., Jacobson, 2023). For example, in a survey conducted after the 2022–2023 school year, fewer than 20 percent of parents expressed concerns about their students' academic performance during the 2022–2023 school year, down from 30 to 40 percent earlier in the pandemic (Polikoff et al., 2023). This urgency gap may also lead to parents abstaining from sending their children to voluntary summer programs run by schools.

Finally, recruiting teachers to lead summer programs has become increasingly challenging post-COVID-19. Teachers are reporting record levels of burnout, which presents a significant barrier in getting teachers to sign up to teach during summer vacation.

## EVERGREEN IMPLEMENTATION ISSUES

Although curriculum, tutoring, and summer programs hold much potential for improving student outcomes and accelerating academic recovery, their implementation is both complex and contextualized. As such, we turn attention to how (a) context, (b) resources, (c) people, and (d) coherence affect the success of interventions seeking to promote educational change and equitable student outcomes. We explain how these conditions enable or hinder implementation during the years following the onset of COVID-19, with examples provided related to each of the previously discussed academic recovery strategies.

### Context Matters: The When and Where of Implementation

The *when* and *where* of implementation shapes the nature of change (Honig, 2006; McLaughlin, 1987). The regulations, conceptualizations, and norms present in a context shape how actors interpret and respond to a policy (Coburn, 2001; Farrell, 2015; Spillane et al., 2002). For instance, some states allocate more funding for teacher preparation and development. And some districts may have greater experience with a particular approach to ELA instruction or may have instituted more robust data systems as compared to others. These localized conditions and factors steer both the direction and depth of education policy implementation (Farrell, 2015; Marsh et al., 2021; Spillane et al., 2019). We underscore it is necessary to lean on and apply evidence on the role of context in implementation to more fully understand the implementation of interventions attempting to accelerate and align instruction. Crucially, reformers and educational leaders can take steps to improve conditions to boost the implementation of current improvement efforts.

*When of Implementation*

To fully understand patterns in implementation, it is vital to attend to the historical moment within which a policy was designed and implemented (Honig, 2006). This includes considering how certain types of interventions, or improvement efforts, emerged or gained popularity in different time periods. We point to the following policy waves: (1) the rise standards-based instruction and high-stakes testing in the early 2000s (Booher-Jennings, 2005; Smith & O'Day, 1990; Trujillo & Woulfin, 2014), (2) the tightening of teacher evaluation systems in the 2010s (Steinberg & Donaldson, 2016), and (3) the launch of SoR policies and programs around 2020 (Shanahan, 2020). Each of these policy waves occurred during a particular social and cultural moment—with sets of prevailing ideas and economic and political forces/trends.

COVID-19 era reforms (e.g., accelerated learning initiatives, tutoring, and HQIM) exemplify how the historical moment affects policies and practices (Goldhaber et al., 2022). That is, pandemic-related pressures, such as school closures and reopenings, affected not only the adoption of certain interventions to ameliorate academic setbacks (as described in an earlier section of our paper), but also affected the scope and trajectory of implementation. For example, many states were adopting new reading curricula, and inviting districts to pilot these materials, in 2021–2023; simultaneously, this was the peak period for accelerated learning reform. District and school leaders, as well as teachers, were tasked with balancing the demands of multiple improvement efforts while attempting to recuperate from the pandemic (Grooms & Childs, 2021).

Historical factors also influence the dynamics and outcomes of implementation. Socio-political factors affect educational organizations, educators, and their efforts to uphold particular approaches and implement various reforms, such as in the current pressing example of restrictive educational policies. Currently, there has been a wave of anti–Critical Race Theory (CRT), anti-LGBTQ+ legislation, and school board activity influencing ELA curricula as well as other elements of schooling. From 2021–2023, there were concerted efforts in Texas to ban books and block learning opportunities addressing race, racism, and/or CRT. Similarly, districts in Florida took steps to remove books including gay characters from school and classroom libraries (Negussie & Ahmed, 2023; Soule, 2023). It will be important to continue examining how legislation and other reform efforts aligning to White Backlash (Jefferson & Ray, 2022) intersect with educational recovery interventions. In sum, social, historical, and political forces influence aspects of reform implementation.

*Where of Implementation*

The place—and space—of implementation influences how educators respond to improvement efforts, including interventions to accelerate and align instruction. In particular, the rules and resources in a context can push or pull actors and organizations. Some researchers have attended to how similar reforms, when implemented within varying state and district contexts, are implemented. For instance, Bulkley et al. (2021), collected and compared evidence on governance shifts across Los Angeles, Denver, and New Orleans. They revealed how local and state-level factors guided reform efforts in the three different districts (Bulkley et al., 2021; Marsh et al., 2021). We encourage

attention to how differences in state and district contexts steer the implementation of improvement strategies, including tutoring and ELA curricula. For instance, researchers could compare the selection and adoption of SoR-aligned programs across states. Researchers could also continue tracking the implementation of tutoring programs across districts, with an eye toward understanding how district leaders develop educators' capacity to enact tutoring systems, craft coherence with other instructional improvement efforts, and motivate participation.

## Resources Matter

Several types of resources influence the nature and extent of implementing interventions. There exists considerable variability in resources across states, districts, and even schools (Baker et al., 2016; Hoffman et al., 2013). This variability, in turn, fuels inequities in the implementation of interventions and ultimately student outcomes. Educational improvement efforts, including the implementation of interventions that seek to accelerate and align learning opportunities, are enabled by multiple types of resources (Grubb, 2009; Jackson et al., 2021; McDonnell & Elmore, 1987). Resources are the broad ingredients supporting systems and actors in the education field, including funding, facilities, and time (Grubb, 2009). These resources matter for the direction and extent of educational improvement efforts (Grubb, 2009; Grubb & Allen, 2011; Jackson et al., 2016).

### *Funding*

Whether and how school funding makes a difference for the implementation of interventions and, ultimately, student outcomes has been a topic of debate for decades (e.g., Jackson & Mackevicius, 2024). Researchers have considered how the design of school finance systems create the inequitable distribution of resources, particularly for students of color (Lee et al., 2022). This has resulted in a number of influential lawsuits and new policies changing the way school finance systems allocate funds across schools (Candelaria & Shores, 2019). However, even with these initiatives, inequities still exist within school finance systems, contributing to uneven and inequitable implementation of academic recovery efforts (Sosina & Weathers, 2019).

In response to the COVID-19 pandemic, the Biden administration authorized a historic school funding program (ESSER III) that allocated more than $120 billion for schools to address public health concerns on school campuses and engage in academic recovery efforts (Office of Elementary and Secondary Education, 2023). Although this provided districts with millions of dollars to fund an array of programs, these funds had to be spent within a short amount of time (i.e., allocated by Fall 2025) (The White House, 2023). The ability to spend funds quickly became a sticking point for many districts. Moreover, even though ESSER funds likely had a positive impact on student achievement (Dewey et al., 2024; Goldhaber & Falken, 2024), the funds were inadequate for districts and schools to recover from COVID-19 slide (Dewey et al., 2024; Goldhaber & Falken, 2024; Shores & Steinberg, 2022).

*Facilities*

The expansion of tutoring programs, particularly for districts with many students struggling to maintain grade-level standards, raises several facilities considerations. Carbonari et al.'s (2022) interviews with several school district leaders revealed several factors that hindered the implementation of interventions during the school year: (a) districts often lacked the central office capacity to manage new, large-scale interventions, including the on-boarding of new staff or intervention providers; (b) students schedules often conflicted with other high-need priorities; and (c) districts lacked the physical space to accommodate the number of students who qualified for the interventions. Additionally, districts running summer programs may have to accommodate the lack of air conditioning, an increasing concern in the presence of climate change (Carrillo, 2023). Districts also have to deal with limited-to-no bus routes during the summer.

*Time*

Scholars have also attended to the way instructional time functions as a resource that influences the nature of educational improvement efforts. Administrators can actively organize and manage time through changes in practices or new initiatives (Foorman et al., 2016, 2023; Kraft & Novicoff, 2022; Woulfin & Spitzer, 2023). Kraft and Novicoff's (2022) synthesis of instructional time-use highlights that expanding time, or using it more effectively, could promote more equitable opportunities for students. Foorman et al. (2016) provided sample schedules allocating time for intervention services and classroom reading instruction. These schedules bring to light how the structures of the school day and week enable—and constrain—reform efforts. Additionally, they offer a reminder of the role of district and school leaders in designing the calendar as well as conducting other tasks to shape and monitor classroom schedules. Turning to COVID-19 era reforms, district and school leaders can deploy their discretion to strategically allocate time for tutoring and extended learning programs as well as ELA curriculum (Woulfin & Spitzer, 2023). For instance, leaders can arrange for tutoring to occur before school, during lunch, or after school.

## People Promote Implementation

The success of interventions depends on who is involved. The above sections explained how historical and local conditions as well as resources affect the implementation of interventions, yet people also push the direction and depth of implementation. Applying a structure-agency perspective, policies, and programs—or particular interventions—can be treated as structures that control and shape ground-level activities (Coburn, 2016). However, educational leaders, teachers, and other actors still possess agency to work in strategic, innovative ways to shape the nature of implementation (Coburn, 2004, 2016; Donaldson & Woulfin, 2018; Elfers & Stritikus, 2014). Based on the role of people for implementation, it will be important to examine how district and school leaders engaged in specific practices, or carried out particular leadership "moves" (Spillane et al., 2004), to advance COVID-19 era interventions such as ELA curriculum, tutoring, and summer programs.

*Educational Leadership Practices*

We concentrate on two leadership practices with the potential to boost the implementation of academic recovery strategies: strategic framing and capacity building (Elfers & Stritikus, 2014). First, educational leaders can motivate change by framing particular sets of ideas about a reform (Coburn, 2004). Specifically, when leaders frame the nature of underlying problems as well as solutions to address organizational issues, other actors can make sense of why and how change is necessary (Benford & Snow, 2000). Furthermore, leaders' framing can highlight some elements of a reform while downplaying others; this raises both the clarity and feasibility regarding change. As an example, district leaders, including the superintendent and curriculum directors, can motivate the adoption of new ELA curricula by framing the benefits of using a standards-aligned program. Subsequently, this framing can shape the sensemaking of principals, coaches, and teachers on how to appropriately adopt the curriculum. In this manner, leaders' framing provides instruction to guide reform implementation.

Second, district and school leaders can conduct activities that build educator capacity to implement interventions. District leaders are well positioned to create supportive conditions so that teachers, coaches, and leaders experience quality professional development addressing curriculum and tutoring. That is, district leaders allocate resources, design strategic plans, and facilitate professional development linked with particular interventions (Stevenson & Weiner, 2020; Woulfin & Spitzer, 2023). For instance, district leaders set aside funding and time for PD on ELA curriculum as well as tutoring programs. And school leaders, including principals and instructional coaches, design and facilitate professional learning opportunities on reading curricula (Coburn, 2006; Woulfin et al., 2023). Notably, state leaders also play roles in shaping PD on SoR-aligned programs/approaches (Texas Education Agency, 2023). These practices shape the focus and quality of learning opportunities for educators on these interventions and, in turn, affect the extent of change.

*Educator Working Conditions*

The working conditions of teachers and leaders also affect the implementation of improvement efforts (Johnson et al., 2012). Ladd (2009) asserts that working conditions are composed of "physical features … organizational structure, and the sociological, political, psychological and educational features of the work environment" (p. 6). These conditions matter for building educators' capacity; these also play a role in promoting educator retention (Billingsley & Bettini, 2019; Johnson et al., 2012).

Over the last five years there has been mounting attention to the issue of teacher turnover (Goldhaber & Theobald, 2023). Systems and policies that create inequities in school systems also influence teacher turnover. Tougher working conditions increase teacher turnover in schools serving high proportions of students of color and students from low-income families (Johnson et al., 2012). Billingsley and Bettini (2019) synthesized evidence on the relationship between various working conditions and burnout and turnover of special education teachers. They surfaced trends in the literature on the demands that special education teachers encounter, their affective responses and coping strategies, and the social contexts and conditions (e.g., financial compensation)

influencing their burnout and turnover. In addition, there is mounting evidence that educator turnover issues are racialized, contributing to a Black–White teacher retention gap (Farinde et al., 2016; Sun, 2018). Together, this serves as a reminder of the importance of working conditions for retaining educators and creating a robust foundation for organizational improvement.

Working conditions are also intertwined with the implementation of interventions. For example, ELA curriculum can improve working conditions by providing guidance that streamlines teachers' instructional planning. This type of guidance decreases teachers' workload, preserving time for other tasks as well as preventing educator burnout. However, when ELA curriculum use is over-monitored, oftentimes coupled to the over-control of teachers' work (Ingersoll, 2009), this lowers the quality of working conditions. Specifically, after encountering such constraints and perceiving losing their discretion, teachers might decide to exit the profession.

And, turning to tutoring programs, district and school leaders must be intentional to ensure such programs do not add burdens for teachers and leaders, contributing to burnout and attrition. More concretely, the additional time and effort needed to conduct tutoring could negatively affect working conditions for teachers as well as leaders. In the current political environment, it is increasingly challenging to recruit teachers to work over the summer (Will, 2021). Based on these conditions and factors, leaders must engage in thoughtful decision-making related to staffing academic recovery efforts.

### Coherence Matters

COVID-19 era academic recovery strategies cannot be disconnected from other district policies and practices. Coherence enables the implementation of these recovery efforts. In particular, the implementation of any intervention benefits from a consistent, focused, common direction rather than a blizzard of reforms (e.g., Bryk et al., 2015; Honig & Hatch, 2004). Coherence promotes implementation because, to respond deeply to interventions, leaders and teachers must learn about and then change practices. Infrastructure, or "the roles, structures, and resources that school systems use to coordinate and support instruction, maintain instructional quality, and enable instructional improvement" (Spillane et al., 2019, p. 848), can foster coherence. Yet Cohen et al. (2018) issue the reminder that fragmentation and flaws exist in district and school infrastructural elements; they specifically point to incoherence between curriculum and professional development.

Attending to issues of infrastructure, scholars have articulated how the coherence among curriculum, professional development, and leadership matters for ELA improvement efforts (Cohen et al., 2018; Woulfin & Gabriel, 2020). We offer the example of district leaders creating and refining professional learning systems that ensure each teacher and leader possess the capacities for teaching reading in effective and responsive ways to produce equitable outcomes. These systems play an important role so teachers, coaches, and principals deeply understand how and why to implement an adopted ELA curriculum.

District and school leaders can also foster coherence by taking steps to align programs and messaging related to reforms (Woulfin et al., 2016). As the degree of alignment between ELA instruction and tutoring shapes effectiveness (Fien et al., 2015;

Foorman et al., 2018), we emphasize the roles of principals and coaches in bridging ELA curriculum and classroom practices with tutoring programs. These leaders can check the alignment of instruction and also determine how students are responding to teachers' classroom instruction as well as tutoring. Furthermore, as part of their instructional leadership, principals and coaches can weave ideas about the nature of and rationale for ELA curriculum and tutoring together; this would craft coherence for teachers.

## IMPLICATIONS FOR FUTURE IMPLEMENTATION

Our paper covers the potential benefit of evidence-based academic recovery strategies as well as ground-level challenges that educators and policymakers face as they attempt to implement these strategies at an unprecedented scale. In this section, we summarize specific lessons learned for three intervention strategies: (1) ELA curriculum, (2) high-dosage tutoring, and (3) summer programs. These academic recovery initiatives raise several evergreen issues relevant not only to these interventions, but also a wide variety of interventions districts may pursue in the coming school years. We close this section with recommendations that help address broader structural issues and help mitigate these evergreen implementation challenges.

Table 1 provides a summary of the (a) necessary resources for implementation, (b) key features for success, (c) what to monitor to measure success, and (d) specific recommendations for school and district leaders when considering each academic recovery strategy. In this section, we highlight key lessons learned in each of the three intervention categories. We also provide references to tools useful for implementing these programs in the future.

### Lessons Learned for Curriculum

Two resources are foundational to the successful implementation of HQIM: funding for a complete curriculum and professional development that provides aligned, on-going learning opportunities. District leaders should select and procure curricular materials that align with state standards, encourage differentiation, and are feasible for teachers to use. Furthermore, district leaders should carefully attend to the technical and logistical details of HQIM adoption. These activities range from ordering curricula in a timely manner to distributing the complete set of materials to each school campus. It is essential HQIM are accessible to teachers, principals, and coaches; if educators cannot find or open curricular resources, they will fail to be used appropriately as an improvement strategy.

District leaders should also design and facilitate high-quality and focused professional learning opportunities for teachers and school leaders. Key features of effective PD that have the potential to promote teacher learning and shift classroom practice in the direction of reform are (a) content-specific, active, and coherent learning opportunities; (b) collective participation; and (c) extended duration. PD on HQIM must extend beyond simple, one-time workshops and should promote collective sensemaking among educators (Coburn, 2001; Penuel et al., 2007). These learning opportunities could vary from workshops and webinars to coaching on the curriculum.

**TABLE 1** Summary of Key Features of Academic Recovery Strategies

| Intervention | Necessary Resources | Key Features | What to Monitor to Measure Success | Recommendations for School/District Leaders |
|---|---|---|---|---|
| ELA curriculum | — Funding for full set of materials and PD<br>— Time for intensive, ongoing professional learning (workshops and webinars) | — Accessible, feasible, and educative instructional materials<br>— Curriculum incorporates ideas and information on meeting the needs of subgroups<br>— Instructional materials align with state standards, formative and summative assessments, and local instructional frameworks | — Student progress on ELA formative and summative assessments<br>— Teachers' classroom practice (e.g., use of time, adoption of pedagogical routines) | — Professional learning opportunities aligned with ELA curriculum materials<br>— Coherence with other instructional improvement initiatives<br>— Accessibility and feasibility of ELA curriculum materials |
| Tutoring | — Flexibility to schedule tutoring sessions around students' core academic schedule<br>— Time to align tutoring practices with school curriculum<br>— Open communication between teachers and tutors<br>— Physical space for small groups, if provided during the school day | — Small group sizes (1:1 if possible) with in-person delivery preferable<br>— Strong relationship between tutor and students<br>— Consistent schedule for several weeks (e.g., ×3 week, at least 30 minutes a session, for at least six weeks) | — Attendance<br>— Student progress on focal outcomes (typically formative and summative assessments)<br>— Whether tutoring services provide the expected dosage and outcomes<br>— "On the ground" data from those navigating and enacting tutoring programs | — Pursue outcomes-based contracting<br>— Ensure alignment between tutoring practices and school curriculum<br>— Balance the desire to reach as many students as possible with maintaining consistent participation in the tutoring program |

**TABLE 1** Continued

| Intervention | Necessary Resources | Key Features | What to Monitor to Measure Success | Recommendations for School/District Leaders |
|---|---|---|---|---|
| Summer programs | — Recruitment of effective teachers to lead programs<br>— Schools that are comfortable for learning during summer months | — Program length of five to six weeks with 60–90 minutes of instruction per day<br>— Strong connections between summer program and standard school year curriculum<br>— Engaging enrichment activities and field trips<br>— Incentives for attendance | — Attendance<br>— Spring and fall test scores (if goal is to improve achievement)<br>— Parent surveys | — Work with community organizations to both recruit students and ensure that the program is tailored to community needs<br>— Provide transportation and meals when possible<br>— Start planning early in the school year to ensure enough time to recruit teachers *and* provide PD before the start of the summer |

Curriculum-focused coaching has much potential to deepen the implementation of ELA HQIM (Kraft et al., 2018; Matsumura et al., 2010; Russell et al., 2020). Specifically, curriculum-focused coaching facilitates contextualized, job-embedded learning opportunities on how to use components of the curriculum. Furthermore, this type of coaching permits teachers and principals to see exemplary enactment of the adopted ELA curriculum, reflect on the nature of instruction, and gain techniques for their own future instruction and leadership. Additionally, coaches can observe instruction and offer feedback on teachers' implementation of HQIM. To ensure coaches can engage in high-leverage activities fostering curriculum implementation, district leaders should fortify the infrastructure and systems for coaching and professional learning more broadly (Woulfin et al., 2023). These efforts would include supporting coaches and clearly framing the objectives of the district's coaching model to principals, teachers, and coaches.

District leaders should also craft coherence for principals and other school leaders by weaving academic recovery strategies with other district priorities. For instance, district leaders could adapt teacher observation rubrics so that they reflect key principles and practices of adopted HQIM. By bringing together curriculum reform and teacher evaluation, district leaders can guide school leaders' and teachers' understandings of current, evidence-based approaches to instruction. Moreover, weaving academic recovery strategies with other district priorities reduces the too-muchness of educational improvement efforts and enables deeper levels of change, without overburdening educators.

### Lessons Learned for High-Dosage Tutoring

High-dosage tutoring has a strong research base supporting its use in schools. The million-dollar question is how to scale tutoring to reach the number of students who currently benefit from support. Outcomes-based contracting can help districts

and tutoring keep outcomes front and center. This approach requires vendors to meet desired outcomes (e.g., dosage and student achievement) before receiving payment (Blad, 2023). Rather than providing the majority of the payment upfront, back-loaded contracts hold tutoring vendors accountable for student learning. The Southern Education Foundation has a host of resources for districts to design and implement outcomes-based contracts.[8]

As with all good instruction, successful tutoring programs need time to align tutoring content and instruction with school curriculum. Effective high-dosage tutoring programs use small groups to provide personalized instruction and support for students. One-on-one sessions are preferable if possible, but groups up to three can also be effective (Kraft & Falken, 2021; Kraft & Lovison, 2024). One way to improve the alignment between tutoring content and instruction is to ensure regular communication between tutors and classroom teachers.

It is also important to build a strong rapport between the tutoring providers and their students. Oakland Unified School District's program that incorporates people from the local community as tutors can build relationships faster than external service providers (Jochim et al., 2023). Districts can draw from current teachers, instructional coaches, or other qualified employees to deliver tutoring sessions. Districts that elect to use their own tutors need to allow ample time to recruit, train, and maintain their tutors.

Also similar to best instructional practices, tutoring sessions need a consistent schedule (Guryan et al., 2023; Morton & Hashim, 2023; Robinson et al., 2022). The consensus recommendation is for programs to last several weeks, with multiple sessions per week. An example schedule could be three times per week, each session at least 30 minutes, and lasting at least six weeks. Maintaining this consistency during the pandemic proved challenging for many districts. Finally, district leaders should balance the desire to reach as many students as possible with the realities of maintaining consistent participation in the tutoring program.

### Recommendations for Summer Programs

The most successful summer programs are ones that are well tuned to community needs and involve ongoing refinement and monitoring. Districts should work with community organizations to both recruit students and ensure the summer program is tailored to community needs. Recruitment and attendance are key to the success of any summer program, and students are more likely to attend if the programs are designed with their specific needs in mind. Additionally, it is important to not limit the planning and evaluation of summer programs to just the summer. Bringing together constituents at the end of each summer to evaluate what did and did not work well is important to make program improvements for the next year.

If the goal of the summer program is to improve academic achievement, it is essential that the content covered in the summer program is aligned to, and builds off, school year instruction. District leaders should prioritize recruiting teachers with relevant content knowledge and experience teaching the relevant grade levels of students. Furthermore, content experts should be employed to develop written curricula for the

[8] Currently the resources are available at https://obc.southerneducation.org/resources.

summer program that aligns with school-year standards and student needs (Schwartz et al., 2018).

Finally, it is important to start planning early in the school year to ensure sufficient attention is paid to key feasibility issues. Recruiting sufficient teachers to lead summer programs and planning professional development for teachers/staff before the start of the summer requires a great deal of coordination during the school year. The logistics of student transportation, building maintenance, and providing meals outside of the traditional school year also present unique challenges for the summer programs. Schwartz et al. (2018) recommend starting active planning by January with a program director who has at least half of their time devoted to the job. Clearly, attending to these details requires adequate funding for key personnel throughout the year, not just during the summertime.

## CONCLUSION

We are entering an interesting time as federal financial support for academic recovery efforts draws to an end in fall 2024. As a field, we are just starting to understand the impact of the design and implementation of ESSER (Dewey et al., 2024; Goldhaber & Falken, 2024). A full accounting of the implementation and design of ESSER is beyond the scope of this paper. We do highlight a few key lessons that our three focal strategies raise.

To support systemic change that bolsters the implementation of academic recovery strategies, state and federal policymakers should design and implement more robust systems and strategies for district improvement planning. This process would support a variety of intervention types and support many of the important key features in Table 1. State and federal educational leaders could create strategic planning tools and promote strategic planning routines which district leaders could use while selecting and monitoring their recovery efforts (Stevenson & Weiner, 2020). As part of this district leaders could collect "street data" (e.g., the ground-level experiences of actors who navigate and enact academic recovery strategies [see Safir & Dugan, 2021]) to ensure they are listening and responding to real-time feedback of the most important stakeholders. Throughout all data-collection efforts, districts must disaggregate data and consider the specific needs of historically marginalized students to ensure data-based decision-making proceeds in an equity-oriented manner. Furthermore, leaders could build the capacity of district leaders and incentivize these leaders to conduct more coherent, longer-term planning that attends to school system needs and designs and implementation of interventions.

To build district capacity for robust academic recovery, we suggest state and federal officials provide support for district partnerships with technical assistance organizations. Examples of these include Regional Educational Laboratory (REL) programs and Regional Service Centers. These partnerships can play a role in closing outcome disparities among students of color and their peers (Strunk & McEachin, 2014) and promoting systemic change. More specifically, technical assistance organizations can share evidence and tools related to academic recovery programs and systems, while providing contextualized learning opportunities for district leaders. These organizations can also assist by conducting a needs assessment and providing progress monitor-

ing support to support district and school-level change (e.g., Strunk et al., 2014). While collaborating with technical assistance partners, district leaders could review data, draft improvement plans, and develop knowledge and skills to implement plans (Yurkofsky et al., 2020). As a consequence, district leaders would have more complete information on how to continuously improve the implementation of academic recovery strategies.

Federal and state policymakers and district administrators should also shoulder responsibility for properly funding academic recovery efforts. Sufficient funding is necessary for bolstering structures across levels of the education system to meet the significant—and persistent—needs of students affected by pandemic schooling. While ESSER resources supported district recovery efforts, and likely boosted student achievement, they were not sufficient (Goldhaber & Falken, 2024). At the time of writing this paper (summer 2024), district leaders are bracing themselves for the ESSER fiscal cliff. As such, it remains critical for federal, state, and district leaders to attend to school finance issues with an eye toward equitable funding for persistently underfunded districts and schools serving historically marginalized students. This funding should be allocated toward strengthening the infrastructure for deeply implementing academic recovery strategies and creating positive working conditions for teachers and leaders to serve students and communities in high quality, equitable ways.

Across the United States, state and federal administrators and decision makers should direct further attention toward building capacity and fostering coherence, in lieu of accountability and compliance. This might include refining systems and expectations for preparing leaders and teachers as well as for evaluating district and school quality. Additionally, administrators and decision-makers could modify district planning protocols so that district leaders identify ways to increase coherence across multiple initiatives and engage in sustained implementation of particular improvement strategies. Indeed, it is vital that districts enact a program for a long enough period to fully implement all portions and to measure the efficacy of program elements. Throughout, leaders must remain laser focused on encouraging and enabling district and school leaders to find ways to support marginalized students, families, and communities which were hardest hit by multiple pandemic-related shocks.

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