Literacy Tutoring for Baltimore: What we know, where we are, and how to move forward

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by Stephanie Safran and Robert E. Slavin

EXECUTIVE SUMMARY

For students struggling in reading, academic tutoring—either 1-to-1 or in small groups—has been found to be the most effective intervention. This is especially critical considering the negative impact that COVID-19 school building closures have had on students, compounding the number of students already behind prior to the pandemic.

Part One of this report defines tutoring and summarizes the national research base on its effectiveness. **Part Two** describes the current landscape of literacy tutoring supports available to students in Baltimore City, including an examination of the existing evidence on models' effectiveness, as well as a discussion of opportunities and challenges inherent in scaling up existing programs. The report concludes with **Part Three**, recommendations for next steps.

Part One: Effective Tutoring Approaches for Struggling Elementary School Readers

The Baltimore City Public School System (City Schools) faces a major challenge as it begins to re-open its school buildings following the COVID-19 closures. Although City Schools invested in high-quality remote teaching and learning systems, many students have been unable to take full advantage due to lack of technology and challenging conditions within their homes and communities. As a result, many students will be far behind grade-level expectations, in addition to the many students who were already far behind before the pandemic began. Swift action, therefore, is required.

What Is Tutoring? Tutoring is defined as 1-to-1 or small-group instruction that is intended to rapidly improve the learning of struggling students. In elementary schools, tutoring is used primarily in reading and is a proven intervention. Although it may also be effective in secondary schools, there are currently no U.S. reading programs and only two U.S. math programs with strong evidence of effectiveness. The average proven tutoring program for elementary reading has an effect size of +0.41, equivalent to an increase from the 50th to the 60th percentile, and to about five additional months of learning. These are very large impacts.

The Need and the Opportunity: Creating a Marshall Plan for Tutoring in Baltimore City. The DIBELS literacy assessments administered at the beginning of the 2020-2021 school year indicated that approximately 18,000 of 25,000 kindergarten to fifth grade students in City Schools were reading below or far below proficient. City Schools—with federal, state, and local assistance—needs to invest in services for students that are powerful enough to move them forward as rapidly as possible. Proven tutoring is the best example of such services. Fortunately, City Schools has begun this investment and planning.

Cost-Effectiveness. Recent research on tutoring has established that cost-effective forms of tutoring can be impactful. Teaching assistants often obtain the same outcomes as certified teachers, and well-structured programs in small groups can be nearly as effective as 1-to-1 tutoring.

The following are best practices gleaned from successful elementary literacy tutoring programs:

1. Successful programs use a phonetic approach that emphasizes phonemic awareness, phonics, comprehension, fluency, and vocabulary.

2. Successful tutoring programs almost invariably use structured, sequenced approaches, with specific teacher's manuals and materials.

3. In successful programs, tutors almost always have some college education.

4. "Paid volunteers" (i.e., AmeriCorps members paid a living stipend for working full-time) can work well as professional tutors.

5. Successful programs are provided during the instructional day to increase student participation.

6. Successful programs provide at least 60 sessions, generally around 30 minutes per session 3-5 times per week.

7. Professional development provides in-service training that includes simulations with actual students or with peers, plus ongoing monitoring and coaching.

8. Effective tutors maintain close contact with classroom teachers, to discuss progress of students, and also collaborate closely with supervisors and other tutors.

9. It is best to implement proven tutoring programs across the board, not for each tutor or school to make up their own approaches based on general principles.

Part Two: The Baltimore Landscape

For this report, local literacy tutoring programs for grades K-5 were identified that: (1) provide services during the school year; (2) serve students 1-to-1 or in small groups; (3) provide services during the school day, by someone explicitly dedicated to literacy tutoring; and (4) use a structured model, including targeted tutor training and support to implement the model.

Seven elementary literacy tutoring programs were identified as providing services at scale in Baltimore City.

*   **Experience Corps:** Places volunteers aged 50+ in schools to support elementary literacy development through tutoring in both small-group and 1-to-1 formats.

*   **Literacy Lab:** One-to one tutoring that utilizes a menu of 10 leveled interventions that address development of phonemic awareness and phonics skills, as well as basic fluency skills.

*   **Reading Partners:** Mobilizes a large volume of local volunteers who tutor 1-to-1 in Baltimore City Schools, with a proprietary curriculum designed for ease of use.

*   **Springboard Collaborative:** Offers a multifaceted model that aims to increase teacher capacity and parental engagement while providing targeted student literacy support.

*   **Tutoring with the Lightning Squad:** One-to-four tutoring in which pairs of similarly skilled students who take turns acting as "coach" while they read stories, complete activities, and practice skills.

- **City Schools Tier II Fundations Interventionist Program (City Schools Office of Teaching and Learning):** Places specially trained paraprofessionals within 14 schools to act as reading tutors in grades K-2.

- **Amplify mCLASS Tutoring Program (a City Schools vendor):** Provides diagnostic assessment and data analysis; recently implemented its mCLASS remote Tutoring program for struggling readers as a result of the pandemic.

The first five programs listed above are run by non-profit entities; the remaining two programs represent newer initiatives by City Schools designed to increase access to tutoring supports and also to better integrate those supports with current classroom instruction. The seven programs highlighted are operating at significant scale, with each one serving multiple schools and hundreds of students each year. In total, approximately 4,600 students across more than 60 schools have been provided tutoring services in 2019-2020 and 2020-2021.

Evidence and Outcomes. Most of the programs described in the landscape have been assessed by an independent evaluator using rigorous methods. Although the impacts are somewhat inconsistent across groups of students served, these studies tend to show positive impacts overall. The tutoring program providers all incorporate diagnosis and progress monitoring tools into their programs; these data provide information to schools about student progress and to stakeholders about program outcomes. City Schools has recently asked some providers to work more closely with them to align the programmatic data with DIBELS, the literacy assessment tool used K-5 in City Schools. This effort should result in the system being better positioned to target supports and track student progress.

Cost and funding. The range for models providing services in small-group settings in Baltimore was $800-$1,200 per student, while the range for programs serving students in a 1-to-1 setting was $1,200-$2,000.

City Schools currently leverages funding from a variety of sources to support literacy tutoring services, including federal and state grant funds. In response to the COVID-19 pandemic, new federal and state funding is expected to infuse City Schools and provide opportunities to expand implementation.

Part Three: Conclusions and Recommendations

To tackle the unprecedented challenge to public education created by the global pandemic, widening an already yawning opportunity gap, we offer the following seven recommendations:

1. **Make a concerted effort to provide intensive tutoring services to the nearly 18,000 kindergarten through fifth grade students in Baltimore City who, during and after the pandemic, are reading below grade level.** At an estimated cost of $1,200-$1,500 per student, this would amount to an annual investment between $16 million to $20 million to provide tutoring supports to the 13,400 students currently not being served. This amount could be sourced from a mix of federal, state, local, business, and private support.

2. **Utilize an approach that matches each student according to their tier within the RTI pyramid to the best-suited tutoring intervention.** If supports are implemented strategically and with fidelity, this systemwide approach could provide students with learning growth gains of four to six months of reading proficiency each year.

3. **Continue working to ensure that the tutoring strategy is implemented in a data-driven way—equitably and with fidelity.** City Schools, school leaders, and individual school staff members must be responsible for the coordination of tutoring partnerships, the strategic allocation of tutoring resources, expectations and standards for facilitation of these programs at the school level, and data collection to monitor implementation and effectiveness.

4. **Draw on leadership at multiple levels, including the mayor's office, to ensure success of the strategic expansion of academic tutoring throughout Baltimore.** This includes both public support for tutoring and acknowledgement of its impact, as well as a commitment to fully fund the local share delineated in Kirwan legislation.

5. **Allocate a robust stream of federal, state, and philanthropic funds to ensure that every child reading below grade level receives support.** This includes ensuring that the bulk of funding received through the Learning Recovery Act is deployed to support structured, research-based tutoring programs and appropriating additional Kirwan funding.

6. **Expand national tutoring services.** The federal government should expand initiatives such as Americorps and create a new National Tutoring Corps to help subsidize the cost to expand the tutoring workforce.

7. **Conduct additional research on the topic.** Areas of interest include: effective programs that provide the highest yield strategies for Baltimore; longitudinal effects of tutoring and how best to sustain gains made from initial tutoring sessions; and the effectiveness of tutoring supports in both reading and mathematics for upper elementary and secondary school students.

PART ONE: Effective Tutoring Approaches for Struggling Elementary School Readers

By Robert E. Slavin, Ph.D.

Educational research shows the most effective solution for struggling readers is tutoring, either 1-to-1 or in small groups (Neitzel, Lake, Pellegrini, & Slavin, 2021). The same is true of mathematics (Pellegrini, Lake, Neitzel, & Slavin, 2021). In fact, no other interventions come close. Many teachers and educational policymakers know this, but they think tutoring is too expensive to be practical. Yet developments in recent years have identified very effective tutoring models that use teaching assistants as tutors and work in small groups, rather than 1-to-1, making this a more cost-effective approach—a significant step forward considering the research around tutoring's proven impact.

This part of the report defines tutoring, charts the current need and opportunity, and summarizes the research on effectiveness and best practices. The broad purpose is to provide background for Baltimore schools, policymakers, and funders to expand the use of effective tutoring models.

What is Tutoring?

Tutoring is defined as 1-to-1 or small group instruction that is intended to rapidly improve the learning of struggling students. In elementary schools, tutoring is used primarily in reading, and is less often used in mathematics. Tutoring may also be effective in secondary schools (Baye et al., 2019; Ludwig et al., 2014), but there are no U.S. reading programs and only two U.S. math programs with evidence of effectiveness that are ready to go to scale in middle or high schools.

Tutors may be certified teachers, but for reasons of cost, they are most often teaching assistants (paraprofessionals), usually people with college degrees but not teaching certificates. Tutors may be employed by the school system or an outside provider, or they may be unpaid volunteers or "paid volunteers," such as AmeriCorps members who receive stipends or other benefits, but not a salary. If tutors work with small groups, these groups are likely to be composed of two to six students, usually all at one instructional level.

The Need and the Opportunity: Creating a Marshall Plan for Tutoring in Baltimore City

Like all school districts serving many disadvantaged students, the Baltimore City Public School System (City Schools) faces a major challenge as it begins to re-open its school buildings, following the COVID-19 school closures. By the time schools fully open, most students will have been out of their school buildings for an entire school year. Although City Schools invested the time of talented developers and teachers in creating and implementing remote teaching for students and distributed thousands of computers to provide students with access, many students still were unable to take full advantage of remote learning opportunities. As a result, many elementary and secondary students will be far behind grade-level expectations. This is in addition to the many students who were already far behind, even before the pandemic began.

An analysis of the most recent districtwide literacy assessment demonstrates the opportunity for tutoring to meet a need in Baltimore City. At the beginning of school year 2020-2021, City Schools administered the DIBELS reading diagnostic assessment to all

Table 1 2020-2021 Baltimore City Elementary Schools' DIBELS Assessment Results

Proficiency	Number of Students
Well below proficient according to the DIBELS assessment	13,332
Below proficient according to the DIBELS assessment	4,628
Proficient according to the DIBELS assessment	6,942
Total K-5th Grade Students Tested in Beginning of Year 2020-2021	**24,902**

TIER III
Individualized intensive interventions

TIER II
Targeted small group interventions for at-risk students

TIER I
Whole class research-based core instruction
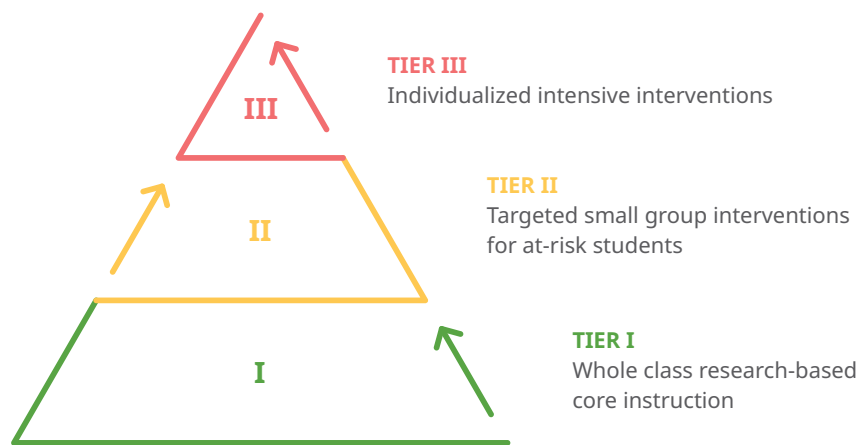
students in kindergarten through 5th grade attending traditional schools.[1] The DIBELS is used to determine student proficiency with several literacy sub-skills, and the proficiency ratings help identify students who are at risk for not meeting end-of-year expectations in reading. City Schools administers it three times per year (beginning of the year, middle of the year, and end of the year) to monitor student progress and measure growth. As the table above shows, nearly 25,000 students were assessed at the start of the school year; of these, nearly 7,000 scored in the proficient range for their age/grade level, while approximately 4,600 scored below proficient and approximately 13,300 scored well below proficient. According to the assessment data, there are nearly 18,000 students in Baltimore City who would benefit from high quality literacy tutoring services, which would be provided as a critical component of ongoing supports provided within the larger Response to Intervention (RTI) framework.

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1   The assessment was administered to the kindergarten through fifth grade population within the first three weeks of the 2020-2021 school year. Administration rate for the assessment was 91%. Charter schools are not required to administer this assessment or to report student scores to the district, therefore charter school students are not included in the data set. This data can be found in the December 1, 2020 ELA and Math Strategy Update https://go.boarddocs.com/mabe/bcpss/Board.nsf/files/BVJTYF799187/$file/ELA%20 and%20Math%20Strategy%20Update.pdf

When students return to in-school instruction, it will not be enough for many of them to just start where they left off. Instead, City Schools—with federal, state, and local assistance—needs to invest in services for students that are powerful enough to move them forward as rapidly as possible. Proven tutoring is the best example of such services. City Schools has begun this investment and planning, and is a leader in tutoring among U.S. urban districts. Additional federal and state funds are likely to become available for tutoring in fall 2021. Recent reviews of various research on other means of accelerating the reading and math achievement of students who are significantly below grade level—such as after-school, summer school, extended day, and technology approaches—have found that none of these has approached the effectiveness of 1-to-1 or small-group tutoring (Kidron & Lindsay, 2014; Neitzel et al., 2021; Pellegrini et al., 2021; Xie et al., 2020).

Based on the evidence (reviewed later), City Schools should seek to find a means of providing a tutoring "Marshall Plan" to assist struggling learners. Just as the U.S. invested heavily in helping to quickly rebuild the economies of Western European nations destroyed in World War II, City Schools must find resources to rebuild the educational futures of its students who have lost ground due to COVID-19 school closures.

Tutoring ranges from about $700 per child per year to as much as $3,600 (mostly depending on group sizes and use of teaching assistants vs. teachers as tutors). Yet money to support tutoring may be coming—from both federal and state sources. In fact, there are currently several proposals circulating within the Biden Administration to fund a National Tutoring Corps (e.g., Slavin, Madden, Neitzel, & Lake, 2020), which would place as many as 100,000 teaching assistant tutors in Title I elementary and secondary schools by fall, 2021. Baltimore City already has various organizations providing tutoring to its students right now,

as detailed in Part 2 of this report. The current programs provide an excellent starting point for a major tutoring implementation, providing a base of experience that most large urban districts cannot match.

The evidence presented in this report documents the effectiveness of tutoring to enhance reading and math achievement among struggling students. However, although tutoring has been shown to be effective in both reading and mathematics, and in secondary as well as elementary schools, there are many more proven programs with far greater capacity in elementary reading, while most tutoring programs for elementary and secondary math, and for secondary reading, lack evidence of effectiveness and/or the ability to go to scale. Therefore, although national development and evaluation of such programs may soon produce effective programs for math and for secondary reading, for school year 2021-2022, the emphasis should be on ensuring that every elementary student who is struggling with reading receives targeted tutoring support in reading. Further, based on an extensive research base, and proven providers, large-scale reading tutoring in elementary schools is ready for effective implementation. As presented in this report, the average proven tutoring program for elementary reading has an effect size of +0.41, equivalent to an increase from the 50th to the 60th percentile, and to about five additional months of learning, beyond ordinary gains. These are very large impacts.

National Research Base on Tutoring for Elementary Struggling Readers

Neitzel, A., et al. (2021) recently completed a comprehensive review of research on all types of programs evaluated for effects on struggling readers in grades K-5. The review was limited to rigorous experiments that compared students or schools randomly

assigned to receive tutoring. In these studies, control groups received ordinary instruction and remedial services while the experimental groups were provided with high-dosage tutoring services. Participants were provided with standardized, individually administered tests, given by independent testers. The results are summarized in Table 2.

As is clear from Table 2, tutoring is a very effective intervention for struggling readers. The mean effect size for all tutoring programs is +0.26, but the mean for proven programs—the ones that City Schools or any district

should implement—is +0.41. As noted earlier, this is equivalent to a gain of 16 percentage points, or five months of learning. As a point of comparison from the same Neitzel et al. (2021) review, the mean effect size for technology applications for struggling readers is +0.09 (one to two additional months of learning).

Cost and Cost Effectiveness

In public schools, tutoring has been relatively rare, usually limited to students who are performing significantly below grade level, because of its cost. It is often used as part

Table 2 Effects of Tutoring on Achievement of Struggling Readers in Grades K-5

Types of Tutoring	Number of Studies	Average Effect Size	Additional Months of Learning*	Increase in Percentile
Proven Tutoring**	20	+0.41	5-6	16
All Tutoring	48	+0.26	3-4	10
1-to-1	25	+0.41	5-6	16
Teachers	14	+0.38	4-5	15
Teaching Assistants	4	+0.44	5-6	17
Paid Volunteers	3	+0.46	5-6	18
Unpaid Volunteers	4	+0.14	2-3	6
Small Group	23	+0.24	3-4	10
Teachers	19	+0.21	2-3	8
Teaching Assistants	4	+0.27	3-4	11

Adapted from Neitzel et al., 2021

*Months of learning is an approximate indicator.
**Programs that have been proven effective in rigorous studies

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of response to intervention (RTI)[2], intended to prevent students from needing special education, or provided as a major component of special education services, especially for students with learning disabilities.

From the 1980s, tutoring in reading was dominated by a program called Reading Recovery (Pinnell et al., 1994), which provided 1-to-1 tutoring by specially trained certified teachers to struggling first graders. Reading Recovery was very effective, but also very expensive, at a cost per student estimated at $5,400 in today's dollars (Every Child a Chance Trust, 2009).

In more recent years, a great deal of research on tutoring has established that more cost-effective forms of tutoring can be as effective as Reading Recovery. In particular, evidence has established the following key findings for successful tutoring: (see Gersten et al., 2020; Neitzel et al, 2021; Nickow et al., 2020; Pellegrini et al, 2021; Wanzek et al., 2016)

- Teaching assistants and "paid volunteers" (e.g., AmeriCorps members) serving as tutors can obtain the same outcomes as certified teacher-tutors, using structured materials and methods.

- Although 1-to-1 tutoring is generally most effective in reading, well-structured tutoring programs in groups of two to six can be nearly as effective.

- Very effective tutoring programs in reading have been documented for grades K-5 in the U.S., and also to grades 6-8 in England (Baye et al., 2019).

- There is little information on the effects of tutoring on special education placement rates, but it would seem logical that tutoring would reduce the need for special education. A longitudinal study of Success for All in Baltimore, which incorporates tutoring, found it cut student assignments to special education in half over the elementary years (Borman & Hewes, 2002; Cheung et al., 2021).

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2   A newer term for RTI is MTSS, for Multi-Tier Systems of Support. The difference between RTI and MTSS is primarily that MTSS applies multi-tier strategies to outcomes other than academics (e.g., behavior and social-emotional learning), as well as academics, while RTI just applies to academics. Because the focus of tutoring is academics, we use the term "RTI" in this report.

Tutoring as a Workforce Investment

At the federal level, a massive tutoring effort is valued as much for its impact on unemployment and stimulating the economy in the current recession as it is for solving the education crisis. A recent proposal around establishing a National Tutoring Corps had an explicit focus on recruiting large numbers of people with college degrees—but not necessarily teaching certificates—to work as tutors. Experience tells us that in recessions, new entrants to the labor force suffer the most. Recent college graduates are particularly likely to have difficulties finding college-level jobs, and this may have negative effects on their employment prospects for many years.

In some of the tutoring work occurring in Baltimore City, the Success for All Foundation has found success recruiting recent college graduates. Some other tutoring providers have done this as well. The interest in this opportunity has far outstripped the number of positions, and almost all applicants and hires have been local and reflect the racial makeup of Baltimore City. A substantial tutoring effort could pave the way for a rapid tutor-to-teacher certification program, so that the best tutors can become classroom teachers, filling teaching positions with young, eager, local people who have already proven their capability as tutors.

Discussions of cost-effectiveness are also directly related to decisions around how to prioritize programming when resources are limited. As noted earlier, it is wise to start with services for elementary students reading significantly below their grade level. These students are in greatest need, of course, and are at the greatest risk for placement in special education or retention. But also, research generally finds that the lowest achievers gain the most from tutoring (Neitzel et al., in press). Many students performing close to grade level may also benefit from tutoring; however, the needs of many of these students may be met by existing volunteer tutoring programs. For the students who are farthest behind, paid, well-trained, and well-supervised tutors are essential.

Best Practices for Elementary Tutoring for Reading

While there is a great deal of research on various tutoring approaches, there is little research making head-to-head comparisons of one or another form of tutoring. However, there are lessons to be gleaned from the practices of more and less successful programs.

The following are best practices in elementary tutoring for reading:

1. Successful tutoring programs almost invariably use a phonetic approach in the primary grades. More broadly, their curricular approaches follow the recommendations of the National Reading Panel (2000), which emphasizes phonemic awareness, phonics, comprehension, fluency, and vocabulary.

2. Successful tutoring programs almost invariably use structured, sequenced approaches, with specific teacher's manuals and materials. Effective tutoring models may include technology, but the teaching is primarily driven by the tutor, not the technology (see Neitzel et al., 2021).

3. Teaching assistants used as tutors in successful programs almost always have college degrees. The exceptions are a few cases in which college students served as tutors.

4. With a few exceptions, unpaid volunteers have not performed very well as tutors, but "paid volunteers" (i.e., AmeriCorps members or paid employees of local businesses whose time is donated) can work, as well as teachers or teaching assistants (Neitzel et al., 2021). The problem with unpaid tutors is that they often do not attend regularly and may resign midyear because they find a paying job (see, for example, Jacob et al., 2015).

5. Tutoring sessions are generally 30-40 minutes every day, although there have been successful programs that tutor students two to four days a week. The total number of tutoring sessions varies widely, from 30 to more than 100. This should depend on the needs and progress of the students. Tutors and teachers need to balance providing large amounts of tutoring to a small number of students against the need to provide sufficient tutoring to large numbers of students.

6. Professional development (PD) for tutors usually provides in-service training, including simulations with actual students or with peers. PD can be in person or online. Follow-up to observe tutoring sessions and provide feedback to tutors is very important. This can be done in person or online.

7. Almost all successful tutoring programs have been provided during the instruction day, not after school or in summer school (Nickow et al., 2020). The exceptions are two programs that provided intensive tutoring to K-1 students in the summer (Xie et al., 2020). In general, students tutored during school time may miss time in any subject except reading or math.

8. Effective tutors generally maintain close contact with students' classroom teachers, to discuss students' progress in tutoring, learn about each student's progress in reading class, exchange concerns and celebrate progress.

9. Relationships between tutors and students are very important. Effective tutors try to get to know students well and to learn what motivates and excites them. Most students in tutoring have had a history of failure, so tutors have a need and an opportunity to positively impact students' self-esteem and spark a passion for reading.

10. Students may run into problems that tutors cannot easily solve. Effective tutors generally ask for help with such difficulties from classroom teachers, tutor supervisors, and other tutors.

11. On average, 1-to-1 tutoring has the largest impact, but some small-group methods are very effective in reading (Neitzel et al., 2021). In math, small-group methods are as effective as 1-to-1 (Pellegrini et al., 2021). Although small groups may be best to reach the largest number of students, there may sometimes be a rationale for 1-to-1 for students with severe problems, who might otherwise be assigned to special education, or for students already in special education.

12. In general, students who are the lowest achievers in reading should receive priority for tutoring. Research finds that such students gain the most from tutoring (Neitzel et al., 2021; Gersten et al., 2020). However, there may be students with very poor attendance or other problems that must be adequately addressed before initiating tutoring. Reading tutoring seems to work best in grades K-3, but has also been proven effective in grades 4-5.

Conclusion

Students need many different kinds of supports. A strong relationship with a caring adult can provide mentorship and encouragement, and help a young person develop curiosity, connection, and self-confidence. But to help elementary students develop explicit and systematic skills in literacy, it is best, the evidence suggests, to implement proven tutoring programs across the board, rather than allowing each tutor or school to make up their own approaches based on general principles of curriculum and pedagogy. Most tutoring failures are associated with a lack of specificity about materials, tutoring methods, and professional development, or are associated with tutors who are not adequately trained and compensated for their skilled work.

PART TWO: The Baltimore Landscape

By Stephanie Safran

Reading is an essential skill for academic success and active citizenship. In recognition of this, the Baltimore City Public School System (City Schools) has prioritized efforts to ensure optimal literacy development for each of its students. However, systemic underfunding of the system and its communities strains these efforts: of the nearly 25,000 students in grades K-5 whose reading skills were assessed in fall 2020, only about 7,000 were reading on grade level. The remainde—nearly 18,000 students—were determined to be reading "below" or "well below" grade level, as measured by DIBELS, the tool used by City Schools to assess and monitor elementary students' mastery of core literacy skills. While high-quality classroom instruction is the ideal approach to meeting students' literacy needs, it is considerably challenging to achieve, especially in school systems with large numbers of students who are not yet performing on grade level.

Educators and policymakers across the city, state, and nation acknowledge that such gaps in student achievement are widening as a result of the pandemic. For example, child development experts agree that virtual instruction may not be suitable for our youngest learners, English language learners, students with diagnosed disabilities, or those with less severe but still relevant challenges like information processing or memory issues. These children are often the same children for whom receiving high-quality literacy instruction and support is essential, and yet many are not receiving this additional support due to the current challenges of remote instruction/school. Virtual instruction also makes it hard for teachers to get to know students and build authentic relationships and classroom communities—key features of culturally relevant pedagogy that may motivate students to work hard at mastering challenging skills

and content. These fundamental problems of access to education during the pandemic that have stymied schools nationwide are exacerbated in Baltimore City, where a persistent lack of sufficient resources has hindered access to online instruction and even impeded it entirely for some families.

Understanding the local tutoring landscape is key to envisaging how we can hasten the learning recovery of Baltimore City's students. This section aims to describe the current landscape of literacy tutoring supports available to students in Baltimore City, including key program features, programmatic approaches, staffing structures, and which schools and students are served. We then discuss relative strengths and weaknesses of these models, including an examination of the existing evidence on their effectiveness. Next, we consider the opportunities and challenges inherent in scaling up the existing programs. Finally, we look at the current funding situation, and consider how resources dollars are allocated to support elementary literacy tutoring in Baltimore.

Tutoring Supports Currently Available in Baltimore City

This section delineates the type of tutoring considered for this report, introduces the tutoring organizations and programs with the most significant presence in Baltimore City, and delves into the key characteristics of these programs.

The Baltimore City Public School System takes a strategic approach to developing literacy skills in its elementary school-aged population using a Response to Intervention Model (RTI) that aims to assure a comprehensive continuum of evidence-based, systemic practices to

support a rapid response to students' needs. Structurally, it provides a framework for providing high-quality instruction for all students, identifying students who need supplemental or more intensive supports, and providing the appropriate supports for those who need it. Typically, an RTI model entails three tiers:

- **Tier I:** Core services that provide differentiated and explicit instruction for all students within the classroom to support mastery of grade-level skills and content;

- **Tier II:** Targeted services that provide evidence-based intervention for students who are not meeting established academic goals, often in small-group settings; and

- **Tier III:** Intensive services that provide individualized support systems for students who are struggling the most to make academic gains.

In most cases, tutoring is considered a Tier II academic support, but may also be a Tier III support at higher intensity. Quality RTI systems entail regular screening and progress monitoring to assign students to instructional tiers as needed, and to determine if the targeted interventions are having their intended effect. In reading, for example, City Schools uses DIBELS 8 as a districtwide screening and monitoring tool, assessing a student's phonics skills in grades K-5 at the beginning, middle, and end of each year. Ideally, student performance on this assessment would factor heavily in decisions about which students receive support, what kind, and for how long.

For the purposes of this report, we identified literacy tutoring programs providing services that fell within the following parameters:

- Tutoring services are provided during the school year.

- Tutors meet with students 1-to-1 or in a small group.

- Services are provided after school or during the school day. If during the school day, they are not provided by a regular classroom teacher, special educator, or reading specialist. Rather, they are provided by an employee or volunteer explicitly dedicated to literacy tutoring.

- The tutoring program uses a structured model – meaning a well-developed curriculum and materials designed to provide instruction and practice for students to develop specific literacy skills in key literacy domains – and provides tutors with training, monitoring, and coaching to implement the model as designed.

For this report, we focused solely on tutoring services for City Schools students in grades K-5. Some of the nonprofit organizations included in this report are also serving pre-K students, supported in large part by a state grant specifically geared toward early learners. Because the national research base does not address the efficacy of tutoring services for pre-K students, those services are not accounted for here.

Who is providing literacy tutoring services in Baltimore City?

Traditionally, elementary literacy tutoring services in Baltimore City have been provided by a variety of organizations external to the school district, including community and university partners and nonprofit organizations. Some of these organizations have served City Schools students for decades, while others are newer to the scene.

For many years, in accordance with the school-based decision-making model implemented by former superintendent Andres Alonso, the district deferred decisions about the design, selection, and implementation of intervention programs to principals. During that time, the district's role was primarily to review and approve these external partners.

In recent years, and in accordance with its own Blueprint for Success, City Schools has made significant strides toward a more strategic approach to measuring and meeting student needs. Because there was no centralized database for storing and analyzing information about students receiving Tier II services, the district has spent the past few years constructing complex maps that account for student achievement and resource allocation toward academic interventions at every school, with an eye toward equity.

For example, the district has spent several years investing in the expertise and capacity of a cadre of highly trained reading coaches who work with reading teachers in select schools to improve the efficacy and responsiveness of Tier I and Tier II services.

Recognizing the need for more broadly implemented and well-structured Tier II elementary literacy supports, two years ago the school district leveraged funding created through the "Bridge to Kirwan" legislation to create an in-house tutoring program. This program, described in more detail below, was specifically designed to align with existing curriculum and to build internal capacity.

What exists now is a rich landscape of organizations that provide literacy tutoring to elementary school students in Baltimore City. These include five different nonprofit organizations, as well as a variety of small community- and university-based tutoring programs. Although there are numerous smaller community-based and university-based tutoring programs across the city, only those programs with a clearly defined,

replicable model and sufficient program evidence were included in this analysis.

NONPROFIT TUTORING ORGANIZATIONS

Each of the district's approved partner tutoring organizations has a well-developed program model based on some or all of the five components of reading codified by the National Reading Panel: phonemic awareness, phonics, vocabulary, fluency, and comprehension. While the specifics of their program models and delivery mechanisms differ, these organizations share similar visions and a steadfast dedication to City Schools students. The nonprofit organizations providing services in Baltimore City are:

- **Experience Corps**
  Experience Corps, sponsored by the AARP Foundation, places volunteers aged 50+ in schools to support elementary literacy development through tutoring in both small-group and 1-to-1 formats, with schools determining the ratio. In these tutoring services, volunteers focus on fluency development, using leveled texts from the Reading A to Z program in a structured session.

- **Literacy Lab**
  Literacy Lab is a national replication partner of the Minnesota Reading Corps model (now called Reading & Math, Inc). The model has a menu of 10 leveled interventions that address development of phonemic awareness and phonics skills, as well as basic fluency skills such as word construction and reading connected text. Literacy Lab tutors are school-based, and use assessment data to identify target students, provide daily intervention, and monitor progress toward growth in specific skills.

Community- and University-Based Tutoring Organizations

There are a variety of small community-based programs comprising a rich network of tutoring services that individual schools or families may seek out for their students. Both Morgan State University and Loyola University have offered literacy support or tutoring support in various forms to their neighborhood schools over the years, while Johns Hopkins University has consistently operated a twice-weekly after-school tutoring program on its campus for over 50 years. The intensity of the focus on literacy varies in these programs, but they all have in common the aim of providing students with academic support from a caring adult, who in many cases becomes a trusted mentor and friend.

One local program worth highlighting is the Brown Memorial Tutoring Program, which partners intensively with four Baltimore City public schools to provide individualized support to struggling readers. Brown Memorial's tutoring program has been a stalwart in the Bolton Hill community for more than 50 years. Individualization is a hallmark of the program; each student's reading skills are comprehensively assessed, and then the student is matched with a 1-to-1 volunteer tutor for the school year. Tutors follow instructional plans developed specifically for their student, with input from tutoring program staff. Brown Memorial's volunteer tutors are all trained in the Orton-Gillingham method, which was developed for children with dyslexia and other reading difficulties. The Brown Memorial program incorporates a variety of activities to engage and motivate students, including mindfulness activities, themed explorations, and periodic book giveaways.

Brown Memorial has long-standing partnerships with Eutaw-Marshburn Elementary, Dorothy I. Height Elementary, Mount Royal Elementary/Middle, and Baltimore Montessori Public Charter School. Currently, the program serves approximately 90 students each year. The staff and board are continually seeking to improve their program and have recently enlisted researchers from University of Maryland to design an evaluation. Although space limitations preclude expansion, program leaders have begun developing relationships with other congregations in the city to support a replication of their model and to create a network of congregation-based tutoring programs.

- **Reading Partners**
A well-established national organization, Reading Partners provides tutoring services in 12 cities. Reading Partners mobilizes a large volume of local volunteers who tutor in Baltimore City schools and has a proprietary curriculum designed for ease of use by its part-time, volunteer tutors. Each lesson within the curriculum's five levels includes a tutor read-aloud, introduction or review of a targeted skill, and a comprehension-focused student read-aloud.

- **Springboard Collaborative**
Springboard Collaborative is a relative newcomer to Baltimore City, offering a multifaceted model it calls FELA (Family-Educator Learning Accelerator), which aims to increase teacher capacity and parental engagement while providing targeted student literacy support. Springboard Collaborative offers both a five-week summer program and a 10-week after-school program, which is the program component included in this report. Springboard's program combines Raz-kids (an online guided reading program) with targeted skill instruction by the teacher/tutor, as well as discrete practice activities for kids to do at home.

- **Tutoring with the Lightning Squad (TWLS)**
Tutoring with the Lightning Squad, developed by the Success for All Foundation, is a 1-to-4 computer-assisted tutoring program. Pairs of students with similar skill profiles take turns acting as "coach" to one another while they read stories, complete activities, and practice skills. The computer-based program serves both to engage the students with visual and auditory content as well as to track their responses. A small group of students (typically two to three pairs) is supported by a paid tutor who assesses and monitors their progress.

CITY SCHOOLS OFFICE OF TEACHING AND LEARNING

- **City Schools Tier II Fundations Interventionist Program**
This district program places specially trained paraprofessionals within 14 schools to act as reading tutors in grades K-2. The paraprofessional tutors provide direct skill-based instruction to small groups of students within their classrooms using Fundations materials from Wilson Reading. Services are provided to the students for 30 minutes each day, five days per week.

A CITY SCHOOLS VENDOR

- **Amplify mCLASS Tutoring Program**
In summer 2020, the district took the nontraditional approach of contracting with a corporate vendor to provide literacy tutoring support to an additional 25 schools. This decision was prompted by the unprecedented crisis of the global pandemic, and the urgent need to provide more individualized instruction to students in the early stages of literacy development. The vendor, Amplify, which has for several years provided diagnostic assessment and data analysis to the district, recently began implementing its mCLASS Tutoring program for struggling readers. The tutoring program is being delivered remotely by a cadre of newly hired and trained tutors, many of whom are current college students. The program features embedded assessment and progress monitoring so that students' progress is tracked continuously.

Although all of the programs described in this landscape address key components of literacy development as articulated by the National Reading Panel, none was designed with Baltimore City's population in mind. That means none was developed using the well-established educational theory of culturally responsive pedagogy, which emphasizes "using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them." (Gay, 2010) Culturally relevant pedagogy is more than a theory, however, and there are numerous studies that demonstrate the effectiveness of these approaches. (Aaronson & Laughter 2016) Therefore, an ideal tutoring program would address the specific needs of Baltimore's low-income and marginalized student groups by building on their historical and cultural heritage and lived experience. Directors of the local tutoring programs expressed some awareness of these issues, and a few articulated specific action steps to ameliorate cultural incongruence in their models. For example, Reading Partners has convened a working group to develop and curate more culturally responsive reading passages, using names that are more reflective of Baltimore students' backgrounds.

And Springboard Collaborative's model is built on culturally relevant family engagement principles; operating from the premise that adults at home are equal partners supporting, monitoring, and celebrating students' reading growth, it offers materials and techniques accessible to many types of families. But these examples represent a fertile opportunity for more cultural responsiveness in the local tutoring landscape.

All of the existing programs are operating at significant scale, with each one serving multiple schools and hundreds of students every year. In school year 2019-2020, over 4,500 students in grades K-5 were slated to participate in small-group or 1-to-1 tutoring with these programs. Most programs paused or ceased operations when school buildings closed in March 2020, and it took several months to build new infrastructure and train tutors to provide services virtually. Among the external providers, most have relaunched and have been providing services virtually during the 2020-2021 school year, but at a reduced capacity due to the logistical constraints. With the addition of Amplify's mCLASS Tutoring program, however, the district has been able to maintain the number of elementary literacy tutoring slots available systemwide.

Table 3 Schools and Students Served by Program in 2019-2020 and 2020-2021

	2019-20 [1]		2020-21 [2]	
	Schools	**Students**	**Schools**	**Students**
Amplify mCLASS	N/A	N/A	25	2,300
City Schools Tier II Fundations Interventionist Program	14	650	14	875
Experience Corps	27	650	11	425
Literacy Lab	17	675	14	225
Reading Partners	16	650	16	375
Springboard Collaborative	22	1,500	TBD	TBD
Tutoring with the Lightning Squad	8	500	16	500
Total [3]	**62**	**4,625**	**69**	**4,600**

(1) The number of schools and number of students served presented here represent the number that were engaged and slated to be served by each tutoring organization in 2019-20 before school buildings were closed in March 2020. The actual numbers served vary based on the degree to which program operations were paused, ceased, or reconfigured.

(2) The number of schools and number of students served presented here represent the number that were actively engaged and slated to be served through virtual tutoring services during fall 2020; the actual number served may be higher, as some organizations were still working to increase capacity through spring 2021.

(3) The total number of schools served is not a sum of the number of schools served by each tutoring provider because many schools were served by more than one provider.

What are the key features of local literacy tutoring programs?

Although each of the programs examined for this analysis addresses essential skills in early literacy development, they differ in key aspects of program management and delivery. For example, some local programs focus their resources on students in grades K-3, while others will include older struggling readers, who sometimes have larger or more persistent gaps in their literacy skills. There is also variation in the session structure, the amount of tutoring provided, and the qualifications of the tutors.

One standard feature of most of the tutoring programs described in this report is that children are pulled out of the classroom during the school day. This approach is often utilized because it allows for 1-to-1 support in a dedicated space that affords flexible pacing and privacy. On the other hand, pullout support removes students from the classroom community, which can affect students negatively both academically and socially. Determining how to schedule tutoring services, and, in particular, what lessons or activities students will miss so that they are not further marginalized, presents an ongoing challenge.

As one City Schools leader explained, "We had a very, very intense philosophical debate about how to schedule literacy tutoring support. I appreciate the depth of the team's consideration to make sure a child doesn't, for example, miss art every day, because for some children, that is their driving force at school. So where we were able to land was that we could stagger the kids' schedules so that they're not missing the same thing every day." In response to this concern, another approach that some schools have begun implementing is building in designated periods of intervention/ acceleration to the school day schedule. In this way, all students have the opportunity to receive differentiated instruction without missing any instruction in other content areas.

TUTORING SESSION STRUCTURE AND DOSAGE

As shown in the table below, the frequency and dosage of tutoring services varies by program model. Students may be tutored as frequently as every day or as infrequently as twice per week. Tutoring services are also provided for varying durations ranging from 20 minutes to an hour. Some programs, generally those with less-frequent dosage, assume that students will remain in the program for a predetermined amount of time or an entire school year. However, in other models with more intensive services, tutors frequently assess and closely monitor student progress, with the explicit aim of having students reach articulated skill goals and/or achieve grade-level reading proficiency in less than one year (sometimes in as little as four to six months).

Table 4 Program Dosage and Duration

	# Sessions per Week	Time per Session	Program Duration
Amplify mCLASS	3	30 minutes	Varies based on student need
City Schools Tier II Fundations Interventionist Program	5	30 minutes	Varies based on student need
Experience Corps	2	30 minutes	32 sessions
Literacy Lab	5	20 minutes	Varies based on student need
Reading Partners	2	45 minutes	30-40 sessions
Springboard Collaborative	2-3	60-90 minutes	10 weeks
Tutoring with the Lightning Squad	5	30 minutes	Varies based on student need

TUTOR RATIO AND PLACEMENT

The programs described in this report provide tutoring services in a variety of configurations. As explained earlier in this report, research has shown that both 1-to-1 tutoring programs and small-group tutoring programs can be effective, but 1-to-1 programs are slightly more likely to deliver results.

Another factor to consider in the design of tutoring programs is tutor placement. Consistency in the tutoring relationship is key for student outcomes; research shows that students make the most progress when working with the same tutor most or all of the time. While it is not necessary for a tutor to work full time, there may be benefits to a single tutor or a small cadre of tutors being assigned to meet the needs of a single school. The sustained relationship between tutor and school also helps to facilitate collaboration with classroom teachers, which is a key driver of outcomes documented in the research-base on tutoring. For this reason, Reading Partners, which enlists a large corps of volunteer tutors, employs a full-time AmeriCorps member to fill this role as a site-based coordinator at each school.

Table 5 Tutor Ratio and Placement by Program

	Tutor Ratio	Tutor Placement
Amplify mCLASS	Small group	Tutors work part time and may tutor one or more students.
City Schools Tier II Fundations Interventionist Program	Small group	Tutors work full time at a single school.
Experience Corps	1-to-1 Small group	Tutors work part time and may tutor one or more students. Some tutors work at only one school; some work at several.
Literacy Lab	1-to-1	Tutors work full time at a single school.
Reading Partners	1-to-1	Tutors volunteer to tutor at least one student once per week. Some tutor their student 2x per week; some tutor multiple students.
Springboard Collaborative	Small group	Tutors are teachers who work part time (after school) at their own school.
Tutoring with the Lightning Squad	Small group	Tutors work full time at a single school.

TUTOR QUALIFICATIONS

Research also shows that tutors with some college education are more likely to be effective than those without. In addition, paid tutors are likely to be more effective than those who are not. Although all of the tutoring organizations in this report provide substantive training and on-site coaching to their tutors regardless of whether they are paid or volunteer, it may be easier to hold paid tutors accountable for detailed aspects of program implementation.

How are literacy tutoring organizations partnering with schools?

Each of the tutoring organizations interviewed described the time, energy, and effort they invest in partnering with schools. The investment begins with determining which schools are requesting their services each year and working out service agreements. Each organization works hard to serve the schools that request their help, and to maintain existing partnerships even when faced with

Table 6 Tutor Type and Qualifications by Program

	Tutor Type	Tutor Qualifications
Amplify mCLASS	Paid contract employees	High school diploma
City Schools Tier II Fundations Interventionist Program	Paid paraeducators	College degree or comparable education and experience
Experience Corps	Paid volunteers (AmeriCorps or similar stipend)	High school diploma, but >50% have college degrees
Literacy Lab	Paid volunteers (AmeriCorps or similar stipend)	High school diploma, but >75% have college degrees
Reading Partners	Unpaid volunteers	High school diploma, but >75% have college degrees
Springboard Collaborative	Paid certified teachers	College degree and t eacher certification
Tutoring with the Lightning Squad	Paid contract employees	College degree or comparable education & experience

funding or logistical challenges. The tutoring organizations are also investing significant time and resources in recruiting, training, and supporting tutors. Tutor training can take the form of 30-40 hours of onboarding and initial training, followed by ongoing oversight and support from a coach to ensure proper implementation of the model.

Easing the burden on principals and teachers was a consistent theme in these interviews. The tutoring program directors typically aim to provide a predictable service delivery stream that operates in parallel with what schools are already doing, reducing the demand on the school. However, Springboard Collaborative aims for something different entirely in its relationship with schools. Springboard intentionally works directly with teachers (as opposed to paid or volunteer tutors) to build teacher capacity with high-leverage instructional practices in literacy development. This commitment to improving capacity of existing, school-embedded staff members was echoed by City Schools instructional leaders in their development of the Tier II Fundations Interventionist Program.

Which schools and students are being served?

Currently, there are 45 elementary schools and 71 elementary/middle schools in Baltimore City. During school year 2019-2020, a little more half of those schools (62) were being served by at least one tutoring organization, while about a quarter were being served by two or more organizations. The number of schools receiving tutoring services increased to 69 this school year. Although several of the tutoring programs have increased their capacity in recent years, tutoring organization staff interviewed reported that there is still unmet demand for programming.

The presence of a tutoring program in a school is a result of a complex set of factors. These can include historical relationships, the school leader's negotiating power, even the capacity of the tutoring program to find volunteers for a specific geographic location. Both the tutoring program operators and school leaders admit, however, that cost has been a significant determinant of which students are served, when, and by whom. District leaders are more concerned about ensuring an equitable and strategic distribution of resources than ever before, and have put these issues at the forefront of their recent efforts. To pilot the Tier II Fundations Interventionist Program, the district selected the Community Learning Network (CLN 3) at the nexus of greatest need and fewest existing services. For the Amplify mCLASS Tutoring program, district leaders worked with Network directors to identify the schools with the highest need for tutoring in each Network, thereby spreading the program districtwide.

Evidence, Outcomes, and Local Metrics

What evidence is available on the effectiveness of these models?

In accordance with federal law, state law, and local school board policy, City Schools vets every prospective partner organization before allowing the program to operate within the district. The vetting process includes reviewing third-party evaluation data as well as local program outcomes. In this section of the report, we examine the evidence that has been made available to City Schools and consider the suitability of the evidence for future decision-making.

All of the literacy tutoring models profiled in the report have been subject to at least one rigorous evaluation to determine their impact on students' reading skills. In the field of

education policy, the standard for "rigorous" evaluation is high. To meet this standard, an evaluation must:

- Be conducted by an independent third party, such as an applied research firm or a university;

- Include a large sample across sites and/ or over a period of several years;

- Include both treatment and comparison groups demonstrated to be sufficiently similar in composition; and

- Measure outcomes using a valid and reliable test.

Three of the models were evaluated in studies with the most rigorous methodology, which is a randomized control trial (RCT). The other three were evaluated with a quasi-experimental design, in which schools are not randomly assigned to receive tutoring but a sufficiently similar comparison group is constructed from students or schools not receiving the tutoring services, allowing for a valid comparison between those who received the tutoring support and those who did not.

Table 7 on page 24 summarizes the evaluation type and outcomes for the most recent evaluation conducted on each literacy tutoring model. In most cases, the research demonstrated that the program had an overall positive impact on students who participated. The exception is Amplify's mCLASS tutoring program, which was not found to have a statistically significant positive impact. However, the study's authors noted that the program was not consistently implemented in the treatment schools, which made it nearly impossible to determine what impact the program might have on students who received the intended number of tutoring sessions.

Although the evaluation studies tend to show positive impacts overall, these impacts are rarely consistent across all groups of students served. For example, some of the programs were found to be more effective with K-1 students while others were found to be more effective with second and third graders. In one study, it was English language learners who made the greatest improvements through their participation in the program. These more nuanced findings represent the kind of data that would help City Schools principals and district leaders align resources and deploy programs most strategically.

The usefulness of these evaluation data for local decision-makers is limited by several factors inherent to large, rigorous program evaluations. One factor is the age of the data. For example, one of the evaluations dates back to 2010; others were published in more recent years but rely on data collected during the 2013-14 or 2014-15 school year. Every one of these programs has made some revisions to its materials, methodology, and training procedures in that time. In effect, the models being implementedmay differ from the models evaluated in these rigorous evaluations. Another significant limitation of these evaluations is the comparability of the student sample to students in City Schools. Only two of the evaluations were actually conducted with schools in Baltimore. For most of the remaining studies, it is impossible to tell how closely the students in the study sample aligned with City Schools students on demographic indicators like race, ethnicity, and income. Local program implementation can also vary from the model studied. These caveats indicate that rigorous national program evaluations are a necessary, but not sufficient, basis for strategic decision-making about literacy support for students in the Baltimore City Public School System.

Table 7 Summary of Program Evaluations

	Evaluation	Study Design	Population Comparable to City Schools	Statistically Significant Impact
Amplify mCLASS	University of Michigan, 2019	Most rigorous: Randomized control trial	Yes on poverty rate; Somewhat on racial/ethnic composition	No
Experience Corps	Mathematica, 2010	Most rigorous: Randomized control trial	Yes	Yes
Literacy Lab	NORC at the University of Chicago and TIES, 2014	Most rigorous: Randomized control trial	Somewhat on poverty rate; Somewhat on racial/ethnic composition	Yes
	Inciter, 2019	Moderately rigorous: Quasi-experimental design	Unclear	Yes
Reading Partners	MDRC, 2015	Most rigorous: Randomized control trial	Yes on poverty rate; Somewhat on racial/ethnic composition	Yes
	Augenblick, Palaich and Associates, 2017	Moderately rigorous: Quasi-experimental design	Yes on poverty rate; Somewhat on racial/ethnic composition	Yes
Springboard Collaborative	MClanahan Associates & ImpactEd, 2020	Moderately rigorous: Quasi-experimental design	Yes on poverty rate; Unclear on racial/ethnic composition	Yes
Tutoring with the Lightning Squad	Madden and Slavin, 2017	Most rigorous: Randomized control trial	Yes	Yes

What kinds of outcome data are local tutoring organizations reporting?

Rigorous studies conducted by independent evaluators are useful for proving the efficacy of a model, but, as explained above, there are limitations to their usefulness for operational decision-making on a continual basis. Traditionally, principals and district leaders have relied on the tutoring program providers to provide data about their local operations and outcomes. The tutoring programs are collecting and managing vast amounts of operational data and program implementation data, and also tracking a variety of outcomes for both students and tutors. However,

because each tutoring program has unique data collection goals, plans, and methods, school and district leaders have been left to compare outcomes that are inconsistent across programs.

Because improving reading skills is the primary focus of these programs, every program measures and tracks students' reading skills using a multi-part measure aligned with the specific domains of reading development that the program aims to address. As shown in Table 8, there are four different reading assessments used by the seven main local tutoring providers. Only one of these, DIBELS, is the same assessment used by schools

Table 8 Literary Assessments for Progress Monitoring

	Name of Literary Assessment
Amplify mCLASS	DIBELS
City Schools Tier II Fundations Interventionist Program	Fundations Embedded Assessment and DIBELS
Experience Corps	DIBELS
Literacy Lab	Fast Bridge Assessment
Reading Partners	Star Early Literacy and Star Reading Assessments
Springboard Collaborative	DIBELS
Tutoring with the Lightning Squad (1)	Embedded Proprietary Assessments

(1) At City Schools' request, Tutoring with the Lightning Squad recently added DIBELS to its student progress monitoring plan

districtwide. For the tutoring programs that use a different assessment, and for the schools they serve, this lack of alignment can present a challenge.

Because some of these formal assessments are administered only a few times per year, each of the programs embeds some level of routine progress monitoring. This routine progress monitoring takes a variety of forms; in some programs, tutors complete a log or checklist to track student participation and activities completed. Some programs conduct short assessments on a very regular basis to track student mastery of each new skill. When tutoring programs collect these kinds of detailed data, they then establish mechanisms to share them with teachers. However, even where these more nuanced student outcomes data exist, it is not clear that they are always able to be accessed and used strategically by teachers, school leaders, and district leaders.

Although the primary goal of the tutoring programs is improving students' literacy skills, all of the programs run by nonprofit partners track a variety of other outcomes associated with their presence in schools and in the community. These data are typically collected via annual staff surveys, and may include:

- School leader or teacher satisfaction with tutoring services;

- Students' academic confidence and other attitudinal shifts;

- Students' social-emotional skills;

- Investment in public schools (by tutors and their social networks); and

- Parent/family engagement.

These types of surveys, while less useful for assessing a program's efficacy for improving students' reading achievement, still provide valuable information about additional benefits accrued through these partnerships.

As mentioned previously, tutor retention is a data point of interest for all programs, though they take different perspectives on this topic based on the program model. For programs like Experience Corps and Reading Partners, retaining tutors from year to year has benefits. Returning tutors often gain expertise, which can both improve student outcomes and reduce organizational costs associated with recruitment and training. For programs like Literacy Lab, which employs AmeriCorps service members, retention beyond three years is not a goal for individual tutors. However, Literacy Lab tracks its alumni tutors and has found that nearly 30% enter the teaching profession. Their skills and competencies working as a tutor position them well for entry into the teaching workforce, and many of these local Literacy Lab tutors choose to teach in City Schools. Reading Partners also tracks its alumni AmeriCorps members, and reports that nearly 20% pursue graduate programs in education or teacher certificate programs.

In conclusion, we found that while the tutoring programs invest heavily in data collection and management, the available data are not always well aligned with school and district priorities and do not allow for a complete picture regarding the efficacy, relative strengths, and efficiencies of these programs.

The district is well aware of this issue and in recent years has begun to tackle it in a variety of ways. The Office of Teaching and Learning has developed a complex map of needs and resources to track program investments and outcomes within the district. It is also asking literacy tutoring providers that they contract with directly (for example, Tutoring with the Lightning Squad) to integrate DIBELS into their diagnosis and progress monitoring routines so that district staff have more comparable data across programs and sites. And it has used the development and roll-out of the Tier II Fundations Interventionist program specifically to carve out a more explicit structure for managing expectations, communications,

and accountability. In this model, district staff are progress monitoring the initiative across schools and providing follow-up communication and support to improve implementation efforts.

COSTS AND FUNDING ISSUES

What are the main funding sources for the existing elementary tutoring programs?

Table 9 describes the major funding streams that the local tutoring programs rely on for their operations. These data illustrate that several of the nonprofit organizations (Experience Corps, The Literacy Lab, and Reading Partners) rely on the federally funded AmeriCorps program to fund staff positions. In addition, these programs, along with Springboard Collaborative and Tutoring with the Lightning Squad, have garnered significant community investment in the form of corporate partnerships, foundation grants, and individual donations. These investments represent a share of costs that are not being passed directly to the district and/or to individual schools.

Table 9 Funding Sources by Program

	Funding Sources
Amplify mCLASS	100% District funding
City Schools Tier II Fundations Interventionist Program	100% District funding
Experience Corps	30% School fees 30% AmeriCorps funding 40% Private funding
Literacy Lab	40% School fees/District funding 30% AmeriCorps funding 30% Private funding
Reading Partners	20% School fees/District funding 30% AmeriCorps funding 50% Private funding
Springboard Collaborative	75% District funding 25% Private funding
Tutoring with the Lightning Squad	100% District funding in 2020-2021 100% Private funding prior to this year

What is the cost of the intervention(s) on a per-pupil basis?

Cost is obviously an important factor in determining the value of tutoring services, and one that all stakeholders express concern about. Unfortunately, determining the costs of these programs can be difficult to do.

One challenge of calculating costs is that the programs are constantly in flux; no organization's budget is static, and none is serving a fixed or predictable number of schools and students from year to year. The way that most of the local nonprofit organizations function is to develop school partnerships and then staff up with tutors. Each tutor serves a range of students depending on degree of need, scheduling constraints, and how quickly students move through the intervention. Therefore, it is impossible to determine the cost per student until after the fact. Some of the organizations providing tutoring services have several years' worth of cost data to examine, while other programs launched or expanded more recently could only estimate.

Another complicating factor in determining a per-student cost is establishing which inputs to count. When we asked the tutoring program providers to break down their costs, some did so simply by accounting for the programmatic costs charged directly to individual schools and/or the district; others layered in a variety of organizational and overhead costs. Directors of the nonprofit organizations whose primary mission is to provide tutoring services are more easily able to account for the tutoring services as a percentage of their entire annual budget in this way, while managers of tutoring programs embedded within other organizations or programs (i.e., Amplify, City Schools, and Tutoring with the Lightning Squad) are not necessarily accustomed to doing so. Due to these complex sets of factors, it was not possible, within the bounds of this study, to establish true per-student costs for each program.

Based on the data reported by the program operators, we were able to determine a range of costs typical among the local programs. Predictably, these ranges were different for programs offering 1-to-1 services versus those providing services to small groups. The range for models providing services in small-group settings was $800-$1,200 per student, while the range for programs serving students in a 1-to-1 setting was $1,200-$2,000.

Even determining an accurate per-student cost would provide only half of the information needed to enable data-driven decision-making around the cost-effectiveness of any given program or model. As explained previously, we do not currently have comparable outcome data on these local programs in a form that would be necessary for such comparisons.

What local, state, and national funding is currently and potentially available to City Schools for tutoring as an intervention?

City Schools currently leverages funding from a variety of sources to support literacy tutoring services. These include federal and state grant funds, each of which entails a distinct set of requirements and limitations.

FEDERAL FUNDING

Title 1

One funding stream that funds a significant portion of the existing elementary literacy tutoring services in Baltimore is federal Title 1 funding. The U. S. Department of Education allocates Title 1 funding to school districts based on the percentage of students living in poverty. It is important to note that the district receives these funds based on the number of students who are eligible for the Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF), or who are homeless or in foster care. These students are "directly certified" as low income. For school year 2020-2021, Baltimore

City Public Schools received $56 million in Title 1 funds. This amount is considered woefully insufficient by knowledgeable education funding and policy advocates, and underestimates the number of students living in poverty due to the difficulty of accurately counting students from undocumented and mixed-status families.

Each year, City Schools' central office retains a portion of the funds for districtwide initiatives but allocates the majority directly to schools via the school-based budgeting process. Utilizing a tiered model, City Schools provides a per-pupil allocation for each qualifying student at a school, based on the school's poverty rate:

- Schools with a poverty rate greater than or equal to 66.7% received a per-pupil allocation of $1,285.

- Schools with a poverty rate between 41.7% and 66.7% received a per-pupil allocation of $990.

- Schools with a poverty rate between 35.4% and 41.7% received a per-pupil allocation of $880.

In Baltimore City, 108 schools qualified as Title 1 schools for school year 2020-2021. Principals often use these funds primarily to pay for additional full-time classroom teaching positions, which may allow them to reduce class sizes to more manageable levels in select grades. What remains may be used for materials and services that support instruction and offer enrichment, such as books and supplies, technology, field trips, and contract services like tutoring. In recognition of the many priorities that principals must address, the school district has traditionally eased the burden of funding literacy tutoring programs by subsidizing a share of the cost and requiring individual schools to pay the remainder from Title 1 funds.

AmeriCorps

Currently, City Schools does not directly receive any funds directly from the Corporation for National Service. However, three of the local literacy tutoring organizations receive funds through the AmeriCorps State and National grant programs, or through AmeriCorps VISTA, to pay tutors and/or tutor managers. Over $1.5 million was brought into Baltimore City to support literacy tutoring last year alone.

STATE FUNDING

In recent years, City Schools has also received state grants through various funding streams. In some cases, these funds have been earmarked for tutoring, while in other cases the district has been given the discretion on how to spend the funds. Recent state grant programs that have been or could be applied to tutoring include:

Transitional Supplemental Instruction for Struggling Learners (TSI) Grant

In 2019, the Maryland State Assembly passed the "Bridge to Kirwan" legislation, which allocated $23 million statewide for additional academic supports using evidence-based programs as defined in the federal Every Student Succeeds Act (ESSA), including 1-to-1 and small-group tutoring with a certified teacher, a teaching assistant, or any other trained professional; cross-age peer tutoring; and screening, identifying, and addressing literacy deficits. The funds were targeted for K-3 students. Baltimore City was allocated $4 million each year for FY2020 and FY2021. With these funds, the district developed its own Tier II small-group tutoring program, which it launched in all 14 Community Learning Network 3 schools in spring of 2020.

Striving Readers Grant

In summer 2018, the Maryland State Department of Education (MSDE) ran a competitive grant application process to

award subgrants from the U.S. Department of Education designed to help advance literacy among K-12 students. MSDE disbursed a total of $43 million; every jurisdiction in the state received a grant of at least $1 million. City Schools was awarded one of the largest grants, totaling $2.8 million. With these funds the district developed a comprehensive literacy coaching program.

Learning in Extended Academic Programs (LEAP)

MSDE's LEAP initiative allocates funds to schools, or to districts on behalf of individual schools, where 80% of students qualify for the free and reduced meals program. The funds must be spent on extended academic programs to address both academic performance and general well-being, and programs must be implemented in collaboration with a nonprofit partner. City Schools applies annually and award amounts fluctuate from year to year; the district received $1.4 million for 2019-2020 and used the funds for a highly regarded summer program by Young Audiences of Maryland, which incorporates academic, social-emotional, and arts integration components.

Maryland Early Literacy Initiative (MELI)

This MSDE grant program, initiated in fall 2018, offered districts the opportunity to apply for grants of up to $75,000 per Title 1 school for evidence-based early literacy interventions. City Schools was awarded $2.4 million and used the funds to expand literacy tutoring services through several of its existing nonprofit partners, including an expansion of Literacy Lab's program to serve Pre-K students.

Coronavirus Aid, Relief, and Economic Security (CARES) Act

In spring 2020, the Maryland State Department of Education received over $250 million in federal funds to support schools during the

global pandemic. $26 million dollars of CARES Act money was designated for tutoring; however, the funds were made available to the district with an extremely tight spending deadline. This portion of CARES tutoring money was utilized to contract with Amplify to provide an additional $2.5 million in 1-to-1 tutoring for students in 25 schools.

Although the district has benefitted from the availability of these funding sources, district leaders pointed out many limitations of the programs. First, the funding sources and program requirements tend to shift every few years, requiring that district staff interrupt existing programs and/or reconceive them to fit the state's priorities. In addition, state grant programs rarely if ever include a planning year allocation, forcing the district to invest heavily up front and to stand up programs at scale quickly. Finally, the programs often include short spending deadlines. For example, the MELI grant program was initially designed by the state to be a three-year program, but the term was unexpectedly shortened to two years, which forced the district to scramble to spend the funds and truncated what was originally conceived as three years of spending on literacy interventions.

Given the complexities and limitations of this funding landscape, the district has been trying to think very strategically about how it allocates both internal and external resources. For example, staff from the Department of Teaching and Learning developed an exhaustive map of literacy supports, accounting for services and programs at every one of the district's schools, in order to determine which network would receive and implement the Tier II literacy support program developed with "Bridge to Kirwan" funds. In addition, the department initially surveyed existing nonprofit tutoring partner programs to see which could be deployed with CARES Act funds; when none could expand quickly enough in the midst of the pandemic, the

district extended its partnership with Amplify—an existing vendor—because it committed to filling the gap by serving students from 25 additional schools remotely.

PHILANTHROPIC FUNDING

There is significant private investment being leveraged to support tutoring for elementary school students in Baltimore City. As discussed earlier in the report, there are numerous local universities and community organizations supporting home-grown tutoring programs. Both the paid and volunteer positions are supported by the sponsoring entity, and other costs—such as materials, snacks, and even transportation—are being covered by the sponsoring entities as well. Although there is no centralized source of information about these kinds of investments, both Brown Memorial and the Johns Hopkins University are supporting programs with budgets in excess of $100,000 per year. Of course, larger investments are being made in the five nonprofit literacy tutoring programs delineated in this report; we estimated at least $200,000 contributed by individual and corporate donors, along with $1.5 million from local foundations.

The Challenges and Opportunities of Scaling Up—and Out

While there was already a precipitous gap in reading achievement in Baltimore City before the pandemic, early data show that the gap is widening. For example, City Schools has determined that nearly 1,500 of the students in grades 1-4 who left school last March reading on grade level lost ground in the intervening months and are now measured as having reading skills that are below grade level.[3] With teachers and families struggling to replicate or replace normal instruction in remote

conditions, it is unlikely that many of these students will be able to achieve and sustain core literacy competencies without targeted support. In addition, mental health experts are concerned for the well-being of students who have been alienated from their school buildings, teachers, and peers—in many cases able to access only limited social and emotional support to deal with this social isolation or even extenuating circumstances like grief and food insecurity brought on by the pandemic.

City Schools is working assiduously to meet these needs, but will not be able to address the problems alone. Scaling up literacy tutoring services is necessary to provide desperately needed, targeted, and effective support to students. While 1-to-1 and small-group tutoring services may affect reading outcomes, they also help address attendance issues and social-emotional issues through increased contact and focused attention.

Although the city is in a precarious position, there are numerous opportunities inherent in the current moment. One such opportunity has arisen from the tutoring organizations' response to the pandemic. While the stay-at-home orders resulted in a temporary shutdown of services, the ongoing constraints prompted the literacy tutoring organizations to be more flexible in structuring and delivering services. All of the organizations featured in this report have increased their investments in technology, infrastructure, and training to support virtual tutoring. The shift to virtual tutoring may offer a natural experiment and some long-term benefits. For example, virtual tutoring sessions don't require travel time, and have allowed some organizations to recruit college students who will tutor part time. In addition, because virtual sessions largely take place with students learning from home,

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3   This data can be found in the December 1, 2020 ELA and Math Strategy Update, https://go.boarddocs.com/mabe/bcpss/Board.nsf/files/BVJTYF799187/$file/ELA%20and%20Math%20Strategy%20Update.pdf.

some of the tutoring organizations have had increased contact with families.

The recent shifts in tutor recruitment and management point to another latent opportunity, which is the potential for a coordinated effort with local workforce development entities and experts. Maryland's economy has been hit hard by the pandemic, and both recent and soon-to-be college graduates are facing limited job prospects. Tapping this well-educated, eager, and tech-savvy population may provide a valuable labor force for tutoring organizations.

An additional imperative presented by the pandemic—and by an anticipated influx of funds related to pandemic relief programs and the passage of the Kirwan Commission's Blueprint for Maryland's Future—is the opportunity to rethink and reframe the instructional opportunities and supports offered to students so that they incorporate more culturally relevant and sustaining pedagogies. While scaling up opportunities for tutoring support, City Schools has a unique opportunity to also scale out, seeking or developing programs and approaches that more explicitly acknowledge historical inequities and more intentionally aim to honor students' language, culture, and lived experience.

Baltimore City Public Schools, like nearly every school district in the nation, is poised at a precipice. The global pandemic has created an unprecedented challenge to public education and widened an already yawning opportunity gap. We currently have a patchwork system of supports for students who are not reading on grade level in elementary school; it is a system that we can build on, but some considerations may make the difference between leveraging this opportunity and wasting it. Practitioners and policymakers at every level bear responsibility for decisive and collective action strategically planned to increase the chances of success.

Photo courtesy of Literacy Lab

PART THREE: Conclusions and Recommendations

By Robert E. Slavin, Stephanie Safran, Joe Manko, and Sarah Manekin

Recommendations

1. **Make a concerted effort to provide intensive tutoring services to the nearly 18,000 kindergarten through fifth grade students in Baltimore City who, during and after the pandemic, are reading below grade level.** Tutoring is the most cost-effective intervention strategy to improve student performance in reading and thereby drive students' overall academic growth. Therefore, tutoring focused on reading in grades kindergarten through fifth grade provides a unique opportunity due to the preponderance of research-based tutoring models already working in Baltimore City. In a typical school year, around 4,600 City Schools students are connected with one of the established tutoring programs in the city. At an estimated cost of $1,200-$1,500 per student[4], this would amount to an annual investment between $16 million to $20 million to provide tutoring supports to the 13,400 students currently not being served. This amount could be cobbled together from federal, state, local, business, and private support.

2. **Utilize an approach that matches each student according to their tier within the RTI pyramid to the best-suited tutoring intervention.** To implement a robust tutoring infrastructure in Baltimore designed for maximum effectiveness, efficiency, and longevity, we need a variety of committed partners and programs, facilitated by the school district as a central coordinating agency. We estimate that if tutoring supports are implemented effectively, with fidelity and at scale, this system-wide intervention could accelerate the rate of learning growth in such a way that students could gain an additional four to six months of reading proficiency each year.

    a. As detailed in this report, there are multiple, non-profit tutoring providers that have a track record of success, have demonstrated research-based outcomes, and could be expanded to address tutoring needs in the city. There are over 13,000 kindergarten through fifth grade students who are significantly behind in reading, and require the most intensive supports. These students should be provided a dedicated, paid tutor, offering either 1-to-1 or small-group tutoring, using a structured reading intervention in accordance with the best practices described in this report.

    b. Community based tutoring programs, operating through local universities, churches, or non-profit partners, that rely heavily on volunteers are a critical element of a comprehensive tutoring ecosystem. Highlighting relationships, mentoring, and general academic support, these programs are a vital resource to students. These volunteers should be directed to work with the over 4,600 students that are below proficient.

    c. In accordance with the principles of RTI, movement amongst the tiers should be fluid, dynamic, and responsive to data acquired throughout the intervention process. If the designated intervention, applied with fidelity over an established span of time, is

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4   The $1200-$1500 price point is an estimate generated from the typical cost of tutoring programs meeting best practices outlined in the report (provided by paid tutors, 1:25 student to tutor caseload, tutoring session ratios of no more than 1:3 at a time, using of structured curricular materials, occurring during the school day, tutors provided with extensive training)

not showing accelerated learning, student supports should be stepped up to a more intensive tier of support. Special attention should be provided for the youngest learners who are struggling to acquire literacy skills.

d. The best-suited tutoring intervention should be informed with nuanced data around various reading skills like phonemic awareness, phonics, fluency, vocabulary, and comprehension (as articulated by the National Reading Panel Report). Ideally, the appropriate intervention would be explicitly matched to each student's specific area(s) of skill deficit.

3. **Continue working to ensure that the tutoring strategy is implemented in a data-driven way—equitably and with fidelity.** City Schools, school leaders, and individual school staff members must be responsible for the coordination of tutoring partnerships, the strategic allocation of tutoring resources, expectations and standards for facilitation of these programs at the school level, and data collection to monitor implementation and effectiveness.

a. City Schools should dedicate staff to support the quality implementation of tutoring across the district. A tutoring initiative of this size and scale (impacting over 20% of the district's school-aged population, involving the potential allocation of several millions of dollars in state and federal funding, and spanning several years) requires an investment in staffing number and staffing quality commensurate with the gravity of the charge.

b. City Schools should work with existing tutoring providers to expand their capacity of service. For needs that cannot be met by existing tutoring providers, City Schools should recruit additional high quality tutoring programs or create new "in house" tutoring initiatives governed by culturally responsive pedagogy and utilizing tutoring best practices outlined in this report to meet the established need of over 13,000 students who are well below proficient in reading.

c. City Schools must work to ensure the equitable allocation of tutoring services, based on student data, according to student needs, across all elementary schools.

d. At the school level, principals and school teams should ensure regular, consistent, evidence-based tutoring sessions, effective tracking of student performance, collaboration with classroom teachers around reading supports, communication with parents about results and home reinforcement, and expeditious movement towards grade level performance.

4. **Draw on leadership at multiple levels, including the mayor's office, to ensure success of a strategic expansion of tutoring throughout Baltimore.** Mayoral support of the tutoring initiative will be critical in two areas:

a. The mayor should publicly support tutoring and acknowledge its promise as the most cost-effective intervention to improve student performance, post-pandemic. Alongside this is supporting the Kirwan recommendations around tutoring by committing the full local share to support this landmark legislation.

b. The mayor should call upon recent college graduates, in a spirit of citywide service, to fill the need for tutors. We project 535 additional tutors will be needed based on a caseload

of one tutor to 25 students. Qualified individuals who live in our communities should be connected to tutoring providers and receive appropriate training, compensation, and support to provide intensive tutoring supports to the over 18,000 students who are below and well below proficient.

5. **Allocate a dedicated and robust stream of federal, state, and philanthropic funds needed to ensure that every child reading below grade level receives regular tutoring support.** Specifically:

   a. The $1.9 trillion stimulus bill passed by the United States Congress includes support for school reopening and academic recovery efforts. City Schools should ensure that a significant portion of federal funding intended for learning recovery is deployed to support structured, research-based tutoring programs.

   b. In the Blueprint for Maryland's Future (Kirwan funding), there exists TSI funding directed at providing regular, consistent support for tutoring programs. Current TSI funding only serves a portion of the need; therefore, the Maryland General Assembly should appropriate additional funds dedicated to students in kindergarten through fifth grade. City Schools should dedicate the full amount of state- provided tutoring dollars to one-on-one and small group tutoring, provided by a trained and dedicated tutor using an evidence-based program.

6. **Expand national tutoring services. Under the new Biden Administration, the federal government should be dedicated to an expansion of tutoring services nationally** through initiatives like the National Tutoring Corps or programs like AmeriCorps that help subsidize the cost to expand the tutoring workforce.

7. **Conduct additional research on the topic.** This report provides information around what research currently tells us about tutoring, including its effectiveness, required frequency and dosage, and who should be providing the service. Additional research is needed both locally and nationally on some key elements of the tutoring strategy. With millions of federal, state, and local public and private dollars already invested, additional research is essential to help frame future investments. The following are important areas of study to consider:

   a. Baltimore needs to invest in additional research around tutoring by commissioning an evaluative study of the various programs and models that seeks to unearth which programs are most effective and cost-efficient, and provide the highest yield strategies for Baltimore. While academic outcomes as they relate to reading growth should be tantamount, other ancillary outcomes should be measured as well, such as the longitudinal impact of tutoring supports, the per pupil cost of the tutoring intervention, retention rate of tutors, and transition of trained tutors into teaching positions.

   b. There is additional research needed on the longitudinal effects of tutoring and how best to sustain gains made from initial tutoring sessions. Further, research nationally is needed into the longevity of tutoring impacts and strategies for sustaining these impacts over many years.

   c. Additional research conducted nationally is needed on the effectiveness of tutoring supports in both reading and mathematics for upper elementary and secondary school students.

ABOUT THE AUTHORS

Robert Slavin is currently Director of the Center for Research and Reform in Education at Johns Hopkins University and is a co-founder of the Success for All Foundation. Dr. Slavin has authored or co-authored 24 books and more than 300 articles and book chapters on such topics as cooperative learning, comprehensive school reform, ability grouping, school and classroom organization, desegregation, school-based vision care, research review, and evidence-based reform.

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Literacy Tutoring for Baltimore: What we know, where we are, and how to move forward

About the Abell Foundation

The Abell Foundation is dedicated to the enhancement of the quality of life in Maryland, with a particular focus on Baltimore. The Foundation places a strong emphasis on opening the doors of opportunity to the disenfranchised, believing that no community can thrive if those who live on the margins of it are not included.

Inherent in the working philosophy of the Abell Foundation is the strong belief that a community faced with complicated, seemingly intractable challenges is well-served by thought-provoking, research-based information. To that end, the Foundation publishes background studies of selected issues on the public agenda for the benefit of government officials; leaders in business, industry and academia; and the general public.

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