

# Tutoring Programs

## *Characteristics, Challenges, and Strategies for Scaling Up*

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COLLEGE OF  
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MARYLAND EQUITY  
PROJECT



# Overview

- Context
- Overview of academic literature
- Our research process
- Key takeaways from our research
- Characteristics of current tutoring programs
- Challenges with implementation and maintenance
- Strategies for scaling up
- Future directions for the AIB



# Context: Tutoring under the Blueprint for Maryland's Future

Under the Blueprint for Maryland's Future, **one-on-one and small group tutoring** is identified as a **key academic support** for K-12 students ([Accountability and Implementation Board, 2024](#); [HB 1300](#)). For example, tutoring interventions are **mandated** for some students, including **K-3 students** identified as needing additional support based on **assessment data** ([HB 1300](#), p. 48-49) and **high schoolers** identified as needing additional support to meet the state's new **College and Career Readiness standard** ([HB 1300](#), p. 11). The Blueprint also identifies tutoring as one of many wraparound services that may be **provided by community schools** ([HB 1300](#), p. 199).



# From the Literature: Tutoring Improves Student Learning Outcomes

- A growing body of literature suggests tutoring increases student learning outcomes ([Robinson et al., 2021](#))
  - Recent meta-analyses have found that tutoring has positive impacts on achievement across grade levels ([Kraft et al., 2024](#); [Nickow et al., 2024](#))
  - Tutoring has particularly positive impacts on achievement for students from low-income backgrounds ([Dietrichson et al., 2017](#))
- **High-dosage tutoring produces some of the largest effects on student outcomes of *any* educational intervention** ([Fryer, 2017](#))



# What makes tutoring high-quality?

- 
- |                      |   |
|----------------------|---|
| <b>Content focus</b> | <ul style="list-style-type: none"><li>• Positive effects for reading and math, while subjects like science and social studies are understudied (Nickow et al., 2024)</li></ul>  |
| <b>Delivery mode</b> | <ul style="list-style-type: none"><li>• Effects of virtual programs are smaller than those for in-person ones but still positive (Kraft et al., 2024)</li></ul>   |
| <b>Provider</b>      | <ul style="list-style-type: none"><li>• Effects are largest when tutoring is provided by teachers or paraprofessionals (Nickow et al., 2024) although tutoring from peers (Kraft et al., 2024) and other paid volunteers (e.g., college students) (Robinson et al., 2021) may have positive impacts</li></ul> |
| <b>Group size</b>    | <ul style="list-style-type: none"><li>• Effects are largest for 1:1 student-tutor ratios but remain positive for small groups (e.g., 4:1) (Nickow et al., 2024; Kraft et al., 2024)</li></ul>   |
| <b>Frequency</b>     | <ul style="list-style-type: none"><li>• Effects are largest for programs offered at least 3 days per week (Nickow et al., 2024)</li></ul>   |
| <b>Duration</b>      | <ul style="list-style-type: none"><li>• Longer sessions are generally not associated with more impact (Nickow et al., 2024)</li></ul>   |
| <b>Time of day</b>   | <ul style="list-style-type: none"><li>• Effects are largest for programs delivered at school during school hours (Nickow et al., 2024; Kraft et al., 2024)</li></ul>  |
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# Scaling Tutoring while Maintaining Effectiveness is Challenging

- Recent meta-analysis found that **tutoring interventions are generally less effective when delivered at scale** ([Kraft et al., 2024](#))
- **Common challenges** include **funding, staffing, and student engagement** ([Makori et al., 2024](#); [NCES, 2024](#); [Robinson et al., 2022](#))
- Programs **targeting lower-performing students**, which may be more efficient, can support those students but may also **create a negative stigma** around tutoring ([Robinson et al., 2021](#))



# Some Studies Point to Promising Scale-Up Strategies

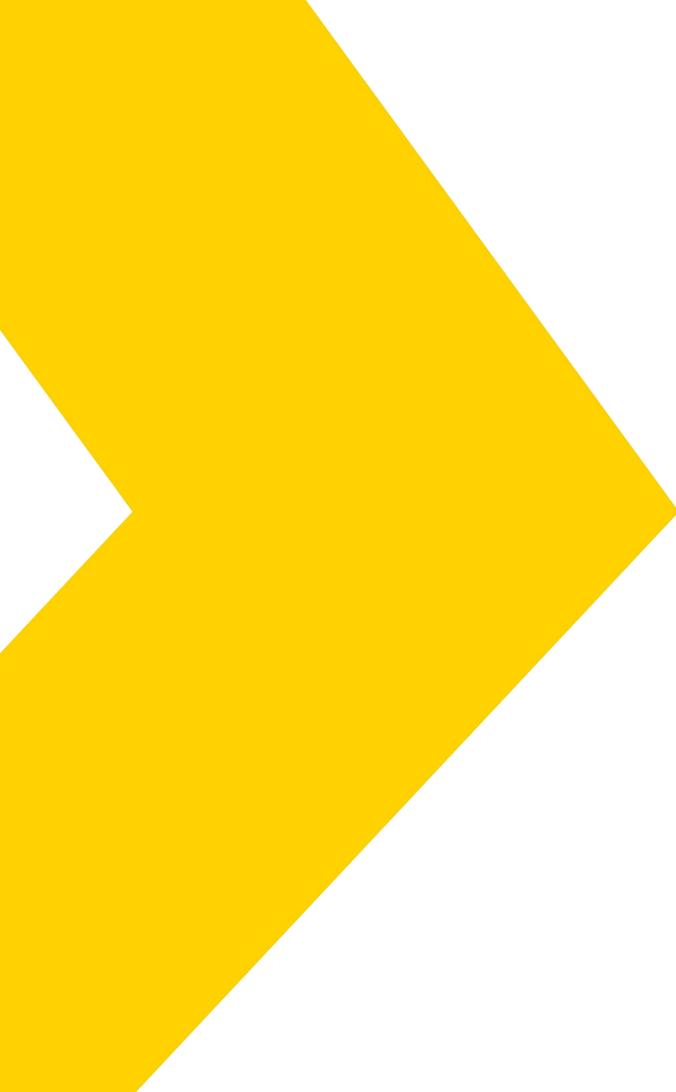
- Ensuring a **combination** of key design features—rather than singular features—can limit potential declines in effectiveness ([Kraft et al., 2024](#)):
  - Is offered in-person, at school, and during school hours
  - Is offered at least 3 times per week
  - Has a student-tutor ratio of no more than 3:1
  - Includes at least 15 hours of total tutoring
  - Uses a provided curriculum
- Effective scale-ups can address challenges by increasing buy-in among staff—including a willingness to rethink school schedules—and pursuing multiple funding sources ([Cohen, 2024](#))
- Targeting lower-performing **grade levels**, rather than students, may combat negative stigma ([Robinson et al., 2021](#))
- Incorporating data from ongoing informal and formal assessments ([Robinson et al., 2021](#))



# Our Research Process: Coding Blueprint Implementation Plans for Promising Strategies and Challenges

- Developed **coding tool designed to capture relevant data** (e.g., program design features)
  - Coding tool was informed by literature but we **coded inductively** to identify **features** of tutoring programs, **challenges** with offering them, and **strategies** for scaling up
- Used coding tool to guide analysis of relevant **portion of districts' 2024 final implementation plans**:
  - Pillar 3: Question #13
    - *Asked districts to describe how they leveraged high-quality school day tutoring to support learning in literacy and math, including whether and how they reorganized the school day, collaborated with external partners, and realigned resources*
- Reviewed coded data to **identify common design features** (e.g., frequency of tutoring) as well as **common challenges and strategies** (e.g., developing tutor pipelines)
  - Attended to whether and how features and strategies aligned with literature





# Key Takeaway

Based on the information provided in 2024 implementation plans, districts appear to be offering tutoring programs that have **at least some of the key design features** identified in the academic literature. Furthermore, the **majority of districts** offer programs that contain **all features** key to mitigating potential losses in effectiveness due to scale-up. Even so, most districts are **facing challenges**—largely tied to staffing and funding—with **bringing tutoring to scale**. Many are engaging in **strategies that have high potential to mitigate these challenges**, but whether and how these strategies support the scaling up of effective tutoring interventions **remains to be seen**.

# Features of Maryland Districts' Tutoring Programs

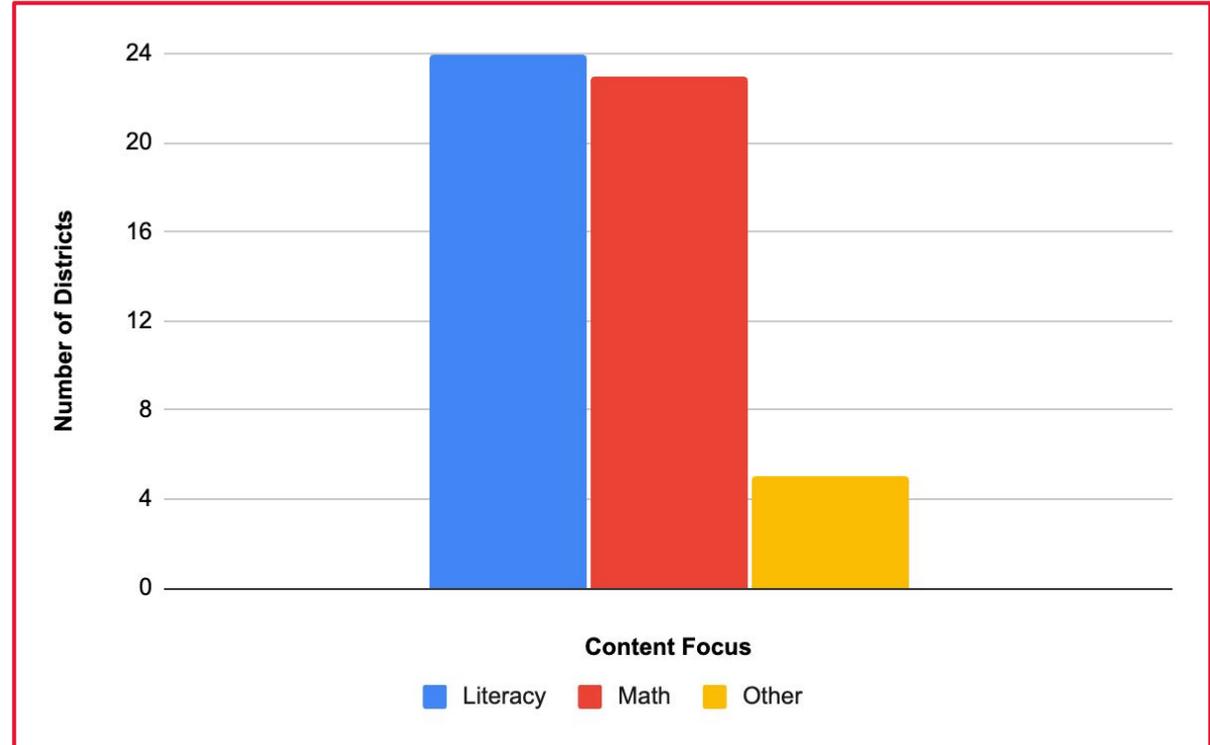
**Most districts** provided information about **most key design features**. The next set of slides details **how the following features vary across districts**. Note that, based on requirements from the *Blueprint for Maryland's Future*, **all programs** were offered, or planned to be offered, **during school hours**.

- **Content focus** (e.g., *math*)
- **Delivery mode** (e.g., *in person*)
- **Provider** (e.g., *certified teacher*)
- **Group size** (e.g., *1:1 student-tutor ratio*)
- **Frequency** (e.g., *3 days per week*)
- **Duration** (e.g., *30 minutes*)



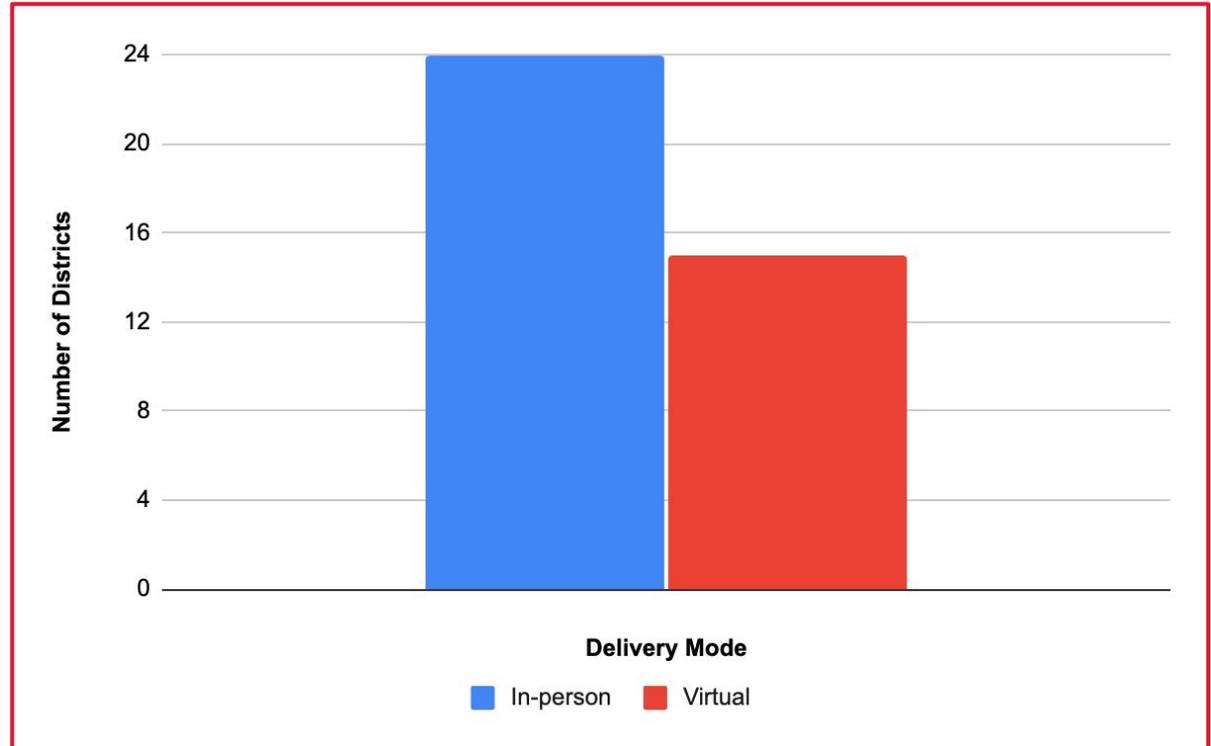
# Content Focus

**Almost all districts** described offering tutoring focused on **literacy** (n=24) and **math** (n=23). Five districts described offering **tutoring in other areas** as well, including “**core subjects,**” **career readiness,** **test preparation,** and **credit recovery.**



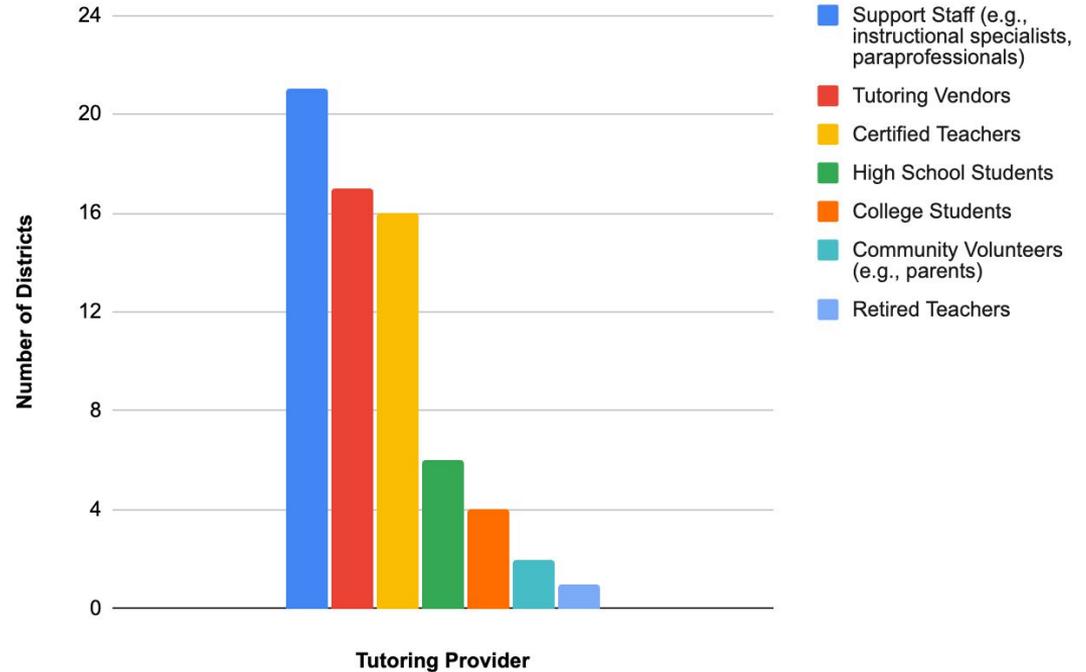
# Delivery Mode

All districts described offering **in-person tutoring sessions**, while 15 described using programs that were **entirely virtual** or included a **virtual component**.



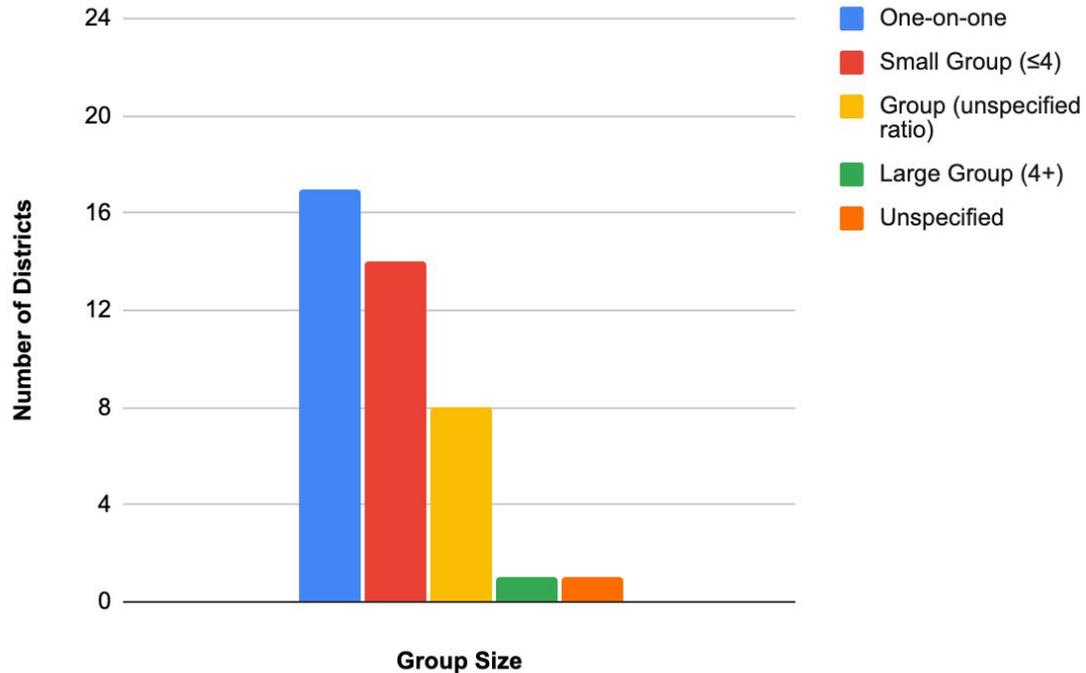
# Provider

Districts described tutoring programs that were offered by several types of **providers**—most commonly, **support staff** (e.g., paraprofessionals) (n=21). Other popular providers were **external tutoring vendors** (n=17) and **certified teachers** (n=16). Other named providers included **high school students** (n=6), **college students** (n=4), and **community volunteers** (e.g., parents) (n=2), and **retired teachers** (n=1).



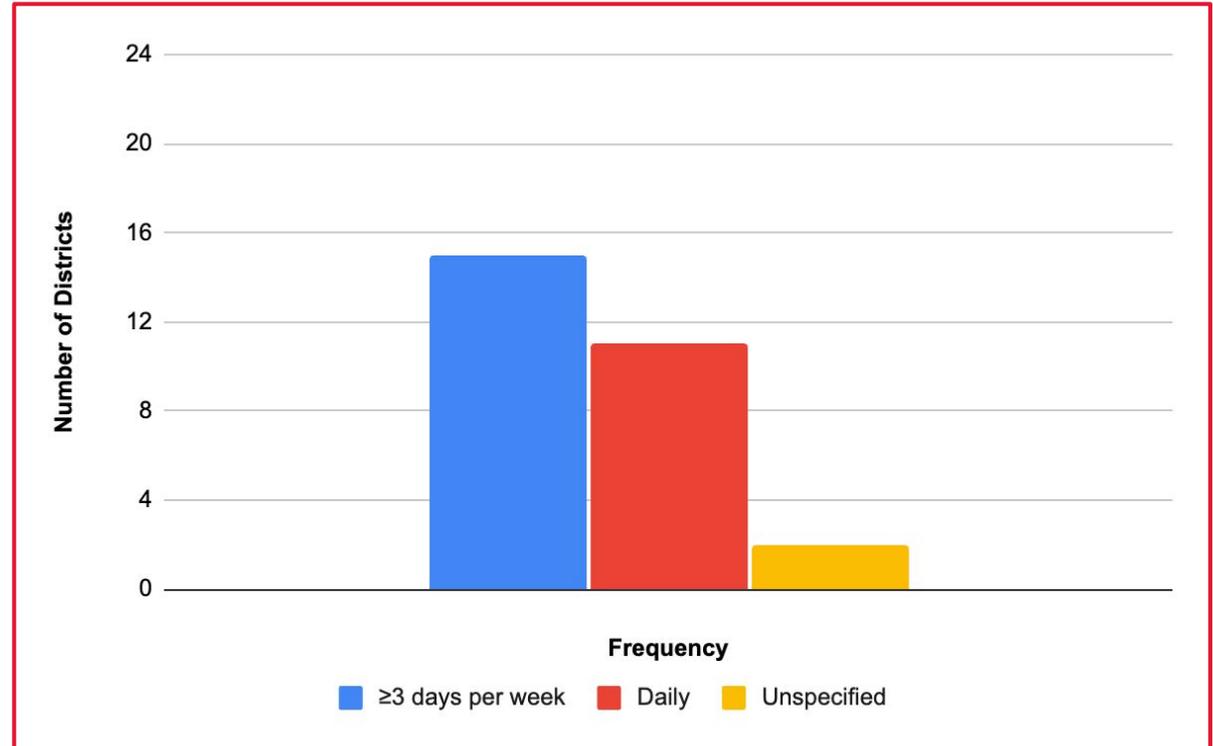
# Group Size

Districts described **four different tutoring group sizes**, which were not mutually exclusive. **Most frequent** offerings were **one-on-one** (n=17) and **small group** ( $\leq 4$ ) (n=14) settings. Additionally, eight districts described offering group tutoring sessions **without specifying a student-tutor ratio** and one described offering tutoring in a **large group** (4+) due to tutor shortages. One district **did not specify** group size.



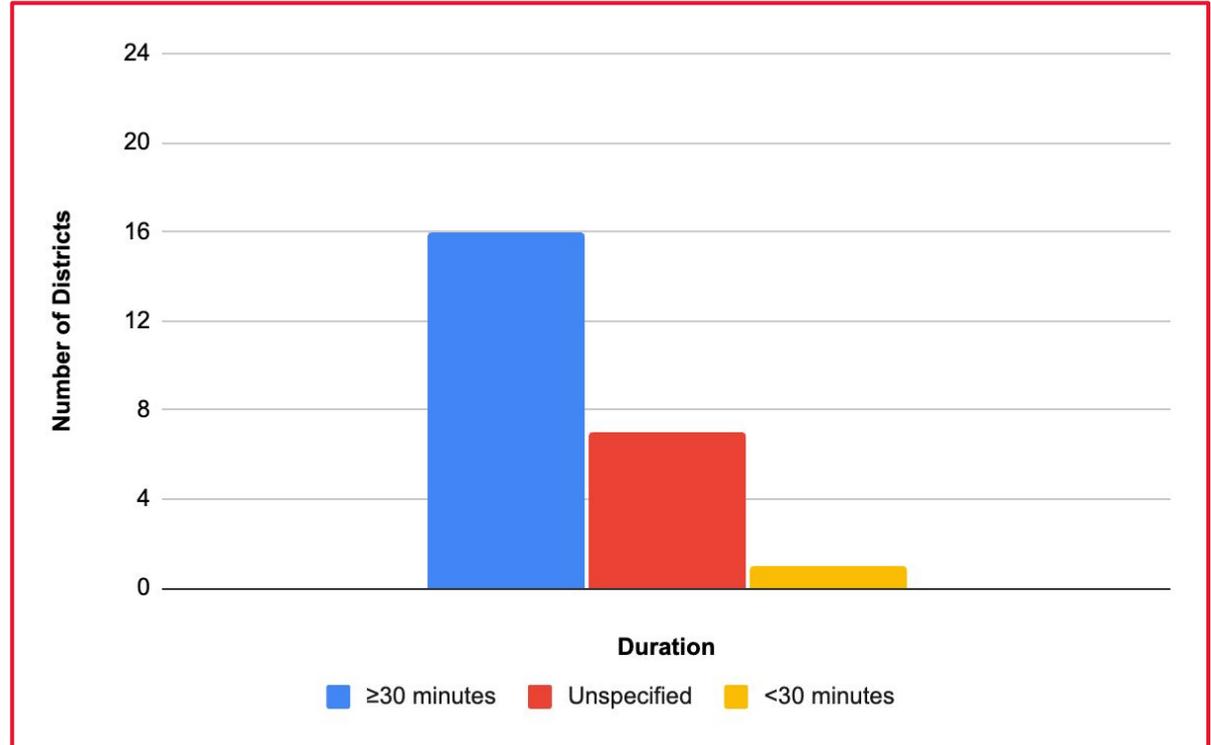
# Frequency

While two districts **did not specify** the frequency at which tutoring was offered, the **vast majority** indicated that programs were **available** to students **at least three days per week** (n=15) and/or **daily** (n=11).



# Duration

Sixteen districts described offering tutoring sessions that were **at least 30 minutes** in duration while 1 district described offering sessions for **less than 30 minutes** (i.e., 15 minutes). Seven districts **did not specify** the duration of sessions.



# Most Tutoring Programs Offer Key Features

We categorize districts into **Most Promising** and **Potentially Promising** categories based on whether the features they offer align with those the literature indicates are key to a scale-up that mitigates declines in effectiveness. The table below provides criteria for each category and indicates how many districts meet those criteria. Note that no districts are categorized as **Least Promising** because all offered tutoring programs with at least two key features (offered **in-person** and **during school hours**).

|                            | Most Promising   | Potentially Promising   | Least Promising  | Total |
|----------------------------|--|---|--|-------|
| <b>Criteria</b>            | Offers tutoring programs with <b>all</b> of the following features: <ul style="list-style-type: none"> <li>• 1:1 or small group</li> <li>• ≥3 days per week</li> <li>• In-person</li> <li>• During school hours</li> <li>• Delivered by certified teachers and/or paraprofessionals</li> </ul> | Offers tutoring programs with <b>3-4</b> of the following features: | Offers tutoring programs with <b>none</b> of the following features: |       |
| <b>Number of Districts</b> | 18   | 6   | 0  | 24    |

Most districts also described **two additional features** of their tutoring programs that are less quantifiable and **more nuanced** than the aforementioned characteristics: (1) ***strategies for identifying students receiving tutoring***, and (2) ***strategies for measuring the effectiveness of tutoring***. The following slides describe these strategies and characterize them on a continuum from ***Most Promising*** to ***Least Promising***.

## Strategies for Identifying Students Receiving Tutoring

Because **little evidence** exists about best practices for identifying students receiving tutoring, the following criteria are based on a recommendation from [Robinson et al., 2021](#). Most districts identified students to receive tutoring through **assessments** and/or **teacher recommendations**. No districts described targeting lower-performing *grade levels* or combatting potential negative stigmas around tutoring for lower-performing students; thus, **no districts' strategies** are categorized as **Most Promising**. However, it is important to note that districts' strategies in this area likely **stem from the Blueprint's mandate** to provide tutoring to students who need additional support to meet Maryland's College and Career Readiness standard.

|                     | Most Promising  | Potentially Promising   | Least Promising  | Total |
|---------------------|---|---|--|-------|
| Criteria            | <p>Targets <b>lower-performing grade levels</b> (rather than students) <b>or</b></p> <p>Targets <b>lower-performing students</b> while engaging in efforts to <b>combat potential negative stigma and</b></p> <p>Provides <b>sufficient detail</b> about these strategies</p> | <p>Targets <b>lower-performing grade levels</b> (rather than students) <b>but does not</b> provide sufficient detail <b>or</b></p> <p>Targets <b>lower-performing students but does not</b> engage in efforts to combat potential negative stigma</p> | <p><b>Does not describe</b> strategies for identifying students receiving tutoring</p> |       |
| Number of Districts | 0   | 24  | 0  | 24    |

# Qualitative Examples

### Potentially Promising (*n=24 districts*)

*“Literacy and math were the prioritized focus at the elementary level, and students were **referred to tutoring** based on their **DIBELS data, math assessment data, classroom performance, and teacher recommendation.**”*

*“High schools also offer “resource courses” for many of our academically at-risk students. Students **identified by teachers and administrators** who could use the additional support are encouraged to schedule for this class during the scheduling process.”*

*“Elementary schools have a full time Reading Resource Teacher and a full time Math Resource teacher who work to **identify students based on data**, assign services, arrange staffing, schedule tutoring sessions, and monitor overall the tutoring services provided in each school.”*

*“Tutoring was offered in both middle and high schools at the secondary level. Students who were **failing a course or at risk of failing a course** were prioritized and invited to participate in tutoring.”*



## Strategies for Measuring the Effectiveness of Tutoring

Because **little evidence** exists about best practices for measuring the effectiveness of tutoring, the following criteria are based on a recommendation from [Robinson et al., 2021](#). The vast majority of districts described measuring the effectiveness of tutoring through **one or more assessments** given **before, during, and after programs**. Most who described using assessments also provided sufficient detail about **which assessments they used** and **how they informed programmatic changes**. However, two districts' strategies are characterized as **Least Promising** because they described “**progress monitoring**” generally and **did not reference** assessment data.

|                            | Most Promising   | Potentially Promising  | Least Promising   | Total |
|----------------------------|--|--|---|-------|
| <b>Criteria</b>            | <p>Incorporates ongoing formal and/or informal <b>assessment data <u>and</u></b></p> <p>Provides <b>sufficient detail</b> about these strategies (e.g., type and frequency of assessments)</p> | <p>Incorporates ongoing formal and/or informal <b>assessment data</b></p> <p><b>Does not</b> provide <b>sufficient detail</b> about these strategies</p> | <p><b>Does not</b> incorporate ongoing formal and/or informal assessment data</p> |       |
| <b>Number of Districts</b> | 16   | 6  | 2   | 24    |

## Qualitative Examples

### Most Promising (*n=16 districts*)

*“Gains are monitored on the SchoolPace platform through ... **informal assessment** and **conferencing data**, alongside the **iReady Reading diagnostic**. ... The iReady diagnostic did not initially show expected gains, prompting teachers to explore **other assessment options** and pilot the **Edmentum Exact Path diagnostic**. Now, teachers combine Edmentum’s Exact Path with ARC Accelerator during intervention blocks and use Edmentum’s Exact Path during independent reading times when they lead small groups with an American Reading Co. toolkit lesson.”*

*“District level instructional team members and school based administrators assess student progress ... through the use of **NWEA MAP data** using **beginning, middle, and end of the year data**. Classroom teachers also **review intervention data weekly**. For example, tutoring in mathematics uses the Do the Math intervention which features a **progress check every five lessons**. Similarly for the literacy intervention, Sound Partners, teachers use **spreadsheets to monitor student progress** through the modules.”*

*“Teachers and school level administration monitored student progress regularly ... using **informal assessment data** to ensure student needs were being met. ... Schools also used the **universal screener data** collected at the **beginning, middle, and end of the year** to measure and monitor student progress and identify target skills. In addition, **informal assessments** were utilized as well as other **content specific screeners** based on the skill deficit of the student (ex: Orton Gillingham, Kilpatrick etc.) which are all part of the county instructional program.”*



# Qualitative Examples

### Potentially Promising (*n=6 districts*)

*“Tutors use resources recommended by classroom teachers and math coaches and teachers evaluate the effectiveness of the program through **progress monitoring of student growth on assessments** and classroom observations.”*

*“Progress monitoring guidelines align with the universal screener and intervention program, providing **data on student growth and skill mastery**.”*

*“The efficacy of this tutoring approach is meticulously assessed using **pre- and post-assessment data**, allowing us to track and celebrate the tangible progress made by our students.”*

*“Students in grades K-5 use DreamBox weekly for up to 30 minutes, the suggested time to see optimal growth. Teachers also use **formative and summative assessment data** to assign additional lessons based on data.”*



# Qualitative Examples

### Least Promising (*n=2 districts*)

*“[Our district] is reviewing platforms that will allow it to **track, monitor, and evaluate** the supports and interventions provided to students. Five platforms have been reviewed. However, the impact of the drastic cuts in funding has halted progress.”*

*“[Our district] is building a process within the Student Information System for **progress monitoring** to be recorded. At this time, the information has not been completely transferred but is actively in progress.”*



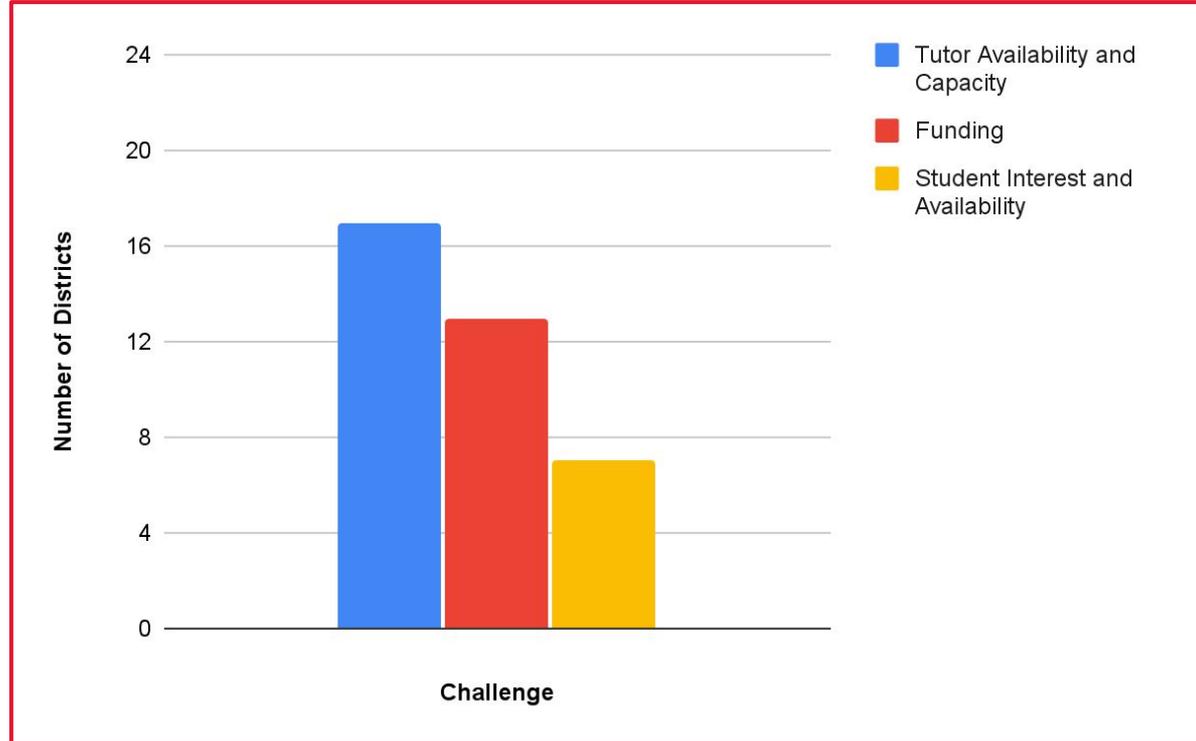


# Scaling Up

*The following slides describe districts' challenges with and strategies for scaling up tutoring interventions.*

# Challenges with Scaling Up Tutoring

**Twenty of 24** districts noted **at least one challenge** with scaling up tutoring programs. The **most commonly cited** (and interrelated) challenges were the **availability and capacity of tutors** (n=17), largely driven by staffing shortages, and **funding** (n=13). Additionally, seven districts identified challenges with **students' interest in and availability to attend tutoring sessions**, which related to their level of **engagement** and ability to participate in tutoring given **school-day schedules** and **additional commitments** (e.g., Career and Technical Education programs).



# Qualitative Examples

Quotes from implementation plans illustrate how districts conceived of various challenges with scaling up tutoring interventions.

*“The **primary challenge** is how the LEA will **reorganize the school day schedule** to enhance the level of high-quality tutoring that will occur during school hours. For instance, **ensuring that scheduling provides staffing and time for individual students or small groups of 2 to 4 students** to receive consistent academic support over a sustained period of time is a challenge.”*

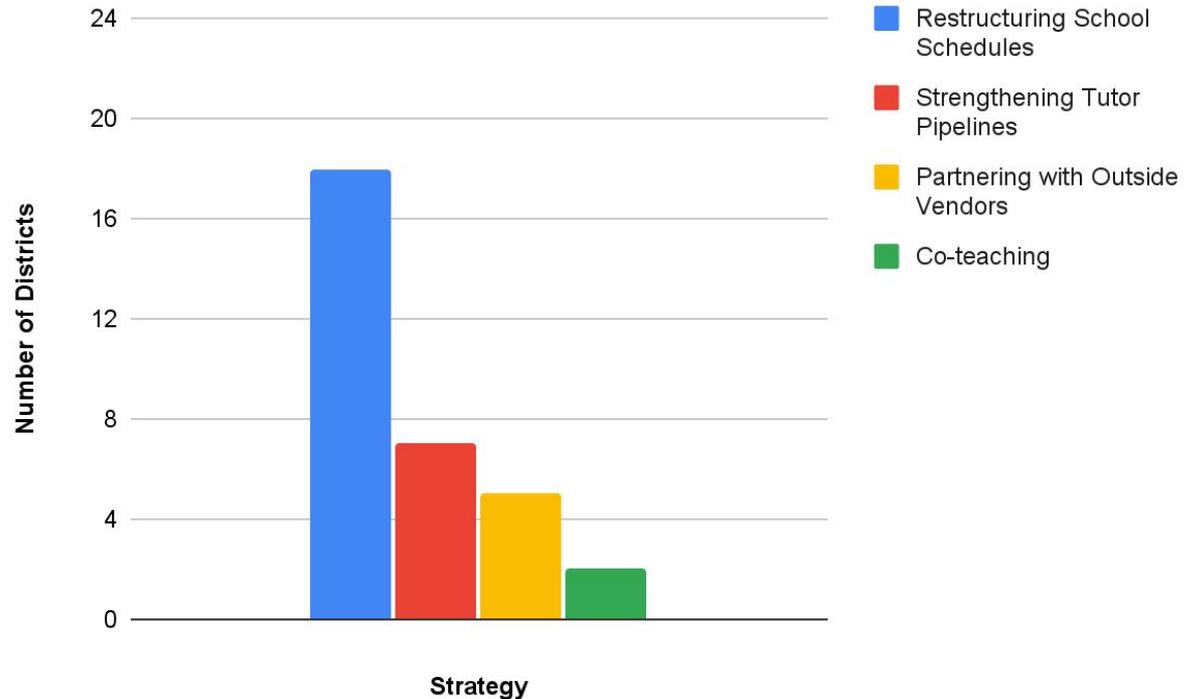
*“During the school day, **providing tutoring can be challenging due to competing priorities**. Students often have **required classes and interventions that take precedence** over additional tutoring sessions. This creates a scheduling conflict, making it difficult to find time for tutoring without interrupting the students' regular academic obligations.”*

*“The **greatest challenges** remain: (1) Finding tutoring time with **sufficient staff**, within the competing interests of a school day; (2) **Resources** for a centralized infrastructure to support tutoring across the district. Positions were initially created using **ARP ESSER funds**; [our district] is **unable to absorb these positions in the operating budget** due to budgetary challenges; [and] (3) **Funding** to partner with external tutoring providers.”*



# Strategies for Scaling Up Tutoring

**Twenty of 24** districts described **at least one strategy** that was being (or would be) employed to scale up tutoring. The **most popular** strategy, by far, was **restructuring school schedules** to make time for tutoring during the school day (n=18). Additional strategies included **strengthening tutor pipelines** (e.g., recruiting college students to tutor) (n=7), **partnering with outside vendors** to provide tutoring (n=5), and **implementing a co-teaching model** (n=2), which would allow tutoring-style interventions during class sessions.



# All Strategies Align with Key Challenges

We categorize strategies into varying **degrees of promise** based on (a) their **alignment with challenges** identified in the academic literature and/or by districts and (b) the **level of detail** in which they are described. The table below provides criteria for each category of promise and indicates how many districts meet those criteria. **Most strategies** are categorized as ***Most Promising*** while **no strategies** are categorized as ***Least Promising***.

|                            | <b>Most Promising</b>   | <b>Potentially Promising</b>   | <b>Least Promising</b>                         | <b>Total</b> |
|----------------------------|---|--|--|--------------|
| <b>Criteria</b>            | Strategies <b>address challenges</b> identified in literature and/or by districts <b>and</b> include <b>sufficient detail</b> | Strategies <b>address challenges</b> identified in literature and/or by districts <b>but do not</b> include <b>sufficient detail</b> | Strategies <b>do not align</b> with challenges |              |
| <b>Number of Districts</b> | <b>15</b>   | <b>5</b>   | <b>0</b>                                       | <b>20</b>    |

# Qualitative Examples

### Most Promising (*n=15 districts*)

*“[Our district] will **reimagine middle school schedules** ... to offer high-quality tutoring during the school day. For example, the middle school schedule will embed Tier 2 time within the core instructional block. Tier III will occur for students needing intensive intervention in addition to Tier I and Tier II time in alignment with the Integrated Tiered System of Supports (ITSS) Plan.”*

*“The **new A day/B day rotation** ... will provide **more flexibility for additional support** classes, addressing the limitations of the previous semester-based schedule. This change aims to improve the availability and effectiveness of support for math and literacy. There will be **time within the schedule now to support classes for high dosage tutoring** throughout the school year.”*

*“The district is **creating partnerships with local colleges and universities** in order to build a high dosage tutoring program during the school day with **post-secondary students providing tutoring** for [our] students. ... [We] will collaborate [with our local college] to **hire college students eligible for Federal Work Study** to provide tutoring services to elementary students in reading and mathematics. ... [We] will **provide the college tutors with professional development and curriculum instruction.**”*



# Qualitative Examples

### Potentially Promising (*n=5 districts*)

*“Developing an **alternate school schedule** to create time for high-dosage tutoring through the adjustment of bell schedules and the creation of an additional advisory period.”*

*“All [district] middle schools are implementing the **co-teaching model** in select math and English Language Arts classes. Content teachers, special educators, reading specialists, and math resource teachers have participated in on-going professional learning to implement this model of instruction. This has allowed for timely and differentiated intervention within the classroom.”*

*“[Our district] was awarded the Maryland Tutoring Corps Grant to **recruit and pay for high quality tutors**. We have worked with our IHE to find **college students who can tutor**.”*

*“[Our district] plans to **expand peer tutoring** as a way to leverage high dosage best practices, improve student tutor career ready skills, and to supplement our teacher grow-your-own pathways.”*





# Future Directions for the AIB

- Commission studies of whether *Most Promising* and *Potentially Promising programs and strategies* are actually promising and resulting in desired student learning progress and outcomes
- Leverage implementation plans or other avenues to gain **more detailed and systematic information** about **key design features** of tutoring interventions, including:
  - **Content focus**
  - **Group size**
  - **Providers**
  - **Frequency**
  - **Time of day**
  - **Duration**
  - **Delivery mode**
  - **Strategies for measuring progress**



# Future Directions for the AIB

- Require districts to provide more detailed information about **how they are identifying students who receive tutoring** and, in alignment with literature ([Robinson et al., 2021](#)), encourage them to **consider strategies that mitigate potential stigmas around tutoring interventions**, which could ultimately undermine their effectiveness
- Require districts to provide **comprehensive plans** (through documents or other avenues) for **scaling up tutoring interventions**, encouraging them to consider **strategies that align with identified challenges**, including:
  - **Building sustainable tutor pipelines**, which could be an additional component of Pillar 2 recruitment and retention strategies
  - **Restructuring school days**
  - **Partnering with outside vendors**
  - **Seeking additional funding** to support the above efforts