Reinventing School with
HIGH-DOSAGE TUTORING

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DEFINING HIGH-DOSAGE TUTORING

High-dosage tutoring is a pedagogical approach that provides students with more individualized support in small groups.

High-dosage tutoring (HDT) involves tutors meeting with small groups of students, at a regular cadence, in order to meet the needs of individual students in ways that are extremely difficult for a teacher to replicate in a classroom of twenty or more students. HDT can be used with all students universally, though it is often used to remediate skills for those who have fallen behind. There is also often a special focus on math, as well as ELA. Quality high-dosage tutoring is grounded in:

- Fostering strong relationships between tutors and students
- A focus on growth and mastery, and specifically fostering a growth mindset in students
- Tutors working closely with classroom teachers to meet student needs
- Using data to drive instructional planning and groupings, especially in relation to the Texas Accountability System Framework
- Quality training and ongoing feedback for tutors

However, there are still some discrepancies regarding what constitutes “high-dosage” tutoring. There is no consensus on aspects like group size, cadence, and duration. In the following sections, we leverage research and learnings from school practice to help leaders maximize the effectiveness of HDT programs.
There are a variety of different approaches to high-dosage tutoring.

The lack of consensus on the definition of high-dosage tutoring suggests that there are several different approaches to the program. Below, you will see two different models, one from the organization Match Corps. and the other from Houston ISD. While similar, they have made some different decisions around their models.

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<tr>
<th>Match Corps. Model in Chicago Public Schools</th>
<th>Apollo 20 Model at Houston ISD</th>
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<tr>
<td><strong>Description:</strong> Provides students who have fallen behind in math with a substantial dose of individualized instruction. The program is delivered during the school day as a credit-bearing elective course with a structured curriculum.</td>
<td><strong>Description:</strong> Provides students in transition years (sixth and ninth grade) with individualized math instruction. Students struggling in other grades receive an additional hour of instruction in math and/or reading.</td>
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<td><strong>Group Size:</strong> Two students at a time per instructor</td>
<td><strong>Group Size:</strong> Two or three students at a time per instructor</td>
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<td><strong>Staffing:</strong> Recent college graduates and those interested in public service</td>
<td><strong>Staffing:</strong> Apollo 20 fellows, who are college graduates and proficient in math, apply directly to the program and are placed in schools throughout the district.</td>
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<td><strong>Cadence and Duration:</strong> One 50-minute class period during each school day</td>
<td><strong>Cadence and Duration:</strong> One 60-minute class period during each school day (exact dosage varies between middle and high schools)</td>
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<td><strong>Logistics:</strong> Tutors are paid $15 an hour, on average (often largely subsidized), for a 10½-month contract covering the school year and preservice training</td>
<td><strong>Logistics:</strong> Apollo 20 Fellows earn ~$20,000, in addition to an incentive stipend. It is mostly subsidized by federal funds, as Fellows schools are Turnaround schools.</td>
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<td><strong>Impact:</strong> The Match program closed about half the gap between participants’ math scores prior to the tutorials and the national average. It also closed about one-third of the black–white test score gap in math in the National Assessment of Educational Progress.</td>
<td><strong>Impact:</strong> Sixth-grade students, who received daily math tutoring, gained the equivalent of 6 additional months of schooling. Gains achieved by ninth-grade students ranged between nearly 5 months to more than 9 months of additional learning.</td>
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Rigorous research studies are beginning to show that high-dosage tutoring has a variety of positive outcomes for students and teachers.

High-dosage tutoring puts a new spin on one of the oldest pedagogies in education. It has become increasingly popular of late, especially as a strategy to accelerate learning in response to Covid-19 closures. Research specific to high-dosage tutoring is still scant, but the research that is available is very promising. Below, you will find some evidence-based impacts:

- High-dosage tutoring can improve **self-efficacy** and foster a love of learning, which the Hamilton Project found to increase scores across other classes.

- Research suggests high-dosage tutoring has the largest impact on **improving math scores** (Fryer, 2019), especially for those at the lowest end of the achievement distribution, but has also been found to increase ELA scores (Kraft, 2015).

- A large, recent meta-analysis indicated that high-dosage tutoring can help mitigate learning loss, by anywhere from three to 15 months across grade levels (Nickow, Oreopolous & Quan, 2020).

- High-dosage tutoring has been found to have a stronger impact on school effectiveness and student learning than traditional inputs such as reduced class size, increased per pupil expenditures, and a greater number of teachers with advanced degrees (Dobbie and Fryer, 2013), especially in the earlier grades (Nickow, Oreopoulous, and Quan, 2020).

- High-dosage tutoring can improve outcomes for Black, Hispanic, and low income students by increasing both attendance and ELA scores (Fryer, 2019; Dietrichson, et al, 2017). In fact, the Hamilton Project found HDT effectively narrowed the black–white math test score gap by almost a third in just one year.
The positive outcomes associated with high-dosage tutoring may be driven by its potential to help schools take various Leaps toward more equitable, 21st-century learning.

High-dosage tutoring is one of the most effective ways to meet the individual academic needs of students; it is one of the five evidence-based tenets recommended by the Harvard Education Innovation Laboratory. Over the past several years, and increasingly so in the wake of Covid-19, HDT has become a top solution to remediating learning loss. In fact, several bills to expand national service programs, including AmeriCorps, are currently circulating in the Senate right now. HDT has the potential to help schools take the following Leaps toward more equitable, 21st-century learning:

Moving from Unequal Expectation & Opportunities to HIGH EXPECTATIONS WITH UNLIMITED OPPORTUNITIES FOR ALL

HDT is underpinned by the expectation that all children can succeed academically, and it provides the time and attention that they need to do so. This additional support can influence motivation and help dismantle long-standing inequalities. The individualized attention helps learners feel confident in their ability to succeed, and the progress monitoring allows them to internalize the gains they're making, boosting self-efficacy.

Moving from Rote Activities to RIGOROUS LEARNING

HDT balances remedial content with content that is currently being learned in the classroom, which is a departure from the popular practice of tutoring as “catch up.” Instead, students also engage in rigorous, higher-order thinking. This helps reduce the stigma around tutoring and enables students to find HDT valuable and motivating. This inclusion of rigorous content involves applying, analyzing, and using one's knowledge and skills, which helps to more meaningfully encode or embed it into one's long-term memory.
Moving from Inflexible Systems to **CUSTOMIZATION**

HDT occurs in small groups, through which tutors can better customize teaching to the specific content gaps a student has or the prerequisite skills they need to practice. Modifying young peoples’ learning experiences in response to their unique needs can nurture their identities, fuel motivation, and support learning. Leveraging HDT to make up for skill gaps ensures learners who need something more or different receive it, and it works to dismantle inequalities.

Moving from Isolation to **CONNECTION AND COMMUNITY**

HDT should be seen as a school-wide endeavour and normalized throughout the community. Tutors should be present in many functions across the school and have a deep connection to students, families, and teachers. This ensures each student is naturally known by more adults, and it is easier for a student to develop a relationship with a tutor they see at dedicated hours several times a week. This fosters a sense of belonging, buffer against stress and trauma, and contribute to positive emotions and mindsets. These relationships help students build and maintain the types of deep, personal relationships become increasingly important to emotional and economic well-being.
Successfully implementing high-dosage tutoring will require your school to make a variety of decisions, as well as set up systems and support.

Fortunately, high-dosage tutoring doesn't need to be airtight for it to pay dividends—it doesn't need a perfect structure or pedagogical approach, or even a certified teacher. However, it's an expensive endeavour and, therefore, your implementation strategy should be well-thought out and planned given your unique context and goals. Using data from a recent meta-analysis, Ed Trust created the graphic below which shows how implementing various features of high-dosage tutoring can affect its efficacy.
Furthermore, we have synthesized insights from a number of resources and supports, including academic research, insights from organizations, and learnings from schools who have already implemented HDT. We also indicated where these connect to the Texas Education Agency’s five Effective Schools Framework Levers.

ESF Lever 1

STRONG SCHOOL LEADERSHIP AND PLANNING

- **Focused Vision and Plan for High-Dosage Tutoring:** Given the different approaches mentioned above, get clear on what high-dosage tutoring will look like at your school and your unique context. Include input from teachers, students, families, and community members and ensure that voices from those traditionally left out of school decision-making processes are elevated. Focus on “key priorities, clear timelines, milestones, metrics, and task owners” before setting a plan into motion.

- **Student Outcomes:** To shape the program’s design, clearly define student outcomes: map learning outcomes and carefully examine and define goals for learner success. Use these to set goals that are attainable and sustainable and define specifics, such as number of students to be served, increases in proficiency, and graduation rate, etc.

- **Earmarked, Protected, and Sustained Funding Stream:** HDT is expensive because it requires lots of people and, ideally, physical space. It can be tempting to cut corners to save by increasing group sizes, but diluting the practices also dilutes results. Precise cost projections, earmarked funds, and a long view are crucial.

- **Monitoring of Implementation and Outcomes for Continuous Improvement:** Data is collected and analyzed regularly to “identify trends and adapt accordingly.” Leaders use quantitative learnings, as well as inputs from the community, for ongoing, short-cycle data analysis and adjustment. This data is held up against the vision for high-dosage tutoring. Those insights are shared back to the community, including what changes will be made based on learnings.

- **Regular, Protected Tutoring Time:** Leaders must ensure that the implementation plan includes regular, protected time for HDT. Though it can take place outside the school day, most effective HDT programs take place during school hours. It is most often a class period, which optimizes for attendance, buy-in, and focus, and can have credit-bearing implications.
ESF Lever 2

**EFFECTIVE, WELL-SUPPORTED STAFF**

- **Appointment of a Full-Time Director:** There are many moving pieces in a HDT program: tutor training and monitoring, programming, behavior management, scaling, etc. Having one staff member dedicated to implementation and ongoing management helps support cohesion and fidelity.

- **Tutor Training, Support, and Accountability:** Since tutors are often not certified teaching staff, but still play a massive role in improving student outcomes, they will need to be *trained, observed, and receive specific feedback* to improve their practice, and their effectiveness must be tracked.

- **Collaboration Between Tutors and Teachers:** In order to ensure that what's being taught in the classroom is aligned to content covered in tutoring sessions, there must be time and mechanisms for two-way communication between teachers and tutors. For example, Reading and Match, Inc. tutors are paired with an internal coach at the school site, usually a content expert, as well as with a master coach from the organization. Together, they participate in monthly meetings to examine data, problem-solve, and share results with teachers.

ESF Lever 3

**POSITIVE SCHOOL CULTURE**

- **Fully Integrate Tutoring into the Life of the School:** Create a variety of “high touch” opportunities for tutors and students to engage during the school day. This might mean tutors eat lunch amongst students, attend culture-building events, or serve on committees.

- **Partnerships with Outside Organizations:** Though it is possible to utilize internal staff or community members as tutors, it is likely most cost- and time-effective to partner with an outside organization to supply and manage tutors. Trained, stipend-funded volunteers, such as those working through AmeriCorps, City Year, etc., have proven *just as good* at tutoring as certified educators.
Strong Relationships Between Tutors, Families, and Students: In order to build positive and consistent relationships that enhance the overall academic experience for students and families. For example, Match tutors call families at least once a week to report on student activities, behaviors, and progress.

ESF Lever 4 & Lever 5
CURRICULUM, INSTRUCTION & ASSESSMENT

A Balance Between Remedial Instruction and Classroom Curricula: HDT works best when leveraged as both an intervention and extra support. Part of the session should focus on students’ lowest skill level yet to be mastered and build from there, while other parts should be tethered to what students are learning in class.

A Focus on Math and Those with Math Skill Gaps: Though HDT has been shown to improve both math and ELA scores, it is particularly impactful in math and for those furthest behind.

Frequent Informal and Summative Assessments: Gap-closing schools frequently assess students on standards-based content and use that data to drive real-time instructional decision-making. Since instruction is tailored to individual needs and geared towards remediation, regular assessments will ensure students get what they need when they need it.
**SCHOOLS & RESOURCES TO EXPLORE**

There are many schools in Texas (and beyond) who are already doing amazing work implementing high-dosage tutoring.

Use the schools listed in the table below to learn more about what high-dosage tutoring looks like in action and the lessons we can learn from them.

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<th>School Name</th>
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<tr>
<td><strong>Lift 6 (TX)</strong></td>
<td>is an initiative implemented by Spring ISD to transform six middle school sites within the district. The Lift 6 model leverages six key strategies and best practices found at successful schools across the country to improve the district’s middle schools, including high dosage tutoring.</td>
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<tr>
<td><strong>Apollo 20 Fellows Program (TX)</strong></td>
<td>is a service opportunity that places passionate full-time tutors in schools across Houston Independent School District. The program is designed to expand educational opportunities for students in Houston’s most high-need schools through intensive small-group tutoring in math. Fellows work to meet the unique learning needs of each student.</td>
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<td><strong>Literacy First</strong></td>
<td>at Austin ISD and Del Valle ISD (TX) serves struggling readers in Grades K-2 at Title 1 campuses. Each student receives daily one-on-one, 30-minute lessons tailored to their literacy level and reading needs. Each child works with the same tutor, until he or she reaches or exceeds benchmarks on critical reading skills and graduates from the program. <a href="#">This report</a> is the first to use external data to examine the short-, medium-, and long-term effects on student outcomes.</td>
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There are many additional high-dosage tutoring resources that can further deepen your understanding of the approach and prepare you for implementing it.

Use the resources below to learn more about high-dosage tutoring and the programs that help support their implementation:

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<tr>
<td><strong>Targeted Intensive Tutoring</strong> from Ed Trust</td>
<td>This brief helps leaders make research-based decisions on implementing HDT. It includes tradeoffs between effectiveness, affordability, and feasibility.</td>
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<tr>
<td><strong>Accelerating Student Learning with High-Dosage Tutoring</strong> from Ed Recovery</td>
<td>This brief provides a variety of evidence-based principles for implementing HDT, including: frequency, group size, staffing, measurement, scheduling, and more.</td>
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<td><strong>Reading Partners</strong></td>
<td>Recruits community volunteers to provide one-on-one reading tutoring to elementary students in ten regions across the country, including North Texas.</td>
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<tr>
<td><strong>Saga Education</strong></td>
<td>Provides evidence-based, personalized tutoring to 4,500 students in 34 high schools across Chicago, New York City, Washington DC, and Broward County, FL.</td>
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<tr>
<td><strong>Match Corps</strong></td>
<td>Recruits recent college graduates to spend a full year providing tutoring to students in Boston; in addition, MATCH has worked with charter and district schools in Chicago, Newark, and Houston to implement tutoring programs to meet their students’ needs.</td>
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<tr>
<td><strong>City Year</strong></td>
<td>Recruits volunteers between the ages of 18-25 to spend a year in schools across the country, including in San Antonio and Dallas, building relationships with students and providing academic intervention.</td>
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AmeriCorps

AmeriCorps volunteers serve in nearly 12,000 schools, building capacity in communities across America. Volunteers help to improve students' academic achievement by increasing their engagement and providing one-on-one time with a concerned, involved adult.