High Dosage Tutoring

Strategy Guide 2.0

Strategy Vision and Description

In this guide, we define High Dosage Tutoring as human instruction aimed at supplementing classroom-based education for groups of no more than six students that meet three or more days per week. This definition does not include computer-based supplemental instruction, small group instruction that replaces grade level instruction, or assisting students with completing class assignments or homework.

Research has shown that the following components support the effectiveness of high dosage tutoring. It is important to note that while there is evidence to demonstrate the effectiveness of each component (see research following each component), these components are most effective when implemented together. The following components are derived from various articles and research that articulate what High Dosage Tutoring should include:

1. **Tutoring Plan Vision and Infrastructure**
2. **Implementation of Aligned and Data-Driven Instruction**

Evidence Base

ESSA defines levels of research based on the quality of the study (Levels 1-4). CDE requires that schools and districts identify the research base for strategies that they select for their Unified Improvement Plans, and for applications for school improvement funds in the EASI application.

The research on **High Dosage Tutoring** that is cited here meets the threshold for **ESSA Level 1-3**.

Necessary Preconditions

The following systems, structures, or practices should be established at the site before implementing this strategy, as they serve as a foundation for the practices described in this guide.

- Foundational Practice: Data Analysis, Instructional Leadership Team
- Foundational System: Standards-Based Instruction, Professional Learning
- Foundational Strategies: Coaching, Common Mission and Vision, Data Driven Instruction

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Contextual Fit

Possible Root Causes include inadequate, inconsistent or ineffective…

- System for additional Interventions
- Student experiences
- Student preparation

Is this strategy a good fit for your district/school?

- Is there district and community support for high dosage tutoring?

- Is there time to plan for high dosage tutoring?
- Are there competing family, community, school and/or district demands that will lessen the effectiveness of high dosage tutoring?
- Are there staff, teachers and administrators available and willing to provide high dosage tutoring?
- Is funding available to support high dosage tutoring?
- Is the purpose of high dosage tutoring clear and aligned to student needs?
- Is there a need to increase reading proficiency in lower elementary grades, or math proficiency in upper elementary, middle and/or high school grades?

Core Components, Elements & Activities

Components, and elements within each component, should be implemented sequentially in the following order to increase the likelihood of successful outcomes.

Core Component 1: Tutoring Plan Vision and Infrastructure

In order to develop an implementation plan, schools must develop a vision and infrastructure for highly effective High Dosage Tutoring.

Elements or Activities	Description
Establish Vision and Infrastructure	Ensure that there is a clearly articulated purpose and vision for high dosage tutoring. Schools should make decisions around the timing, frequency and duration of tutoring, size of tutoring groups and how to select students and tutors. Additional decisions should be made around tutoring content, communication systems and assessments.
Determine Tutoring Schedule	Tutoring during the school day leads to an increased effect size of 0.4 standard deviations. Tutoring during the school day should be supplemental rather than replacing grade level content classroom instruction. Examples of times during the school day include during electives/specials, or during a second block of content instruction. Schools have increased the length of the school day in order to incorporate tutoring into the daily schedule. Tutoring after school leads to an increased effect size of 0.21 standard deviations. • It is important to have a consistent, regularly scheduled time and location in order to increase student participation in tutoring. • Most tutoring programs reporting increased effect sizes have 30-60 minutes of tutoring at least three days each week, with a greater effect size with four to five days per week. • Students who participate in approximately 65 total hours of tutoring have shown an increase in achievement. • Effective tutoring lasts less than 20 weeks; more time has not shown to have an increased effect on academic achievement.
Select Students	Students are selected using diagnostic assessment data as opposed to non-assessment based criteria, such as classroom grades, homework completion rates, parent requests or other referrals.

Make Decisions around Size of Tutoring Groups	One-to-one tutoring is generally more effective for students in preschool or kindergarten. Students in first grade benefit most from either one-to-one tutoring or in groups of two students. For students in second grade and above, tutoring in groups of three or four students is more effective. High Dosage Tutoring is considered to have six or less students per tutoring group
Select Quality Tutors	Schools that used teachers as tutors generally have stronger results compared to schools that use others as tutors. • Tutoring is most effective when teachers provide instruction. • Using paraprofessionals as tutors provided slightly less effectiveness than teachers, but still provided a significant positive impact on academic achievement. Using community members, such as college students, or parents resulted in a small positive impact. When using community members or parents, there is a need for additional training and supervision in order to achieve results.
Determine Content Area(s)	Tutoring in reading has a greater positive impact on younger students compared to older students. • Reading tutoring has a moderate positive impact for preschoolers and kindergarten students. • There is slightly less, but still a significant positive impact of reading tutoring for first grade students. • There is a small but positive impact of reading tutoring for students in second through fifth grade. • There is a slight increased impact for middle and high school students receiving reading tutoring. Tutoring in math has a greater positive impact on older students compared to younger students. • Math tutoring has a moderate positive impact for students in preschool and kindergarten • There is a slightly less moderate impact on students in first grade. • The positive impact of math tutoring increases to a moderate level for students in second through fifth grade. On average, there is a small positive impact for middle and high school students receiving general math tutoring although there is research that refers to greater positive impacts for middle and high school students when students participate in high dosage tutoring as defined.
Core Component Deliverable	Written plan for High Dosage Tutoring has been developed, including vision, schedule, students, student groups, content and tutors.

Core Component 2: Implementation of Aligned and Data-Driven Instruction

Tutors should implement and progress monitor the High Dosage Tutoring plan as indicated.

Elements or Activities	Description
Ensure Match between Student Needs and Tutoring Content	High Dosage Tutoring is more likely to positively impact student achievement when the instructional content of tutoring closely matches the students' needs. Tutors use results from students' diagnostic assessments to determine instructional content during tutoring. Instructional content during tutoring reinforces the core content taught in the regular classroom. Tutoring programs have systems to regularly communicate what is being taught in the classroom and current performance and misconceptions of students to ensure that tutors can support current classroom instruction.
Implement & Analyze Frequent Assessments	Student learning is assessed frequently in order to gauge the impact of previous tutoring content as well as determine subsequent tutoring content.
Core Component Outcome	Degree of fidelity around implementation, including level of communication between tutors and classroom teachers

Guidance for Implementation

Implementation Element	Guidance or Considerations
Staffing and Teams	Schools that used teachers as tutors generally have stronger results compared to schools that use others as tutors. • Tutoring is most effective when teachers provide instruction. • Using paraprofessionals as tutors provided slightly less effectiveness than teachers, but still provided a significant positive impact on academic achievement. Using community members, such as college students, or parents resulted in a small positive impact. When using community members or parents, there is a need for additional training and supervision in order to achieve results.
Progress Monitoring	Schools progress monitor both the fidelity of implementation of the High Dosage Tutoring Plan as well as its impact on student performance (interim measure). Coaching supports increased fidelity around implementation.

Sample Implementation Plan

Context: The following Sample Implementation Plan assumes that a school does not currently have a High Dosage Tutoring Strategy in place and is installing this strategy for the first time. Note also that the dates given in the table below are suggested approximate ranges for the given activities. A true action plan should specify precise dates and date-ranges for each activity. Sample taken from Core Component 1.

Name	Description	Start/End Date	Key Personnel
Establish Vision and Infrastructure	Write out vision and determine logistics around High Dosage Tutoring	August - September	Instructional Leadership Team
Determine Tutoring Schedule	Determine times, frequency and cumulative hours for High Dosage Tutoring Program.	September	Instructional Leadership Team
Select Students	Select students for High Dosage Tutoring Program using Fall Baseline Data.	September - October	Instructional Leadership Team, Teachers
Make Decisions around Size of Tutoring Groups	Divide students into tutoring groups.	September - October	Instructional Leadership Team
Select Quality Tutors	Select tutors.	September - October	Instructional Leadership Team
Determine Content Area(s)	Use research, data and qualifications of tutors to determine content of High Dosage Tutoring group(s).	September - October	Instructional Leadership Team

Sources

Academic Studies Leading to ESSA Rating

Cook, P. J. (2015). Not too late: Improving academic outcomes for disadvantaged youth. *Northwestern University Institute for Policy Research Working Paper*, (15-01).

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Fryer Jr, R. G. (2014). Injecting charter school best practices into traditional public schools: Evidence from field experiments. *The Quarterly Journal of Economics*, *129*(3), 1355-1407.

Fryer Jr, R. G., & Howard-Noveck, M. (2020). High-dosage tutoring and reading achievement: evidence from New York City. *Journal of Labor Economics*, *38*(2), 421-452.

Kraft, M. A. (2015). How to make additional time matter: Integrating individualized tutorials into an extended day. *Education Finance and Policy*, *10*(1), 81-116.

Nickow, A., Oreopoulos, P., & Quan, V. (2020). The impressive effects of tutoring on prek-12 learning: A systematic review and meta-analysis of the experimental evidence.

Additional Sources Supporting Implementation of the Strategy

Hallgren, K., Gonzalez, N., Choi, J., Kelly, K., Li, A., Ochoa, L., ... & Gill, B. (2017). The Atlanta Public Schools Turnaround Strategy After One Year: High Impact Tutoring and the Purpose Built Schools Partnership. *Report submitted to the Atlanta Public Schools. Princeton, NJ: Mathematica Policy Research*.