



BRIEF

High-dosage tutoring for academically at-risk students

February 2024

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Many districts across the country have leaned on high dose tutoring (HDT) to help students recover from pandemic-related learning disruptions. While the design of HDT may vary, it [typically involves](#) tutoring in one-on-one or small groups for at least 30-minute sessions at least two to three times per week. Part of HDT's popularity stems from a growing evidence base, largely from prepandemic school years, showing that students who complete HDT programs experience large gains in test scores (e.g., 0.37 standard deviations in a [recent study](#)). These effects are especially impressive [compared to most](#) education interventions.

Although HDT can be an effective tool for promoting academic recovery, district progress in recovering student learning is only just beginning. Evaluations of recovery programs such as [summer school](#) have found marginal or null effects on student achievement, with [districts facing many challenges](#) related to staffing, scheduling, student absences, and school-level capacity that have hindered program implementation and effectiveness. While implementation of recovery programs remains challenging, districts should persist with HDT given the strong evidence on its efficacy as an intervention strategy. With the sunset of ESSER funding, districts will need to be more strategic in how they design and sustain HDT in the long term.

One way that districts can be strategic with HDT is to target academically at-risk students who stand to benefit the most from intensive supports to catch up to grade-level learning. HDT can be a promising approach for districts to target and sustain the academic recovery of at-risk students for two general reasons. First, HDT leverages [evidence-based strategies](#) for improving academic outcomes for at-risk students. Examples of these strategies include personalizing instruction to individual student needs and fostering supportive relationships that build student engagement and motivation in learning. Second, HDT has [consistently shown larger benefits for students' test scores](#) relative to other interventions targeted at low-achieving students (e.g., technology-enabled programs, professional development, and curriculum reforms).

Why focus on at-risk students?

Despite many school districts' efforts to help students catch up on learning, students remain behind prepandemic levels of student achievement. Alongside lower levels of student achievement overall, [students who entered the pandemic with lower test scores](#) experienced a larger drop in achievement compared to their peers. What this means for school districts is an unprecedented increase in the number of students designated as academically at risk, which we define as students who require intensive support outside of classroom instruction to [learn grade-level skills](#) or [pass coursework](#) necessary for later academic success and school completion.

How we define at-risk: At-risk students require intensive support outside of classroom instruction to learn grade-level skills or pass coursework necessary for later academic success and school completion. Their academic performance is influenced by a [broad range of circumstances](#) (from individual factors, such as behavioral or emotional challenges, health problems, language barriers, and disabilities, to external factors) such as family or community-based poverty, homelessness, and school mobility.

[Prior guidance](#) on the best ways to implement HDT suggest the following design principles: (1) scheduling frequent tutoring sessions during the school day; (2) tutoring in one-to-one or small groups; (3) hiring experienced or adequately trained tutors; (4) using data and assessments to monitor student learning progress; (5) implementing high-quality instructional materials aligned with grade-level content; and (6) fostering supportive tutor-student relationships. We offer further detail on how these principles can address the needs of at-risk students, while highlighting additional considerations of student equity and program evaluation. In what follows we explain why focusing HDT on at-risk students is necessary and the grade levels and subjects where districts can expect to see the most impact. We then review the design principles that should guide districts' ongoing efforts.



HDT is not only effective for at-risk students in early elementary grade levels, but also a potential aid for struggling high school students.

Notably, for younger at-risk students, HDT can be effective in helping them develop foundational skills in [literacy](#) and [math](#) that, in turn, enable long term academic success. Since students in elementary grades experienced [some of the largest setbacks to achievement from the pandemic](#), districts should strongly consider using HDT as an intervention strategy in elementary grades. For example, districts could introduce HDT as early as kindergarten to help at-risk students reach literacy targets expected by third grade. For high schools, programs such as [Saga](#) and [MATCH](#) may help to raise math test scores for at-risk students. Districts can therefore use HDT to accelerate learning for older students who, in comparison to younger students, [need more time](#) to recover from pandemic setbacks to achievement.

While HDT shows potential as an intervention strategy for at-risk students, districts will need to implement its design principles with fidelity to optimize impacts on student achievement. In the sections that follow, we elaborate on some of these principles with considerations that are particularly relevant to at-risk students.



HDT programs should proactively address barriers that hinder student access to HDT.

- **Ensure equitable selection criteria for HDT:** Districts should [review and revise program features](#) (e.g., online versus in-person, tutor contracts, and program participation requirements) to avoid excluding at-risk students most in need of academic support (e.g., multilingual learners, students with disabilities, students who are far below grade-level learning, or students with significant behavioral delays or low attendance).
- **Mitigate barriers that hinder equitable access to HDT:** Districts should pair HDT with [other holistic supports](#) (e.g., transportation, childcare, health services, enrichment, etc.) to mitigate external factors that could hinder learning for students from at-risk backgrounds.



Compared to regular classroom instruction, HDT programs should focus on systematically tailoring instruction to students' needs and focus on mentoring relationships.

Here are a few key differences between high-quality HDT programs and typical instruction:

- **Focus on discrete and targeted skills:** HDT should consist of lessons that build [progressively on discrete and targeted skills aligned to grade-level instruction](#).
- **Structured pacing and direct instruction:** Tutoring lessons should offer [more structured, paced, and direct instruction](#) than what is typically provided in a classroom. Scripted activities can help students grow familiar with the curriculum and work at a fast pace without needing repeated directions.

- **Immediate and direct feedback:** Tutoring lessons should incorporate time and activities for tutors to provide students with [immediate corrective feedback](#) and to [tailor instruction to individual student needs](#).
- **Mentoring relationships are an active ingredient for instructional effectiveness:** Interventions for at-risk students cannot be successful without [fostering mentoring relationships](#) to reinforce teaching and learning. Mentoring relationships that are sustained over time and focused on clearly defined academic and social-emotional goals can provide access to [frequent social reinforcement and feedback](#) and improve student [confidence and engagement in learning](#).



Assessments and data should be used to evaluate student skills targeted for intervention, monitor learning progress, and document other at-risk factors that affect learning.

- **Use a variety of assessments to guide programming:** While interim and summative assessments can help identify academically at-risk students, districts should use additional assessments—often formative and informal in nature—to evaluate the [specific skills](#) targeted for intervention and to document [students' existing strengths and weaknesses](#) so that tutoring can be tailored accordingly.
- **Examples of assessments:** Assessments that can guide progress monitoring of HDT programs include [sub-tests for literacy or math skills](#) (e.g., decoding, word recognition, or numbers sense), [teacher input](#), measures of [student progress through the tutoring curriculum](#), or [researcher-developed assessments](#) designed to capture the specific skills targeted for intervention.
- **Incorporate non-test data into progress monitoring practices:** Districts should use other data to monitor the multiple factors that can affect student learning for at-risk students, including student ability (e.g., multilingual learner or disability status), attendance, student behavior and engagement, health, and out-of-school conditions (e.g., poverty).



HDT programs should include systems and procedures to ensure that tutors with different skills and qualifications implement the intended instructional program with fidelity.

- **Balance cost and tutor qualifications:** To meet the scale of students need for academic support, districts may consider [hiring less skilled tutors](#) to reduce program costs and overcome labor shortages. Because the small-group environment of tutoring is less complex than a regular classroom, districts can hire [tutors across a range of experience and qualifications](#) (e.g., certified educators versus volunteers or college students) without sacrificing gains in student achievement.
- **Implement robust systems and procedures to ensure fidelity:** Districts should supply tutors with scripted [instructional materials, intensive training, and ongoing supervision and feedback from on-site tutor supervisors](#). Districts should also [observe and rate tutor sessions](#) for fidelity, and [track data on student progress through the assigned curriculum](#).



Evaluate effectiveness of HDT programs against targeted skills and grade-level knowledge and for evidence of impact on under-represented student groups. Expect variation in program effectiveness across outcomes and scale.

- **HDT programs show the biggest impact on targeted skills:** Districts can expect HDT programs to have the largest impacts on assessments that directly measure the skills targeted for intervention. Interim and summative assessments may not be as responsive to HDT programs since these assessments evaluate [broader, grade-level knowledge](#).

- **Evaluate HDT programs for under-represented student groups:** Given the limited evidence on HDT design considerations and impacts for certain at-risk student groups (e.g., multilingual learners, students with disabilities, chronically absent students, etc.), districts should partner with researchers to evaluate programs for these student groups.
- **Expect variation in the effectiveness of HDT programs:** District leaders can expect wide variation in HDT program effects based on the specific skills evaluated. Recent literature reviews of early-reading interventions show [larger effect sizes for phonics and fluency-related outcomes](#), [smaller effect sizes for reading comprehension](#), and [larger effect sizes in earlier versus later grade levels](#).
- **Effectiveness of HDT programs at scale is unknown.** While there is extensive evidence on HDT efficacy in experimental settings, there is limited evidence on HDT effectiveness when implemented at scale in districts and schools, with [recent program evaluations](#) under NCLB finding mixed or inconsistent results. Districts should consider partnering with researchers to track the effectiveness of HDT.

Conclusion

Given the postpandemic increase in students classified as academically at risk and the forthcoming sunset of ESSER funding, we offer research-based recommendations to support districts as they make strategic decisions about the future of HDT in their local contexts (see the table below for a summary of these recommendations). Districts should continue to use HDT to provide intensive support to students deemed academically at risk to prevent these students from falling further behind. Supporting at-risk students may lead to better education outcomes for these students in the long term—helping address achievement disparities that were exacerbated during the pandemic. To positively impact student achievement, districts need to adhere to core design principles for HDT, as well as ensure equity in student access and evaluate HDT programs against a range of outcomes.

Design principles for HDT with additional considerations for at-risk students

Design principle	Existing guidance	Additional consideration for at-risk students
Frequency and scheduling	30-minute sessions, 2-3 or more times per week, during school day	
Group size	One-to-one or groups of three to four students	
Personnel	Hiring experienced or trained tutors	HDT programs should balance tutor qualifications with program costs and need robust systems and procedures to ensure tutors implement intended curriculum with fidelity.
Measurement	Use data and assessments to monitor learning and tailor instruction	Assessments and data also evaluate student skills targeted for intervention and can document other at-risk factors that can affect student learning.
Curriculum	Implement high-quality materials aligned to classroom content	HDT delivers more systematic and tailored instruction than in a typical classroom setting.
Relationship	Tutor-student relationships support understanding of student needs	Mentoring relationships are an active component of instructional effectiveness. Relationships provide social reinforcement and build student confidence and engagement in learning.
Equity		HDT programs need to address barriers that hinder student access to HDT by ensuring equitable selection criteria and offering holistic supports for student learning.
Evaluation		Evaluations of HDT programs should focus on targeted skills, grade-level knowledge, and impacts on under-represented student groups. Districts can expect varied results based on outcomes and program scale.

Note, in this table we draw on Robinson et al. (2021) for existing design principles for HDT and add additional considerations based on the needs of academically at-risk students.

ABOUT THE AUTHORS

Ayesha K. Hashim draws on interdisciplinary and mixed-methods research designs to study the impacts of district-level school policies on student learning, as well as the leadership, organizational, and implementation conditions that can explain observed results. Her research covers a range of topics including the integration of technology with standards-based instruction, school choice and accountability, teacher professional development, and COVID recovery. Ayesha's work has been published in *Education Finance and Policy*, *Economics of Education Review*, *Educational Evaluation and Policy Analysis*, *Computers and Education*, *American Journal of Education*, and *Peabody Journal of Education*. Prior to joining NWEA®, Ayesha was an assistant professor at the University of North Carolina, Chapel Hill. She completed her PhD in education policy, MA in economics, and master's in public policy at the University of Southern California.



Miles Davison specializes in using quantitative and mixed-methodologies to examine how K-12 intervention policies and programs impact equity in schools. His research is driven by a desire to assist schools in creating optimal learning environments for students. He is particularly interested in understanding how processes and mechanisms associated with school policies ultimately impact student behavioral and academic outcomes. Specifically, his recent work has focused on changes in school disciplinary practices and disparities after the implementation of restorative justice policies. Through this work, Miles has gained a passion for producing research that is actionable and relevant to policymakers and practitioners. Dr. Davison holds a PhD in sociology from the University of California, Irvine.



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