

Math Success with DMTI

TIME MATTERS MORE THAN THE SCHEDULE

In today's edition, we explore:

- **The Classroom Reality:** Why instructional minutes—not just materials—determine what kind of math learning is possible
- **The Cognitive Why:** What research says about daily math time, four-day weeks, and long breaks
- **Strategic Advocacy:** What educators and leaders should protect, prioritize, and ask for when time is tight

Educators,

How often have you heard conversations about math improvement focus on *what* to teach—but rarely on **whether there is enough time to teach it well**?

Across districts, teachers are being asked to deliver deeper learning, richer discourse, and stronger outcomes—often within shrinking or fragmented schedules. It is no surprise that questions keep coming up:

- *Do we really need 60 minutes of math every day?*
- *Can we split math into shorter blocks?*
- *Will a four-day week actually work?*
- *What about summer learning?*

Research is clear: **time is not neutral**. How instructional minutes are allocated and structured determines whether students can reason, struggle productively, discuss ideas, and consolidate understanding—or whether instruction collapses into coverage and compliance.

This isn't about "doing more math." It's about **aligning time with how students actually learn mathematics**.

The Classroom Reality: Why Math Needs Sustained Time

Mathematics learning is fundamentally different from subjects built primarily on exposure or recall. Students need time to:

- make sense of problems
- test and revise strategies
- connect representations

- explain reasoning
- consolidate ideas

When math time is shortened or split into small segments, lessons often end **before the learning cycle is complete**. Students may “do the work,” but they never fully integrate the mathematics.

Research from cognitive psychology and mathematics education converges on a consistent finding: **without sufficient, uninterrupted time, high-leverage instructional practices simply cannot occur**.

How Much Time Does Research Support?

Based on developmental, cognitive, and instructional research, the following **daily Tier 1 math time** is recommended:

- **Grades K–2:** 70–90 minutes
- **Grades 3–5:** 60–75 minutes
- **Grades 6–8:** 50–70 minutes

These ranges are not about longer lectures. They exist so teachers can implement lessons that include **warm-ups, exploration, discussion, meaningful practice, and reflection**—the phases where understanding actually develops.

When time is compressed, teachers are forced into impossible tradeoffs between **depth and coverage**, even though research consistently shows that depth leads to stronger retention and transfer.

The Four-Day Week Question

Four-day weeks often sound appealing: fewer transitions, more planning time, longer lessons. But research tells a different story—especially for mathematics.

Mathematics learning depends heavily on **frequency and spacing**. A four-day week introduces repeated three-day gaps that increase forgetting and require more re-teaching. Over time, this disproportionately affects students who are already behind or most dependent on school-based learning.

Even when total minutes appear comparable, **learning is weaker when instructional frequency drops**.

Intervention: Support Without Sacrifice

One principle emerges clearly from the research:

Intervention must supplement—not replace—core math instruction.

Pulling students from Tier 1 math to receive support deprives them of access to grade-level learning and often widens gaps rather than closing them. Effective systems protect core math time while adding:

- **Tier 2:** 20–30 minutes, 3–4 times per week
- **Tier 3:** 30–45 minutes daily, highly targeted

Schools that succeed do not ask *whether* to protect core time—they design schedules so it is non-negotiable.

Summer Learning and Equity

Time matters not only daily and weekly—but yearly.

Research shows that students lose **1–3 months of math learning over the summer**, with the greatest losses occurring in elementary grades. These losses are not evenly distributed. Students from lower-income backgrounds experience significantly steeper declines, widening achievement gaps year after year.

Addressing summer learning is not enrichment—it is an **equity imperative**.

The Bigger Picture

“We spend a lot of money on education, but very little on what actually changes math instruction.”

Time is one of the few levers that affects **every classroom, every teacher, and every student**.

When instructional time is protected and structured to match how students learn:

- teachers can teach deeply, not rush
- students can reason, not memorize
- learning becomes durable, not fragile

What to Advocate For

As conversations continue in your school or district, here are high-leverage, research-aligned priorities to protect:

1. Daily math blocks that allow the full learning cycle to occur
2. Five-day instructional frequency whenever possible
3. Intervention time that supplements, not replaces, Tier 1
4. Intentional planning for summer and long breaks
5. Professional learning that helps teachers use time effectively

More to Explore and Share

This newsletter is just a preview. For the **full *Time Matters* research overview**, companion documents, videos, and downloadable resources, visit the **DMT Insights** page at dmtinstitute.com/research.

We’d also love to hear from you. What is **one form of support** that would genuinely help you teach math more effectively—more time to collaborate, clearer priorities, classroom demonstrations, deeper content learning, or stronger coaching?

Share your reflections, questions, or classroom experiences at contact@dmtinstitute.com. We regularly compile and elevate educator insights (anonymously) to help advocate for **better instructional conditions and support across districts**.

Time matters. And how we use it matters even more.



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