



District
Management
Group

SPOTLIGHT

Managing Time: Your Scarcest Resource

by Nathan Levenson and Daniel Goldberg

Originally published in *District Management Journal*, v.17, Spring 2015

Appropriate utilization of staff and student time is among the most important levers for raising achievement cost-effectively.


Managing Time: Your Scarcest Resource

| Nathan Levenson and Daniel Goldberg

DMC Spotlight represents the thinking and approach of the District Management Council

Nearly every K-12 district has thoughtful procedures for spending their money. School boards require a compelling case for major investments and approve all annual budgets; procurement departments screen different vendors and negotiate for the best value; complex financial systems track spending by each department and each funding source. To most, this level of scrutiny makes sense because district dollars are largely taxpayer dollars, and misuse of funds crosses the line into the unethical or unlawful.

In contrast, how districts spend their time is often managed with much less precision and active planning. While many districts have sophisticated software to track their finances and learning management systems to track their students' data, few districts have methods for tracking how staff or students spend their time. In many districts, scheduling is delegated to principals, assistant principals, and individual educators as opposed to those with scheduling expertise. Whether these schedules are followed can be hard to tell, as observations tend to be short and infrequent. Why such a disconnect between the level of scrutiny paid to money and that paid to time?



This disconnect is odd because, as the saying goes, time is money. Almost nowhere is this truer than in school districts, where 70% to 80% of budgets is typically spent on staff and staff time. Even more important than the financial implications of unmanaged time are the implications about student learning. From academic growth to arts enrichment to social-emotional learning, nearly all of the things that we value most require time. For adults too, professional growth and continuous learning require not only large investments of time, but thoughtful and expert use of that time. During any given school day, valuable priorities compete against one another for time.

In short, appropriate utilization of staff and student time is among the most important levers for raising student achievement cost-effectively. Without managing time effectively, students and staff will spend much of their days in unproductive lessons or pointless meetings, frustrated by their lack of progress. →

Why such a disconnect between the level of scrutiny paid to money and that paid to time? This disconnect is odd because, as the saying goes, time is money.

Increasing Quantity, But Not Quality

Over the past several decades, as school districts have faced ever-greater challenges, they have typically responded by increasing the number of adults in the classroom (by either decreasing class sizes or adding co-teachers and paraprofessionals) and increasing the amount of instructional time for students. Since the 1960s, the number of teachers in U.S. public schools has more than doubled, while student enrollment has grown by only 40%, reducing the average pupil to teacher ratio from approximately 26 to 16.¹ At the same time, the average total hours students spend in school in the United States has been rising steadily. Since 2000, 13 additional hours per year have been added at an approximate national cost of over \$500 million per year.² Recently, Boston Public Schools (MA) became one of over 1,500 school districts across the country to extend the school day (in Boston's case, 40 minutes were added to the school day, and the total cost is estimated to be \$12.5 million per year).³ Even districts that have not gone to the lengths of extending their formal school day have begun to seek creative ways to achieve greater instructional time. Nonprofits and other organizations, such as Building Educated Leaders for Life (BELL) and Citizen Schools, which partner with districts to offer after-school extended learning time, have expanded significantly in recent years.

In short, American educators as a whole have taken the stance that when it comes to time in school, more is better. However, these increases in the amount of man- and woman-hours dedicated to helping students succeed have not always translated into improved results. Despite the significant amount of resources, hard work, and energy that have been dedicated to these reform efforts over the years, student achievement has risen only marginally. The latest National Assessment of Educational Progress (NAEP), often referred to as the “nation’s report card,” shows only a gradual improvement in reading and math scores since the test was first administered in 1971 and a persistent gap between the performance of different racial subgroups.⁴ On international assessments, U.S. students are falling behind students in other nations, and already perform significantly below the OECD average.⁵ Even satisfaction in the quality of K-12 education among Americans has remained mostly flat, at near 50%.⁶

These national trends play out on a smaller scale in districts all across the country. In districts that have attempted to extend the school day without addressing other systemic issues, few meaningful changes in student outcomes have been achieved. In one Northeastern district, the Board and Superintendent negotiated a contract with the teachers union to extend the school day by 30% at a cost of approximately \$30 million. However, many other district practices remained the same: buses ran over an hour late, students ate breakfast during instructional time, and curriculum implementation was inconsistent across schools. Perhaps unsurprisingly, this district saw no meaningful changes in student outcomes. As time went on, the Board and Superintendent began to wonder whether the district could have generated better outcomes at much lower cost by optimizing their existing school day.

The Challenge of Managing Effective Use of Time

Why is it so challenging to translate increases in time, money, and effort into increases in actual student performance? In districts, a number of factors conspire to make managing how time is actually spent in schools and in classrooms a very difficult task:

- **Culture of teacher autonomy:** In many schools, a culture of teacher autonomy provides teachers great latitude in determining what happens in the classroom. This approach can have many benefits—allowing teachers to adapt to the needs of individual learners and encouraging teachers to take ownership of results. This approach indeed may attract better teachers (after all, what professional wants “big brother” constantly looking over his or her shoulder?). However, this degree of latitude behind closed doors can sometimes result in inefficient use of time as well as individual actions that may not be aligned with district-wide needs.
- **Big-data needs:** Unlike the precision districts use in managing their finances and their student data, many districts lack sophisticated data systems to collect information on individual activities. District leaders cannot analyze how much time therapists spend with students versus in meetings, how much time ELA teachers spend teaching phonics versus vocabulary, how much time curriculum department leaders spend in schools versus in the central office, and so on. Getting this data is possible, but often the difficulty of gathering it is perceived as being too high.
- **Lack of sophisticated scheduling tools:** Even when districts know what their staff should do, actually creating a schedule to allow for implementation of these activities is beyond the capabilities of many districts. Sophisticated scheduling tools are needed that can integrate various forms of information and align how staff spend their time with strategic priorities.

Because of these and other factors, district leaders across the country are often left frustrated: Why does there never seem to be enough time in the day to enact all of the district’s priorities? Why is it so difficult to know how staff spend their time, and even more difficult to schedule their time efficiently? How can staff activities be streamlined without reducing the personalization that is necessary to meet every student’s individual needs?

Today, the challenges that districts face are greater than ever. Federal and state governments have cut funds to schools and are not likely to increase funding in the near future. Student demographics are changing, with needs increasing. All of this is occurring as the Common Core and other revised standards raise the bar for what is expected of districts and their students. Amid these challenges, it is more necessary than ever to reconsider the ways that districts manage time in order to achieve the maximum benefits from each available hour. →

Time in School: Is More Better?

Over the past decade, significant efforts have been made to increase learning time in America’s schools. Many of these efforts began under the direction of the federal government: according to Secretary of Education Arne Duncan, “adding meaningful in-school hours is a critical investment that better prepares children to be successful in the 21st century.” Several federal grant programs—including Race to the Top, Investing in Innovation (i3), and Title I School Improvement Grant (SIG) Funds—have emphasized time as a key strategy for school improvement. In response, districts across the country are taking significant steps to increase the amount of time children spend in school.

Today, the average public school is in session 6.7 hours per day and 179 days per year. In charter schools, the average time is slightly higher, with an average of 6.8 hours per day and 180 days per year. However, a large number of schools have extended learning time, typically achieved by extending the hours per day rather than days in the year. Over a third (36%) of public schools have school days longer than 7 hours, a 12% increase since 2000. In private and charter schools, students are even more likely to encounter extended days, with 45% of private schools and 50% of charter schools offering days of 7 hours or more. Far fewer schools have extended school years: only 10% of public schools have school years longer than 183 days.¹

Despite these more recent efforts to expand time in American schools, the United States already requires more time in school compared to other developed countries. Among OECD countries (typically higher-income countries), an average of 834 hours per year is required in primary schools. In the United States, 982 hours are typically required, with only Chile and Australia requiring more. In Finland and South Korea, two countries often lauded for their educational systems, only approximately 710 hours are legally required (a difference of about 43 days of school per year compared to the U.S. school year).²



1. Tammy Kolbe, Mark Partridge, and Fran O'Reilly, "Time and Learning in Schools: A National Profile," *National Center on Time and Learning*, 2015, <http://www.time-and-learning.org/>.

2. OECD, *Education at a Glance 2014: OECD Indicators*, OECD Publishing, October 2014, <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>.

Maximizing the Benefits of Student and Staff Time

To maximize the benefits of staff and student time, districts need to carefully consider both the quantity of time available and how that time is spent. To aid districts in this process, DMC has developed a comprehensive framework for considering the key components that enable effective use of time.

This framework can be applied to both staff and students alike. For students, effective use of time is what ensures that each student is able to master rigorous materials. Thoughtful management of staff time likewise allows teachers and other educators to work collaboratively and develop expertise in their crafts.

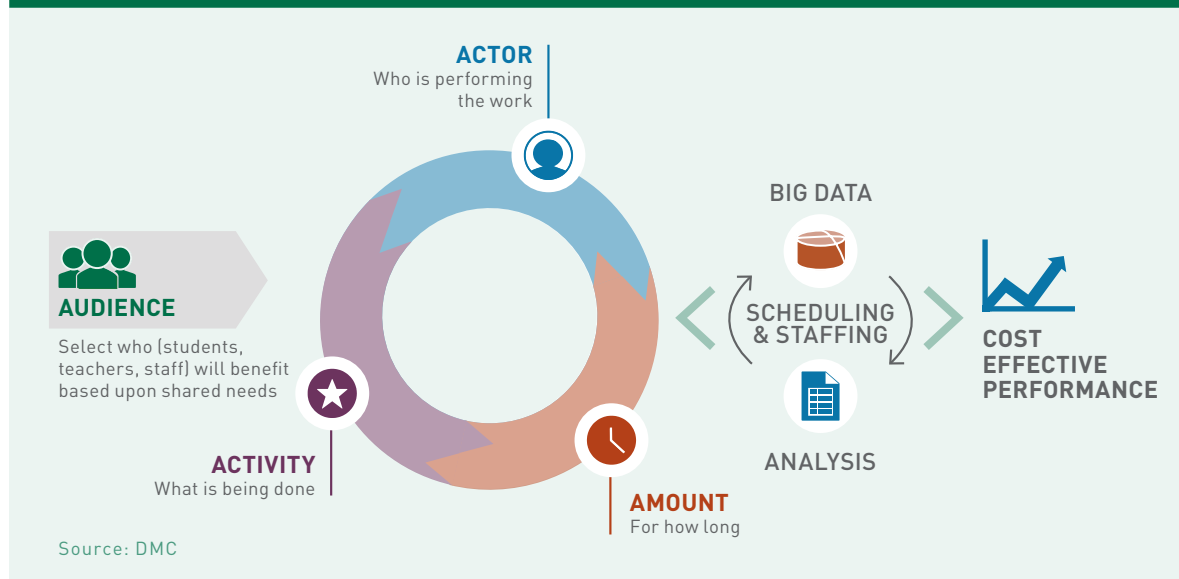
There are three essential components of managing staff and student time (Exhibit 1) that lead to cost-effective performance. For any given block of time, it is first necessary to group the “audience” (that is, the students or staff who will benefit from the dedicated time) according to similar needs or identified areas of development. Second, the specific use of that time must be carefully determined, including what is to be done, for how long, and by whom. Finally, districts must utilize big data and analysis in order to monitor performance and continuously adjust how time is being spent.

1. Selecting the “Audience”

As any educator knows, no two pupils are alike. Even within the same classroom, two students may be struggling for myriad different reasons, including a difficult home life, prior gaps in skills, or different learning styles. In other words, the “audience” in any given classroom is tremendously diverse. While this is common knowledge among all great teachers, this insight is rarely applied to the way districts as a whole classify, track, and schedule their people.

Currently, many districts group students into different “audiences” without paying close attention to their specific needs. In some districts, parent requests help to determine class compositions and pull-out groups; in other districts, these groups are random; much less commonly are groups formed based on specific common needs. Similarly, when districts disaggregate results or evaluate a program’s effectiveness, they often segment students based on *who they are* (e.g., based on race, socioeconomic status, gender, English language fluency, and other federally mandated reporting categories), but not based on *what they need*. When students of all different “audiences” are grouped, the teacher must differentiate to meet very different needs. However, when students with similar root-cause needs are grouped together, the ability to tailor instruction to their specific needs is much greater.

EXHIBIT 1: DMC FRAMEWORK FOR OPTIMIZING TIME



Staff are also often treated as if their needs are more similar than different. It is not uncommon for schools and districts to deliver generalized professional development (PD) to all teachers of a certain grade or subject area. For instance, all kindergarten teachers may receive PD on teaching phonics with the district’s new reading program, and all special education teachers may receive training on effective lesson planning with a co-teacher. Although news regarding certain district initiatives and administrative matters may be best delivered to the largest possible group of educators, the most effective PD usually targets specific teachers’ identified areas of development. Within that group of elementary teachers, only a few might struggle with teaching phonics, while others may need more help managing classroom transitions. Some of the special education teachers may likewise benefit from joining their general-education colleagues to learn more about phonics instruction. When staff are grouped by need rather than by job classification, PD can become a much more powerful lever for raising teacher ability and student achievement.

2. Managing the “Three As”: Activity, Amount, and Actor

Once segmented into different audiences, students and staff with different needs will benefit the most when the use of time is targeted toward their specific need. Three simple questions about the use of any given block of

student or staff time can dramatically improve the quality and effectiveness of that time:




- What is being done? (What is the **activity**?)
- For how long? (What is the **amount** of time?)
- By whom? (Who is the **actor**?)

The best teachers, of course, already pay close attention to each of these questions. These teachers write careful lesson plans, follow best-practice research, and employ various different pedagogical techniques in order to reach diverse learners. But all too often, these teachers are left to do it alone, without the help of systemic district-wide supports. When districts do issue guidelines, they are often not consistently monitored or supported across all schools. As a result, resources may be poorly matched to staff and student needs, and some students are left to struggle.

Exhibit 2 illustrates how each of these questions may be addressed in the context of an elementary literacy block. For different audiences, each of these questions may give rise to specific guidelines tailored to ensure that each audience’s needs are met.

3. Utilizing Big Data and Analysis for Continuous Improvement

Although selecting the audience and managing the “Three As” seems reasonable, the difficulty for many districts lies in execution. It all seems well and good to group →

EXHIBIT 2: THE “THREE As” IN PRACTICE		
	GUIDING QUESTIONS	EXAMPLE GUIDELINES
ACTIVITY 	<ul style="list-style-type: none"> • What topics are employed in the instructional block? 	<ul style="list-style-type: none"> • Literacy block should be divided between phonics, word work, small-group work, and independent reading
AMOUNT 	<ul style="list-style-type: none"> • How is time spent across each topic? 	<ul style="list-style-type: none"> • 15 minutes each for phonics and word work, 45 minutes of small-group work, 30 minutes independent reading
ACTOR 	<ul style="list-style-type: none"> • Who is providing instruction? • How are students grouped? 	<ul style="list-style-type: none"> • Reading should taught by the classroom teacher, and assisted by a highly skilled reading teacher during small-group time • Each group should be composed of 4 to 5 students of similar needs

Source: DMC

students and staff by need and to thoughtfully manage how their time is spent, but the sheer number of different actors in most districts adds considerable complexity. How can districts ensure that the hundreds or even thousands of different staff members are spending their time as agreed upon? How can instruction be personalized when juggling the needs of thousands of students, not simply those in one classroom? Is it possible to do any of this without asking ever more of already overworked staff or spending more money on hiring additional people?

Knowing what staff actually do is the first step in maximizing the benefit of staff and student time. Of course, many principals and many managers believe that they know how their staff spend their time. However, perception rarely matches reality. Only after hard data has been collected on staff and student practice (e.g., via detailed time study) does it become possible to begin managing activities and providing personalized instruction.

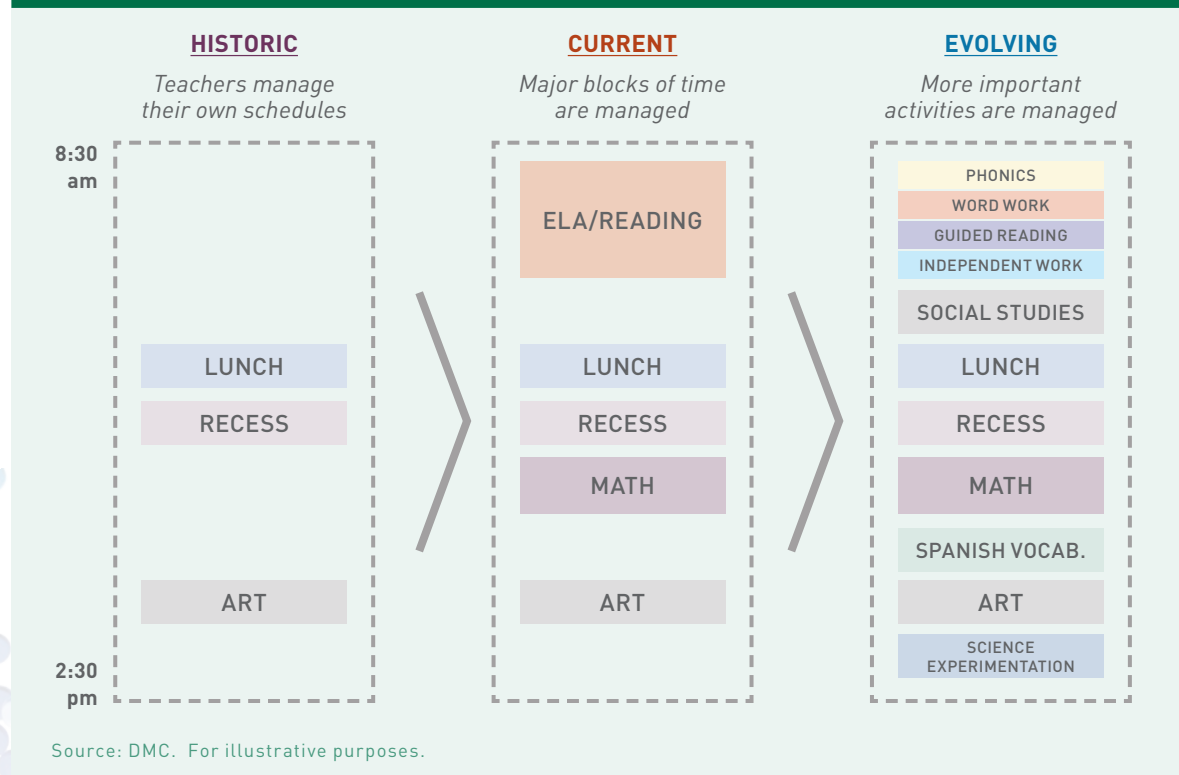
Once all of this data is collected, the way that it is operationalized is through effective schedules. All schools

have schedules—often hundreds, when counting those for each staff member and student. However, good scheduling is a skill, and cultivating that skill can save districts hundreds of thousands of dollars while improving instruction for all students. The best district leaders recognize that scheduling is not only a technical task but a strategic lever to raise achievement cost-effectively.

Putting It Into Practice

As is evident from the over 1,500 districts that have recently extended their school day, district leaders see time as an important strategic lever for performance improvements. Many of the most forward-thinking superintendents, principals, and teachers across the country have already begun implementing these best practices. Although work must still be done to scale and refine these ideas, the following three real-life illustrations show what is possible when districts embrace a more thoughtful and active approach toward managing staff and student time.

EXHIBIT 3: EVOLUTION OF DISTRICT MANAGEMENT OF STUDENT TIME



Managing Student Time by Setting Clearer Directions

Historically, elementary school teachers received very little guidance from the district or from the principal on how to spend their time. Teachers may at most have been told the school's start and end times, and been assigned a time for lunch, recess, and a daily elective. For the remainder of the day, however, teachers would be left to manage their own schedules.

Increasingly, districts are providing more guidance on how time is to be used, especially for core subjects at the elementary level. Elementary teachers are now much more likely to be told that, based on best practices, a 90-minute literacy block is mandated, as well as 60 minutes of math every day. In some districts, they may even be told that the literacy block should occur from 8:30 to 10:00 AM, and math should be taught immediately after art class in the afternoon.

Going forward, making the most of student time will require providing even more detailed guidance and customization to specific student needs (Exhibit 3). Districts must know not only that there is a 90-minute literacy block, but what is being taught within that block, for how long, and by whom. Are kindergarten teachers spending sufficient time on phonics instruction? Do fourth-grade teachers provide explicit instruction in reading comprehension? Are certified reading teachers providing the instruction, or are certain students receiving literacy instruction from paraprofessionals? Although managing the major activities during a typical period in middle and high school is less common, it may be just as useful to know how much time in social studies is spent on debate versus note taking, or how much time in Spanish is spent on speaking versus writing. The point here is not that there is necessarily a right answer, but that these data points raise a question: how should teachers and administrators

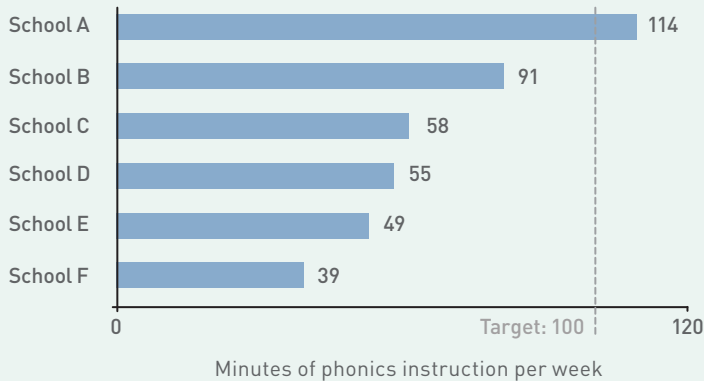
Many principals and many managers believe that they know how their staff spend their time. However, perception rarely matches reality.

manage the “Three As” of activity, amount, and actor? Tracking this data along with student outcomes will provide valuable information as to what works best, and will allow for more rapid scaling up of successful practices.

In some of the most innovative districts nationwide, this approach toward managing more specific increments of important blocks of time is already being employed. In one Midwestern district, administrators set a target that every student in grades K-2 should receive 100 minutes of phonics instruction per week. However, when the district actually measured how teachers spend their time, they →



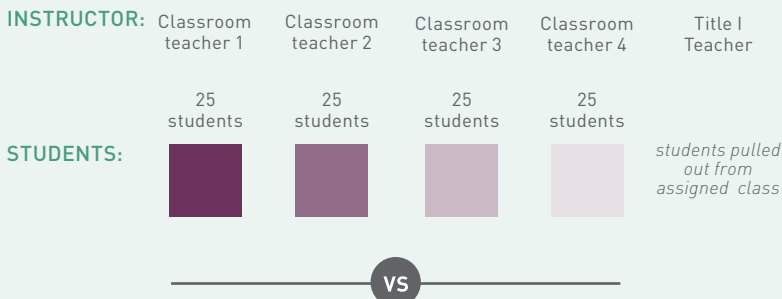
EXHIBIT 4: AVERAGE MINUTES OF PHONICS PER WEEK GRADES 1-2



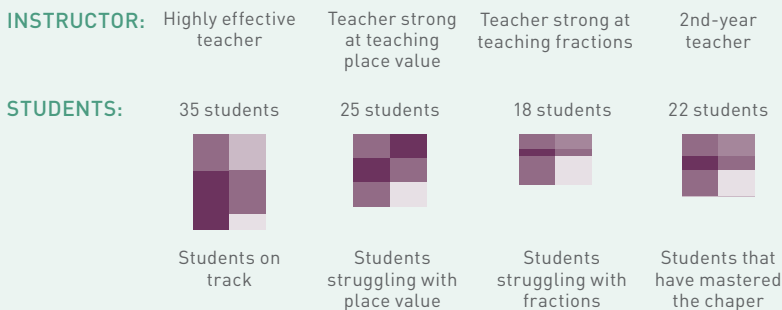
Source: DMC engagement

EXHIBIT 5: REVISED MODEL FOR FIFTH-GRADE MATH*

TYPICAL CLASSROOM MODEL



REVISED CLASSROOM MODEL



Source: DMC. For illustrative purposes.

*Sample week

uncovered substantial variation. In some classrooms, well over 100 minutes of phonics instruction were delivered per week; in others, fewer than 40 minutes were delivered (Exhibit 4). Some teachers lacked the skills and training to deliver high-quality phonics instruction, and so simply taught very little of it; other teachers provided so much phonics that it cut into other important topics; still others delivered phonics in nearly perfect accordance with the district's plan.

By being very thoughtful and very clear about what is expected in terms of the activity, amount, and actor and then collecting the actual data on how these expectations are implemented, the district has been able to improve teacher practice and manage resource allocation with much greater precision. Reading coaches, professional development, and principal observers can all be targeted to the areas where the guideline of 100 minutes of phonics per week is not being met. The result is higher-quality literacy instruction for all students, regardless of the school they attend or the teacher to whom they are assigned.

Thoughtfully Grouping Students Based on Need

This framework for effective use of time also has implications for the most basic form of school organization: the classroom. In many schools, classroom assignment—not student need—drives much of how time is used and who provides the instruction. Once students are assigned a teacher at the beginning of the year, all students in a class receive the majority of their instruction from the same teacher, and get very similar activities during the day. Between different rooms, class size typically remains constant. Only at the margins (e.g., via pullout by Title I or special education teachers) do students receive a small dose of customization and teacher specialization.

In certain places across the country, this typical classroom organization has been upended. In 2007, the fifth-grade math teachers at one Massachusetts school decided that the traditional model, with static classroom assignments formed once at the beginning of the year, was not working. Teachers launched their own initiative to periodically shuffle classroom assignments based on student needs. Every other week, each fifth-grade student would take a common assessment, and on Sunday mornings, teachers met over breakfast to pore over the results. Based on this data, teachers regrouped students and matched them with the teachers best suited to meet their needs. For instance, one week, all students struggling with place value were grouped together with the teacher strongest at teaching place value. Other students had mastered the chapter, and so were moving on to alternate material. Unlike in the typical classroom model, class size also became a variable to manage, with the most experienced teachers and most advanced students participating in larger math classes, while those that struggled were supported by smaller class sizes. By flexibly grouping students with similar needs and pairing them with teachers best suited to meet their needs, this school was able to maximize the benefit of each hour of instruction (Exhibit 5).

What was the result of this experiment in actively managing student “audiences”? Within one year, the school’s fifth-grade math proficiency increased from 38% to 68%. Indeed, the increase in proficiency was so dramatic that it drove up the overall district average from 40% to 51%.

Of course, replicating this success story at large scale would be far from simple. This arrangement relied on the heroic efforts of teachers who went far beyond their prescribed duties. In their Sunday morning scheduling sessions, they used 100 post-it notes—a student’s name written on each—to regroup students. While challenging for 100 students, this type of exercise would be impossible for 1,000.

However, thoughtfully grouping students with similar needs is possible with the help of data analytics and scheduling expertise. In New York City’s public schools, a pilot program called School of One used technology to match students to teachers and activities on a daily basis. Students took daily quizzes, and an algorithm used the results along with other factors (such as student preferences and the assignment of

Class size also became a variable to manage, with the most experienced teachers and most advanced students participating in larger math classes, while those that struggled were supported by smaller class sizes.

other students and teachers) to determine a student group, teacher, and lesson most appropriate for the next day. The program’s designers are now piloting similar programs all across the country (known as Teach to One outside of New York), and are seeing student math growth at approximately 1.5 times the national average.⁷ Even for districts without such sophisticated algorithms or technology infrastructure, simple tools and scheduling experts can help any district more thoughtfully group students on a smaller scale.

Leveraging Time to Help Teachers Become Better Teachers

For staff, perhaps the most interesting application of this framework is regarding districts’ efforts to help teachers become better teachers. Professional development in its many forms (e.g., lectures, courses, coaching sessions, planning meetings) requires a significant investment of time. And although over 80% of teachers believe that professional development is important to improving student outcomes, only about 40% of teachers believe that their current professional development is helping.⁸ →

Not only can effective use of time improve the quality of teaching and learning that occurs for all students, but it can do so while reducing costs, increasing equity of staff workload, and increasing leaders' abilities to allocate precious resources to achieve their visions.

Consider, for instance, a typical teacher planning session such as a professional learning community (PLC) or data team meeting. Typically, these teams are formed based on teachers' grade, school, or subject area, but not based on expertise. Instead, schools hope that somebody will be in the room with expertise worth sharing, and that those experts will carry the day. Oftentimes, this veteran teacher dominates the discussion in PLCs.

What happens, though, when the veteran teacher is not the most effective? Or worse, what happens when, of the few teachers assembled in one room, *none* is a highly effective teacher? It is unclear how, by working together, these teachers will ever become highly effective. By not carefully matching

the “audience” to the “actor,” this school has squandered valuable planning time on activities that are likely to have no effect on professional growth or student learning.

With teachers, as with students, *who* provides or leads teacher improvement efforts is key to effectiveness. Schools and districts that have paid close attention to the “Three As” when designing teacher improvement efforts have been successful in dramatically improving the effectiveness of professional development.

Scaling Best Practices for Everybody

These best practices have already proven their worth for schools and districts across the country. But as is so often the case, the challenge lies in scaling them.

Given the incredible complexity of any school district, scaling these best practices will require the use of big-data analytics and sophisticated scheduling analysis. Although many districts lack data on how staff and students spend their time, this data is not unknowable. And although effective scheduling is a challenging task, it is a skill that can be developed or accessed.

Should districts succeed in implementing these practices at scale, the rewards for students could be enormous. Not only can effective use of time improve the quality of teaching and learning that occurs for all students, but it can do so while reducing costs, increasing equity of staff workload, and increasing leaders' abilities to allocate precious resources to achieve their visions. In today's environment of higher standards, dwindling budgets, and increasing state and federal mandates, careful management of an organization's time is an opportunity too important to overlook. ♦

NOTES

1. Department of Education NCES, “Digest of Education Statistics 2013,” Table 208.20
2. Tammy Kolbe, Mark Partridge, and Fran O'Reilly, “Time and Learning in Schools: A National Profile,” *National Center on Time and Learning*, 2015, <http://www.timeand-learning.org/>.
3. Kathryn Baron, “Boston Joins Growing Ranks of Districts with Longer School Days: Teacher pay often a stumbling block,” *Education Week*, January 28, 2015. James Vaznis, “Extended school day yields mixed results in Boston,” *Boston Globe*, January 14, 2015.

4. National Center for Education Statistics, National Assessment of Educational Progress (NAEP), <https://nces.ed.gov/nationsreportcard>.

5. National Center for Education Statistics, PISA data explorer, <http://nces.ed.gov/surveys/pisa/>.

6. Gallup Education poll, <http://www.gallup.com/poll/1612/education.aspx>, accessed February 24, 2015.

7. Doug Ready, Teacher's College at Columbia University, “Independent Analysis of First Two Years of Teach to One: Math,” *New Classrooms*, December 4, 2014, <http://blog.newclassrooms.org/>.

8. Bill & Melinda Gates Foundation and The Parthenon Group, “Targeted Research on Users of iPD: Key Learnings,” *The Parthenon Group*, February 13, 2012, <http://www.parthenon.com/ThoughtLeadership/TargetedResearchonUsersofiPDKeyLearnings>.