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SPOTLIGHT

A Productivity Viewpoint on Staffing

by Nathan Levenson and Keith Macleod

Originally published in *District Management Journal*, v.9, Winter 2012

Putting student learning as the priority and staffing costs as the variable, rather than vice-versa, is in many ways the most child-centered approach to managing declining resources.

A Productivity Viewpoint on Staffing:

Looking at an Old Challenge Through a New Lens

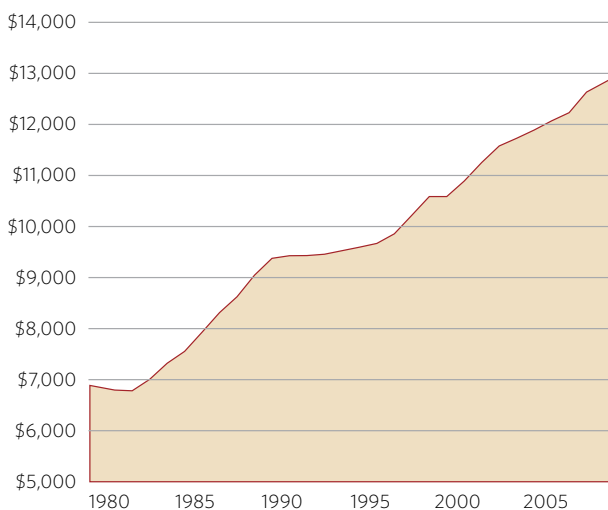
It might sound like an aphorism of leadership gurus to say that organizations run on their people, but in the world of public education, it rings true. School districts do not have patented technology, sophisticated machinery, or an extensive distribution network; their most important asset is their people who conduct or support what goes on in the classroom.

| KEITH MACLEOD AND NATHAN LEVENSON

Districts' budgets reflect the paramount importance of their human capital. Salaries and benefits typically account for 80% or even more of the expenditures in public education. People expenses have also driven the vast majority of the increase in the cost of public education. Rising salaries, lower student-teacher ratios, and the expansion of non-instructional staff all go a long way toward explaining why per-pupil total spending on education has nearly doubled over the last 20 years, even adjusted for inflation (Exhibit 1).¹

EXHIBIT 1

Per-Pupil Total Elementary and Secondary School Expenditures, 1980-2008



Source: National Digest of Education Statistics

It seems highly likely that this trend cannot continue. For the first time in recent memory, public education spending will probably decline, as districts face the funding cliff caused by the end of ARRA dollars, the lingering economic downturn, and the prospect of lower long-term growth. If total spending has to decrease, then, by extension, spending on the largest expense of staffing will also have to go down.

District leaders have started to wrestle with this challenge directly in recent years. Often the discussion focuses on which types of positions or programs to cut. Reading tutors and crossing guards? After-school help and reading recovery? A response that looks solely toward cuts unfortunately ends up delivering less for children—less support, less learning, or both. There is, however, a different way to approach these challenges that doesn't negatively impact students. The concept of managing "productivity" can be powerful, albeit initially uncomfortable.

Let's start with a definition. Managing productivity is a mindset of looking at staff and programs based on how much learning takes place for each dollar spent. High productivity implies lots of learning for few dollars spent. If a district can increase the productivity of their staff, then at worst it will maintain learning at a lower cost and in the best case it will actually increase learning with less spending. District leaders and school boards have always thought along these lines, but typically more in the back of their minds, rather than explicitly.

One challenge to using productivity as a framework

for balancing budgets is that it can sound cold and corporate. Yet, it is actually just the opposite. Putting student learning as the priority and staffing costs as the variable, rather than vice-versa, is in many ways the most child-centered approach to managing declining resources. Thinking about staffing through the lens of a productivity framework can be visualized as starting at the status quo and moving forward in various directions as depicted in Exhibit 2. The key variables are student learning and spending.

While eight paths lead from the status quo, five are either not desirable or not feasible. All of the options that create less learning aren't worth pursuing. It is a tough question to ask, but have any of your district's recent budget cuts led to less learning for students? Sometimes it can seem that no other options exist, but the productivity concept might open new paths for the district.

Spending more with no increase in learning is equally undesirable as creating less learning. Few would

advocate for this, but national data suggests that real per-pupil spending has increased and results on the SAT or NAEP are mostly flat. Unintentionally, some districts have reduced productivity over time.

Putting student learning as the priority and staffing costs as the variable, rather than vice-versa, is in many ways the most child-centered approach to managing declining resources.

Moving forward, districts should focus on the options that at minimum maintain and ideally raise student >

EXHIBIT 2

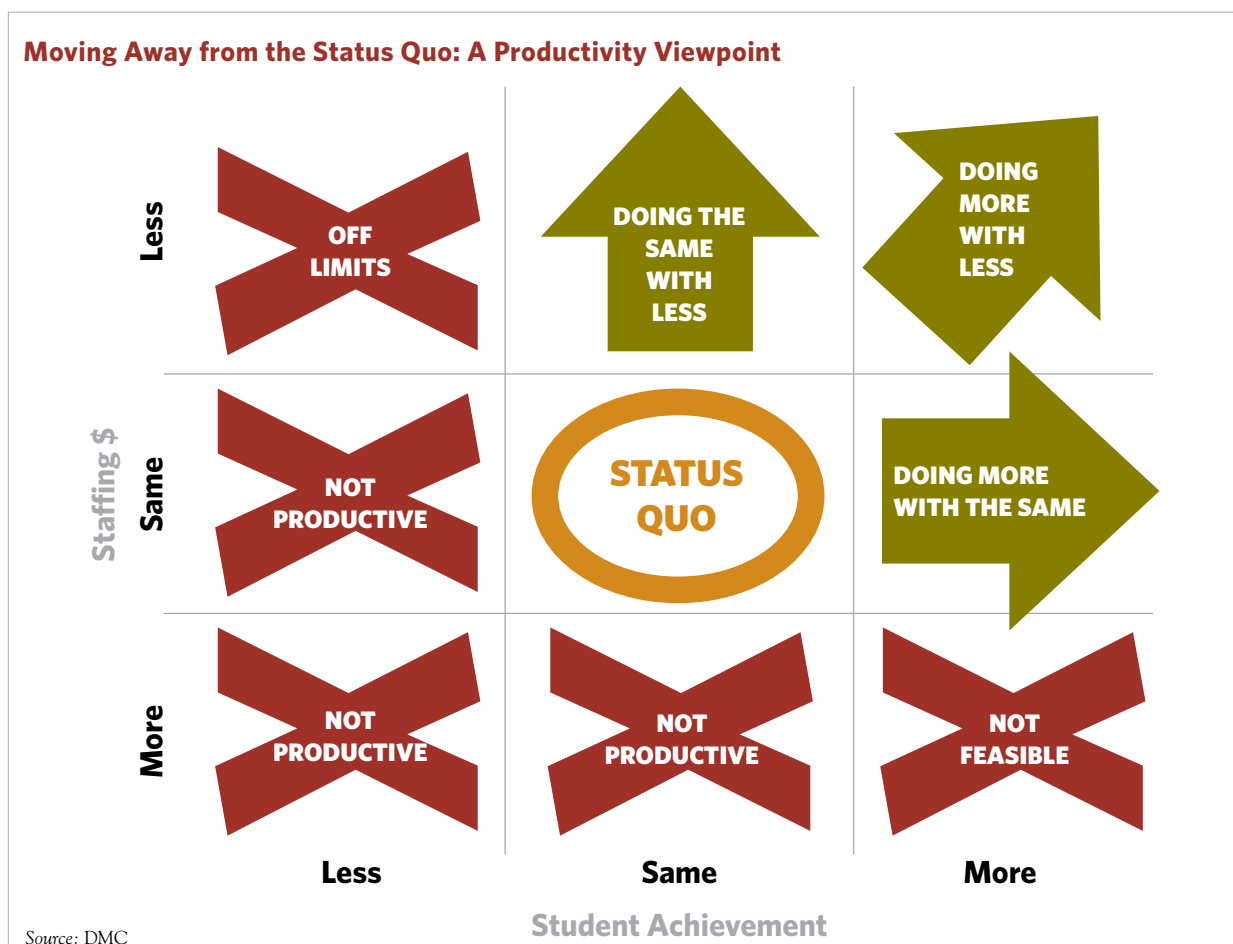
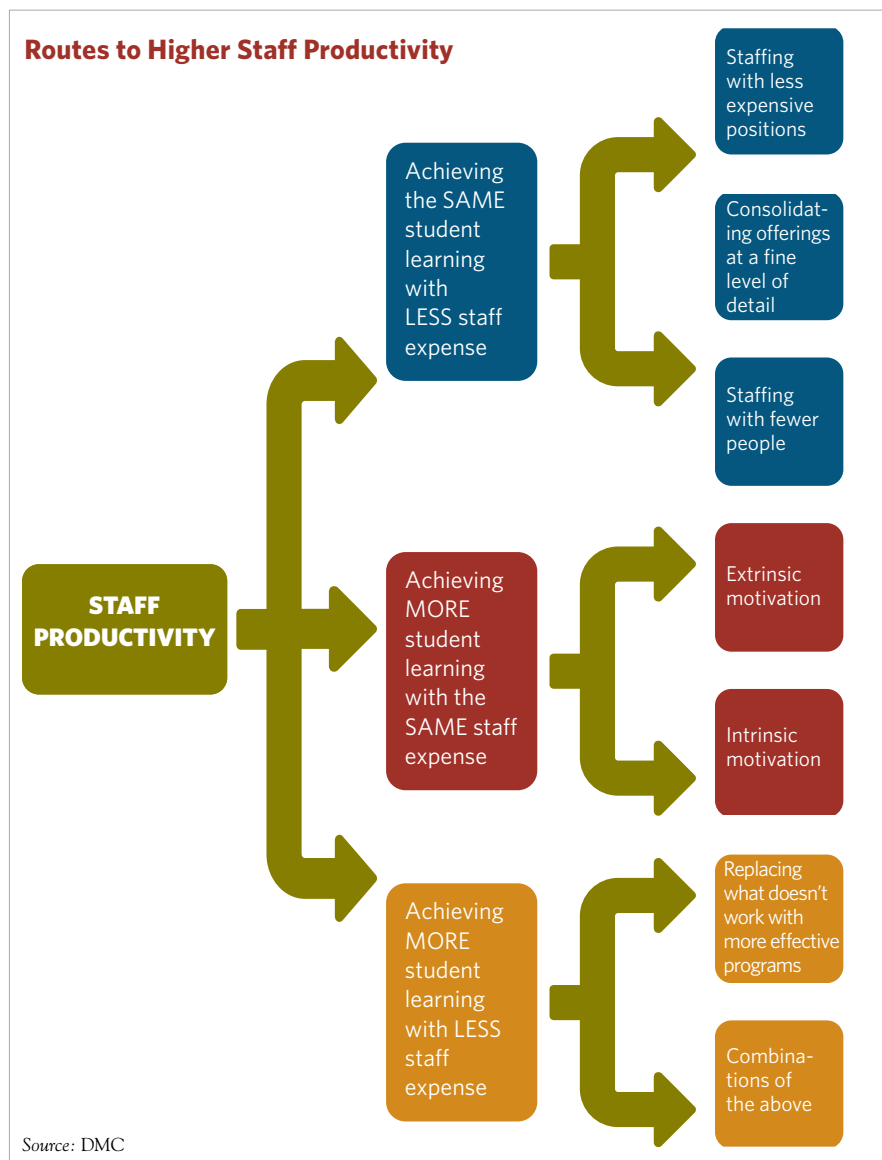


EXHIBIT 3



achievement while lowering costs. There are three main paths to increased productivity (Exhibit 3).

1. Achieving the SAME student learning with LESS staff expense

The branch that encompasses the most discrete and concrete strategies for raising productivity is doing the same for less. This is the area that might seem most familiar, as it builds on what districts have already started to do to respond to the fiscal imperatives of the past few years.

Staffing with less expensive positions

Why have blogs posed such a threat to established

newspapers? In part, the threat is rooted in different staffing models. While national newspapers house a large staff of well-paid professional reporters, blogs like *The Huffington Post* rely largely on a cadre of unpaid contributors.

Running a school district on volunteers isn't realistic, but the idea of moving to a less expensive staffing model is. There are two basic routes to increasing productivity in this way: using less expensive district employees or shifting the work to the outside altogether.

The first seeks to use lower-skilled, thus lower-paid, staff when appropriate. Could some of the duties of a school nurse be fulfilled by an LPN rather than an RN? Could a local art museum provide instruction rather than a veteran art teacher?

Asking such questions can often illuminate opportunities to maximize productivity in many day-to-day routines. For example, assistant principals are sometimes engaged in frequent bus, lunch, and recess monitoring. The aspects of highly skilled employees' jobs that do not require their skill sets or justify their pay could maybe be shifted to a lower-cost staff member. Special education teachers and guidance counselors do a lot of clerical work. Perhaps what is currently the work of six guidance counselors could be more productively carried out by four counselors and two clerks.

Another way to split a job into its pieces and isolate its most essential elements

would be through a technology solution. A case in point would be the School of One for math instruction pioneered in the New York City Department of Education in the past few years. By using algorithms that allow software to provide individualized programming, games, and activities, the technology unbundles core teaching and remediation. A certified teacher might present the material first and a non-certified tutor could oversee computer-based follow on.²

And maybe, like *The Huffington Post*, schools can tap some unpaid staffing possibilities. A few high schools and middle schools have reduced their IT departments and turned many of the more standard

responsibilities—setting up new equipment, troubleshooting printers, and manning the help desk—over to students for either community service or course credit. In the more far-reaching category, parochial schools have long relied on parents or students to help with basic cleanup or serving lunch. If students took turns emptying the trash and sweeping the floor, custodial costs could drop by a third.

The second path to higher productivity arises when district contracts push wages and benefits above market levels. Some districts have saved a great deal, without cutting any services, by outsourcing paraprofessionals, food service, or custodial work. Strategic outsourcing creates efficiencies not by reducing service or staff levels, but by enabling more flexible working arrangements and bringing salaries and benefits in line with the market.

Consolidating offerings strategically

Budget cuts often lead to fewer programs being funded. In deciding what gets cut, many approaches prevail. Some common ones include cutting “away from the classroom,” cutting the newest programs, cutting the programs whose funding source was cut, or perhaps cutting the programs with the least politically powerful support. Rather than relying on any of these rationales for the outright cutting of complete programs, consolidating offerings can be a preferable way to save money without reducing learning.

The private sector has learned that offering too much is inefficient. They avoid over-extending their product lines by carefully tracking their “stock-keeping units,” or SKUs. An SKU denotes a unique product, differing from all of the others the company offers by color, size, functionality, or any other relevant characteristic. General Motors (GM) has used this kind of drilldown to improve its productivity. Throughout the 20th century, GM fielded models to meet almost every possible permutation in wealth, family size, and age. They produced sedans, coupes, sports cars, pickups, and vans under the GMC, Chevrolet, Pontiac, Oldsmobile, Buick, Cadillac, and later, Saturn and Saab names. By the early 2000s, as its contracts had grown burdensome and its competitors had proliferated, GM recognized that it had to consolidate its sprawling product range. Oldsmobile was the first to go, followed by Saturn, Pontiac, and Saab.

These were, no doubt, not easy decisions. Some of

the shuttered brands had long, storied histories. But the rationalization enabled GM to avoid spreading its limited resources too thinly and to become most efficient with what remained.

The time might have come for school districts to concentrate resources on efforts that are most important for student success and to cut or shift staff away from the less necessary. Here is where the notion of SKUs becomes helpful. Rather than thinking in the blanket terms of foreign language or full-day kindergarten, what to cut or reduce should take place at a more detailed level. For example, foreign language is important, but how many foreign languages are necessary to offer? And at what grade level must they begin?

One large district found a middle ground by offering full-day kindergarten just to students who are identified as struggling and actually need the extra time.

It was through this line of reasoning that the school district of Arlington, New Jersey, opted to phase out German while keeping Spanish, French, and Italian. As the superintendent explained the decision to *The New York Times*, “It was a low-fill, high-cost area of instruction, and if that wasn’t taken, something else would have been.”³

Arlington’s approach exemplifies a careful balancing of competing interests: the need for cuts against the importance of instruction in at least one foreign language. Another area that can benefit from a nuanced compromise instead of an all-or-nothing sweep is full-day kindergarten. Because of research suggesting that poor students are less ready to learn when they start school, most districts either offer full-day kindergarten or would like to do so. Yet a completely and universally free full-day kindergarten program is an expensive proposition. One large district found a middle ground by offering full-day kindergarten just to students who are identified as struggling and actually need the extra time. Another district offers >

full-day kindergarten free to children of low-income families, and charges those who can pay.

Staffing with fewer people

Quite rationally, most districts' first response to fiscal distress is to pick up the "shiny coins"—opportunities for quick and easy wins that might have been overlooked or de-prioritized in better times. Generally, the next layer in the hierarchy of budget-cutting, once shiny coins have vanished, is to aim cuts as far away from the classroom as possible.

Many of the ways to shift to less expensive staff, such as replacing an RN with an LPN or breaking up the duties of the assistant principal differently, are decisively removed from the classroom. Next, consolidating program offerings certainly gets closer to the sanctity of the classroom, but it seeks to rationalize what is offered in the service of avoiding outright cuts.

But thoughtfully explaining why it might be okay to have more students in an AP class—where students are presumably more self-motivated and the instruction is more about the content—than in a remediation class should strike many as reasonable.

Today, even both of the above might not suffice given the scale of the economic challenge. It might be necessary to reconsider how core instruction is delivered. Fortunately, staffing programs with fewer people is actually not as grim as it sounds, at least not for the students.

Here, again, the private sector offers a bit of insight into reducing headcount without reducing services. From 2008 to 2010, despite the ongoing economic turmoil, U.S. corporate profits actually increased by 10% while their revenues dropped by 6%.⁴ To turn

less top-line revenue into more bottom-line profit, businesses have focused less on cutting services or products offered than on using fewer employees to carry out the same business model. Each person became more productive, i.e., the company served each customer through fewer employees.

For school districts, the customers are the students and the equivalent of meeting customers' needs more productively is maintaining student achievement with fewer staff. One of the most powerful ways to effect this combination—both drastically reducing cost and not harming learning—is by rethinking class size. This high-leverage area elicits visceral reactions; the issue of class size often precludes rational discussion. Yet, both the logic and the economics are clear.

While smaller class sizes are preferable in an ideal world, research has found the quality of the teaching, and not the size of the class, to be the far more important variable. In terms of the economics, adding just one student per class can save a district 2% of total spending.

As Secretary Arne Duncan has himself acknowledged, "Parents, like myself, understandably like smaller classes. We would like to have small classes for everyone—and it is good news that the size of classes in the U.S. has steadily shrunk for decades. But in secondary schools, districts might be able to save money without hurting students, while allowing modest but smartly targeted increases in class size."⁵ Bill Gates comes to the same conclusion based on extensive research, "If you look at something like class sizes going from 22 to 27, and paying that teacher a third of the savings, and you make sure it's the effective teachers you're retaining, by any measure, you're raising the quality of education as you do that."⁶

Deep down many parents intuitively know the same. One superintendent, half in jest, offered parents a choice: (1) You can pick your child's teacher, but the class will have 30 students in it, or (2) You can take the luck of the draw of teachers, but we will guarantee you that the class will have only 15 students. Confronted with this slightly implausible but revealing choice, the majority were willing to accept a larger class size so that their student would benefit from the teacher they regarded as better. This intuitive understanding of the greater importance of effective teaching does not translate into the practices of most districts. Class size is considered a "sacred cow," the tackling of which

is bound to be a no-win proposition. Unwillingness to manage class size often results in cutting back on professional development, mentoring, and data analysis—all key supports for raising teacher effectiveness.

Bringing a more nuanced and strategic approach to class size is certainly not easy. It is much closer to what Jim Collins in *Good to Great* characterized as a “Big Hairy Audacious Goal.” But the size of the opportunity can compensate for the hairiness and justify the audacity. A five-step process can help districts navigate this complex, productivity-improving opportunity.

1. Acknowledge that class size is not a key driver of student learning.

Research has found that smaller classes are better, but only in grades K–3 and only if the size can be reduced to 17 or fewer students. The moderate correlation between smaller class sizes and higher academic achievement disappears altogether for any kind of course at the middle- or high-school level. These studies also focused on students from poverty; class size exerts even less impact on middle-class or affluent children.

When school boards and senior leadership declare that “We will protect the classroom” from budget cuts, they are acting with the best of intentions, but their laudable goal of protecting the classroom experience could be better directed to more robust drivers of student learning.

2. Look at results in your district.

To go beyond the general research and understand whether and where class-size differences become meaningful in your district, look empirically at results by program. Chances are you’ll find that great teaching matters more.

With the wider availability of student-growth data, it is easier for individual districts to conduct this type of research. Certain specialized supports, such as ELL (English Language Learner) instruction or special education, are perfect candidates for this deep dive. What would happen to learning if ELL students were taught in larger groups, but only with the district’s most effective teachers? We know costs would drop. We would expect the achievement gap to close in most cases as well.

Special education is an area where different methods of supporting students lead to widely varying degrees of productivity across districts. Take co-teaching, for example. Requiring roughly one teacher for every

12 students, co-teaching is a staff-intensive form of support. Other models of supporting the same students need only one teacher for every 25, 35, or even 70 students. Because these alternative models have been found to produce at least equal and often higher student achievement, they can be more productive than co-teaching. Because most districts employ multiple delivery models within their special education program, they can compare these models to pinpoint, and then scale up, those that are yielding the biggest gains most productively.

It is a tough question to ask, but have any of your district’s recent budget cuts led to less learning for students?

3. Set tailored class-size targets.

One size doesn’t fit all. The category of classes, grade range, and type of student might all drive different targets. Some of the main axes for meriting different treatment include:

- K–3 vs. later grades
- Core subjects vs. art, music, and physical education
- AP and honors vs. remediation and intervention

These distinctions build on one another. A core class in grade 2 might have a different target class size than a core class in grade 8. Moreover, the above list is hardly exhaustive. Equally strong cases could be made for differentiating class size according to the experience of the teacher—on the theory that teachers should have a chance to settle into the job before taking on too many students—or according to the school’s accountability status—on the theory that smaller class sizes might be important to foster school climate in a turnaround setting. The key point is to have a targeted approach.

In a system as tightly linked as a school system, setting a target in one area might require addressing targets in other related areas. Many elementary schools, for example, unintentionally establish noncore class size limits when they define core class-size targets. Because one elementary classroom goes to one noncore ▸

class at a time, a smaller core class size drives commensurately smaller noncore class sizes in physical education, art, and music. Some districts break this linkage by sending one, two, or even four classes to, say, physical education at a time, thus dramatically reducing the number of gym teachers required without reducing how much physical activity a child receives each week.

4. *Communicate rationale.*

Being crystal-clear about the rationale underlying the selection of each target can help mollify parent opposition. Just saying class sizes will increase because the budget is tight feels like a loss. But thoughtfully explaining why it might be okay to have more students in an AP class—where students are presumably more self-motivated and the instruction is more about the content—than in a remediation class should strike many as reasonable.

5. *Enforce the limits!*

However logical the targets or extensive the buy-in, the targets become meaningless if actual class sizes diverge from them. This sounds straightforward, but enforcing the limits can be challenging. In many districts, class sizes become substantially smaller than the target. The main culprit is that districts do not adjust staffing to reflect changes in enrollment. In a school with a dwindling population, a given teacher ends up teaching the same subject in the same school to fewer and fewer students. Moving the teacher to a different school, splitting the teacher between two schools, or moving him or her to less than full-time can help keep the targets real.

DMC has found that, by adjusting staffing to reflect shifting enrollment, some districts can save between 2% and 5% of total spending. The average class-size data from a real district (Exhibit 4) show that even with a stated target of 20 students, few schools maintained this target over time, and more ultimately dropped below it. When enrollment creeps up, pressure often builds to split a class into two smaller ones. Conversely, when enrollment drops, there is no constituency pushing to combine the rooms.

At the secondary level, the desire to keep all staff full-time tends to drive classes below target. The art teacher in a high school where just 80 students signed up to take art could be a 0.8 part-time FTE, teaching four classes of 20 students each. In practice, many districts would retain that art teacher full-time, giving

him or her a full courseload of five classes. Of course, each class in that scenario would enroll a less-than-optimum 16 students.

2. Achieving MORE student learning with the SAME staff expense

A less financial route to higher productivity can be getting more out of your current employees through motivation. The overall performance of staff members is a product of their ability to carry out the job and their motivation to do it well. Higher performance can result from greater motivation.

The drive to stay in a job, do even better, and reach even higher flows from job satisfaction. This means it is important, even as budgets are shrinking—in fact, especially when times are tough—not to lose sight of school climate and job satisfaction. A well-established research consensus on motivation suggests a critical distinction between “external” factors—things like salary, benefits, and perks—and “intrinsic” factors—the opportunity for recognition, growth potential, input into decision-making, a supportive boss, and the level of interest in the work itself.⁷ Research has found the intrinsic factors to be more important for long-term contentment.

While intrinsic motivation must reside in the individual, there are creative ways for an organization to nourish it. In a budget crunch, the relatively small investments in mentoring, substitutes for peer observation, and attending conferences are often cut first as “nice-to-haves” rather than “must-haves.” When viewed, however, in terms of impact on staff motivation and in turn teacher productivity, these investments might not face the ax so quickly.

There are many absolutely free ways to increase intrinsic motivation as well. Teachers and principals often become unmotivated when tough decisions are handed down, and lately there has been no shortage of hard calls arising from shrinking budgets. Allowing input into decision-making, taking the time to explain decisions, and ensuring that decisions seem fair can all help to sustain motivation even when tough times threaten to dampen spirits.

Some tactics for supporting and enhancing motivation can apply across the board to all employees. For example, maintaining visibility as a leader throughout the organization can help employees at all levels

perceive how their work connects to the overarching mission of student achievement. Other tactics, meanwhile, apply specifically to certain employee groups. Introducing Weighted Student Funding can make principals' jobs more intrinsically rewarding by giving them the new challenge of directing some school-based funds. Empowering teachers to work together to craft curriculum and analyze data can build a culture of trust, pride, and collaboration while also raising student achievement.

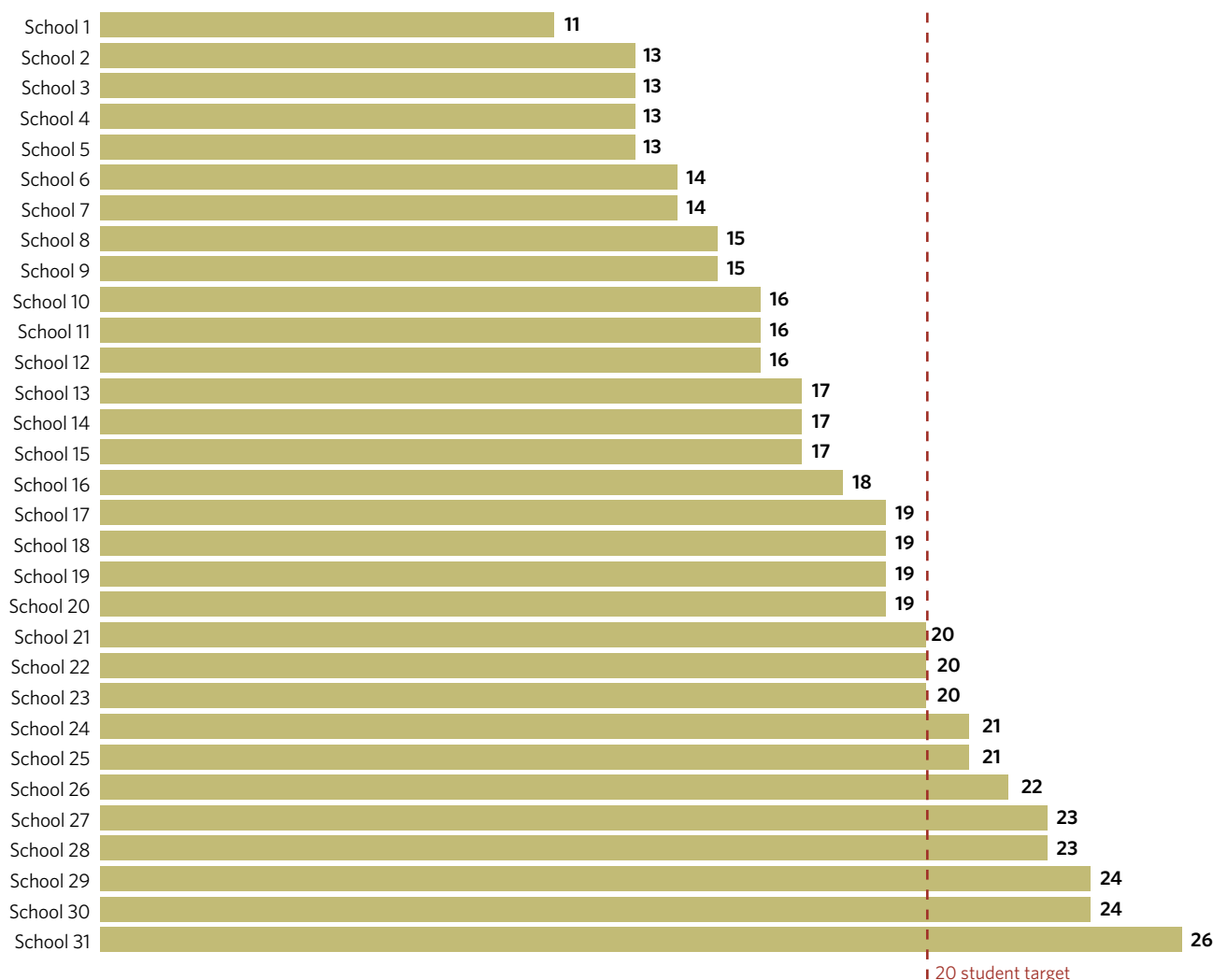
3. Achieving MORE student learning with LESS staff expense

Getting more learning out of less spending is the Holy Grail of staff productivity. Such ideal combinations might sound elusive, but they do exist. Benchmarking your district's spending and staffing can help pinpoint the opportunities. By definition, half of all districts are more productive (more learning at less expense) than the other half. Those districts that are achieving at the same or higher levels with less staff could be sources of best-practice opportunities. ▸

EXHIBIT 4

Average Class Sizes Commonly Vary Despite Stated Targets

Regular Ed Pupils per Regular Ed Teacher



As this data from an actual district shows, there is often significant variation in class size at different schools despite stated class size targets. Targets become meaningless if actual class sizes diverge from them.

Source: DMC

Ideas for Boosting Productivity

The simplicity of the definition belies the power of the concept. By “productivity,” we mean quite simply the amount of learning that takes place for the amount of money that is spent on staff. The goal is to maximize the learning and minimize the cost.

There are three practical paths for doing this. Under each path are a number of specific strategies.

Route to Higher Productivity	Strategy	Tactic	Example
Achieving the SAME student learning with LESS staff expense	Staffing with less expensive positions	Using lower-paid, lower-skilled staff	Replacing RN with LPN
			Having aide rather than assistant principal cover lunch
		Outsourcing to bring wages down to market levels	Outsourcing paraprofessionals, food service, or custodial work
	Consolidating offerings at a fine level of detail	Prioritizing programs that are: <ul style="list-style-type: none">▪ Mandated▪ Important to student success▪ Producing results▪ High demand	Keeping only the highest-fill foreign language offerings
			Offering free full-day kindergarten only to students who are struggling or below poverty line
Staffing with fewer people	Setting strategic class-size limits	Establishing lower limits in core, K-3, and remediation classes	
Achieving MORE student learning with the SAME staff expense	Extrinsic motivation	Compensation-based	Variable compensation based on student achievement, knowledge and skill gains, or serving in hard-to-fill positions
	Intrinsic motivation	Leadership, workplace culture, candidate selection, professional development, job design	Giving principals a new challenge through more autonomy or Weighted Student Funding
			Building trust, pride, and collaboration through teacher/data teams
Achieving MORE student learning with LESS staff expense	Replacing what doesn't work with more effective programs	Benchmarking against districts achieving at same or higher levels with less staff	Moving from co-teaching to extra time in general education
			Launching early intervention reading program
		Combinations of the above	

Districts have been surprised to learn what is typical in neighboring districts. One system that fully embraced a model of inclusion in special education believed that it required 100 classroom paraprofessionals. When they looked at surrounding, similar communities, they learned that a staff of 70 paraprofessionals not only sufficed to support the inclusion model, but also enabled students to have greater independence and more friends.

Highly effective, early intervention reading programs can, over time, also often be a path to more learning with less spending. The transition from grade 3 to grade 4 marks an important departure in most districts' course of instruction. Up through grade 3, students are *learning to read*. Beyond grade 3, they are *reading to learn*. Shifting staff and time to grades K–3 to ensure that all students can read on grade level by the time they delve into other content areas can eliminate the need for a great deal of remediation and special education costs in the later grades. More importantly, it greatly improves children's lives, enabling them to both enjoy school more and get more out of it.

How can you identify other such win-win opportunities? It helps to embrace pragmatic experimentation. Shaking up the status quo with new approaches is important, but so is measuring the results of any new, or, for that matter, existing initiatives. Longitudinal student-growth data, disaggregated by specific instructional program, can provide insight on what is and what isn't working. It is this kind of rigorous testing that led the federal government's What Works Clearinghouse to conclude that certain technologies for reading instruction lacked "discernible effects" on standardized assessment scores.⁸ It also showed that many pedagogical practices did raise student-reading abilities.

The final step is to make decisions based on the results. If a program is found not to be effective, then popularity or history should not suffice to protect it. If a program is moving the needle, it merits continued, perhaps even expanded, funding and staffing.

A Gradual but Ever-Present Consideration

Thinking about staffing through a productivity lens is a powerful lever for both enhanced learning and reduced cost. It's not easy, however. Issues of staffing

are inherently sensitive. Most districts avoid one massive staffing redesign, and instead pursue reforms incrementally as turnover opens up new possibilities for the organization.

Productivity should become an ever-present consideration. Using the concept takes both discipline and flexibility. The discipline should be in connecting every staffing decision to how it impacts both student achievement and the cost to serve. The flexibility should be in experimenting with new approaches to staffing, scaling those that prove effective, and combining them in creative ways to both raise achievement and reduce cost.

The "new normal" is perhaps now an overused term, and it means different things to different people. For us, however, confronting the new normal means rising to this challenge of not letting tough external conditions detract from the power of what takes place in the classroom.

¹ Harvard Business School, *Note on U.S. Public Education Finance (B): Expenditures*, rev. March 30, 2007.

² Harvard Business School, *School of One: Reimagining How Students Learn*, April 1, 2010.

³ Winnie Hu, "Foreign Languages Fall as Schools Look for Cuts," *The New York Times*, September 11, 2009, <http://www.nytimes.com/2009/09/13/education/13language.html>.

⁴ William Alden, "Corporate Profits Near 'Historic' Second Quarter, Thanks to Cost-Cutting," *The Huffington Post*, October 4, 2010, http://www.huffingtonpost.com/2010/10/04/corporate-profits_n_748889.html.

⁵ Secretary Arne Duncan, "The New Normal," American Enterprise Institute Remarks, November 17, 2010, <http://www.ed.gov/news/speeches/new-normal-doing-more-less-secretary-arne-duncans-remarks-american-enterprise-institut>.

⁶ Daniel De Vise, "Bill Gates Talks About Teacher Pay, Class Size," *The Washington Post*—"College Inc.," February 28, 2011.

⁷ Frederick Herzberg, "One More Time: How Do You Motivate Employees?," *Harvard Business Review* (January-February): p. 53-62.

⁸ Trip Gabriel and Matt Richtel, "Inflating the Software Report Card," *The New York Times*, October 8, 2011, <http://www.nytimes.com/schoolbook/2011/10/10/digital-learning-claims-dont-always-match-results/>.



KEITH MACLEOD IS A SENIOR ASSOCIATE AT THE DISTRICT MANAGEMENT COUNCIL. HE CAN BE REACHED AT KMACLEOD@DMCOUNCIL.ORG.



NATHAN LEVENSON IS MANAGING DIRECTOR AT THE DISTRICT MANAGEMENT COUNCIL. HE CAN BE REACHED AT NLEVENSON@DMCOUNCIL.ORG.