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GETTING THE MOST FROM SCHOOL DISTRICT BUDGETS

MANAGING TO EXISTING CLASS-SIZE TARGETS:

Systems and Tools to Staff More Closely to Current Policy

Opportunity Brief • Getting Started • Lessons from the Field

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OPPORTUNITY BRIEF

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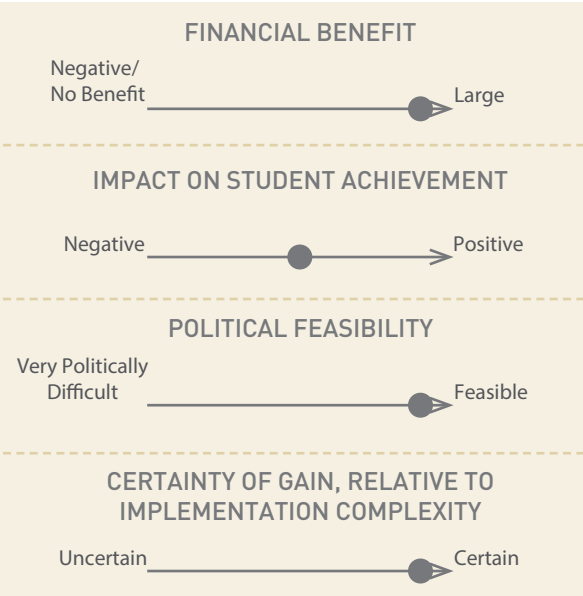
DISTRICT MANAGEMENT COUNCIL®

Most discussions of class size include a healthy debate of the merits and drawbacks of larger or smaller classes. Millions of dollars can be freed up with small increases in class size, but many parents, teachers, and administrators favor smaller classes. Fortunately, there is a far less controversial way in which to create significant savings without the political pushback.

This opportunity lies in achieving the class sizes that a district has *already* set, agreed upon, and approved. All school districts spend much time and thought debating, discussing, and eventually formalizing district policy for class-size targets. These class-size targets may differ for elementary and secondary classes, core versus non-core instruction, K-2 versus 3-5, or a number of other variations. Class-size targets also differ from district to district. A number of considerations are factored into making these important decisions, ranging from very practical issues such as the size of classrooms to deeply-held philosophies. The end result may mean that a first grade classroom in one district may target 18 students while a first grade classroom in another district may target 30 students.



The opportunity of achieving existing class-size targets makes no claim as to whether 18 or 30 students is "better." Instead, it calls for creating mechanisms that increase actual class sizes up to the targeted size. As a result, in many large districts, millions of dollars can be saved.

The beauty of this opportunity is that the political battle of determining the class-size target is over. What is left is the often overlooked challenge of managing student enrollment with laser-like precision and with a number of tools and techniques to ensure that these class-size targets become reality.

It turns out that in many districts, and for many unintended reasons, districts do not actually meet their stated class-size targets.

And, often, these targets are viewed as maximums instead of targets. Being below the class-size target is allowed, but going over is not. For example, while the target size of a first-grade classroom may be 25 students, a visit to first grade classrooms in a district might reveal a few classes of 16, 17 or 18, and perhaps only a small percentage with 25 students. Districts that have mastered actually achieving their classroom targets would instead have nearly all classes of 23, 24, or 25. A few empty seats here and there is no small difference. As an example, an urban district of a little over 50,000 students hired an outside firm that determined that reducing empty seats and achieving the long-existing class size guidelines would save approximately $45 million. Many districts might have smaller opportunities, but the opportunity is still typically quite significant.

Why is achieving existing class-size targets so hard?

The reality of school enrollment is that students rarely enroll in nice and neat multiples of a district's class-size target.

Imagine a district that has set a class-size target of 25 students for third graders. If 75 students enroll in one of the district's schools, then there will be exactly three classrooms of 25 students. In this case, the actual class size equals the existing class-size target.

However, the probability of actual student enrollment working out this neatly is small. More often, the reality is that the school would likely have 44 or 53 or 77 students enroll, for example. These numbers of students do not make it possible to create two or three classrooms of 25 students. If the class size target of 25 is treated as a maximum, actual class size will be 22, 18, and 19 respectively (Exhibit 1).

Exhibit 1

VARIATION IN AVERAGE CLASS SIZE CAUSED BY FLUCTUATIONS IN ENROLLMENT

TARGET CLASS SIZE: 25 STUDENTS

Actual Student Enrollment	Number of Classrooms	Average Class Size	Variance ± 25 Students
50	2	25	
44	2	22	-3
53	2	27	-7
53	3	18	+2
77	3	26	+1
77	4	19	-6

Source: The District Management Council

For our typical urban districts of 50,000 students, the district will save roughly $5-10 million a year as the average class size increases by a single student towards the targeted class size.

Most district leaders, CFOs, and directors of enrollment are well aware of the challenges of creating classes that closely match district targets, but the strategies to better manage class size are less well-known. Not all are applicable to all districts, and for districts in states with mandated class size caps, these five ideas may seem old hat, but for many, they offer a chance to effectively raise class size, free up significant funds, and minimize pushback.

1 Manage grade configuration at the elementary school level

Grade configuration is the number and range of grade levels in a given school. For example, a K-5 school versus a K-8 school represents different grade configurations. While it is obvious that the K-5 school has fewer grade levels than the K-8 school, an important difference is that the K-8 school will have fewer classes at each grade. Given that there are a fixed number of classrooms in a building, as the number of grade levels increase, the number of classes per grade decreases. For example, a school with 18 classrooms would have, on average, three classes per grade as a K-5 school, but just two classes per grade as a K-8 school (Exhibit 2).

Why is this so important? The number of classes per grade makes a large difference in the ability to achieve existing class size targets. A small number of classes at a given grade can lead to classes well below targets. A large number of classes at a given grade can more easily accommodate swings in enrollment.

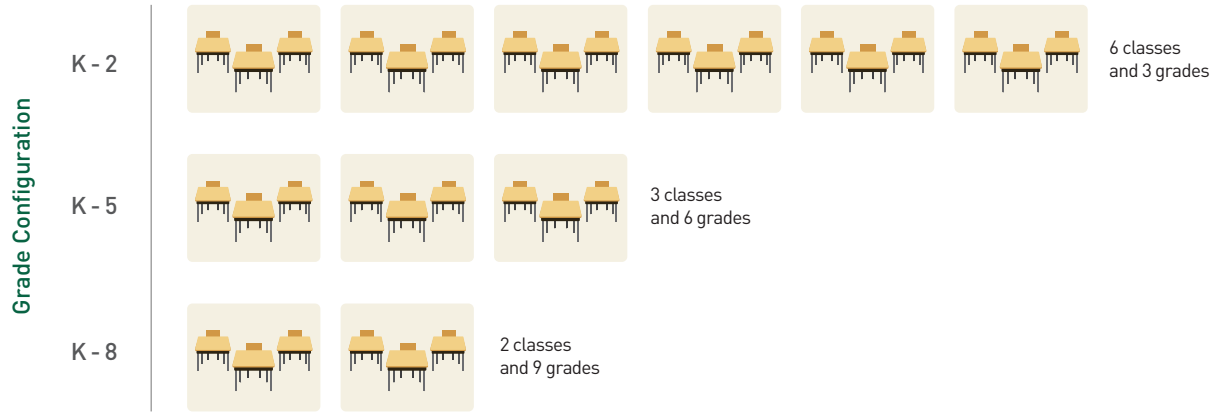
One district debated the value of having primary (K-2) and intermediate (grades 3-5) elementary schools instead of its existing K-5 schools. Interestingly, the debate centered on the benefits of keeping young children together in one school; the impact on the number of teachers needed was not discussed. In fact, it was assumed to be a cost-neutral decision, and they planned on just shifting teachers as needed. This, however, may not be the case. Assume two elementary school buildings have 18 classrooms each and the district is debating between two grade-level configurations:

- One K-2 building and one 3-5 building, or
- Two K-5 buildings

Having a K-2 and a 3-5 building increases the number of classrooms per grade as compared to having two K-5 buildings. The first option would allow for six first grade classrooms in the K-2 building while the other would have three first-grade classrooms in each K-5 building.

Exhibit 2

VARIATION IN CLASSES PER GRADE IN AN 18-ROOM SCHOOL



Source: The District Management Council

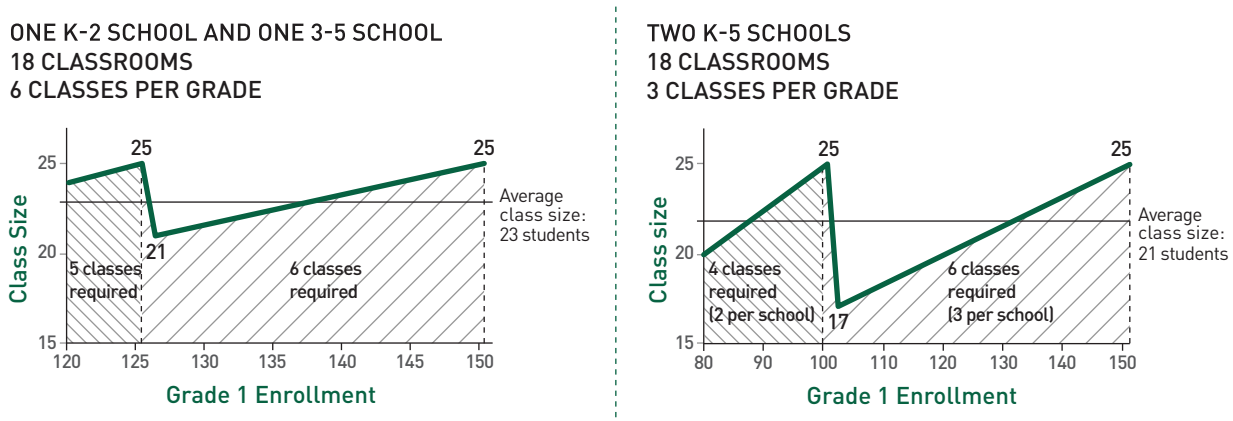
Although the total number of first-grade classes is the same in both scenarios, as enrollment changes, having more classrooms per grade can allow a district to more effectively achieve its existing class-size targets. For example, if 112 students enroll in first grade, grade configuration has a significant impact on class size and staffing. 112 first graders at the K-2 school would require five teachers and have an average class size of 22.4 students. If these same 112 first graders were split between two K-5 schools, each with 56 students attending, then six classrooms of 18.7 students would be required. In each case the class-size target was 25. Neither school reached this target, but having fewer grades at a given grade level reduced the number of staff needed by one teacher.

Since student enrollment at a given grade fluctuates, it is helpful to look at the impact on class size over a range of possible enrollments. If enrollment varies from 120 to 150 first graders in our example, the actual class sizes in the K-2 school would range from 21 to 25 students, with an average of 23 in the primary school. If the district decided to have two K-5 buildings, however, the class size would range from 17 to 25 students, with an average of 21 (Exhibit 3).

As districts consider the financial benefits of grade

Exhibit 3

IMPACT OF GRADE CONFIGURATION ON ACTUAL CLASS SIZE AT VARYING LEVELS OF ENROLLMENT



Note: In this scenario, there is no student transfer between schools
Source: The District Management Council

configurations, there is also clearly an academic component to this decision. Recent research has indicated that students who attend middle schools lose ground in both reading and math compared to their peers who attend K-8 schools.[1] The number of transitions from school to school (e.g., moving from a K-5 elementary school to a 6-8 middle school) is an important consideration. Transitions between schools can be difficult for some students. Instructional practices may change; the textbook series used may vary; and rules and policies can differ. The more a district can vertically align its curriculum and other elements of school life, the more the impact of transitions can be reduced.

2 Consider the impact of school size on class size

As the first strategy demonstrated, increasing the number of elementary classrooms at a given grade level makes it more likely that target class sizes are achieved as enrollment fluctuates. Another way to achieve a similar result is to build larger schools, which allows for more rooms for each grade, regardless of grade level configuration.

While this strategy is not as applicable for districts that are not building new schools any time soon, many districts across the country, especially in the southern and western part of the United States[2], are growing, and building new schools as a result. In districts with declining enrollment and school closure decisions at hand, these strategies can influence which schools to keep open.

Imagine a quickly growing district considering how best to meet increasing elementary enrollment. Two options are under consideration:

- Build one K-5 building with 36 classrooms to serve up to 900 students or
- Build two K-5 buildings with 18 classrooms to serve up to 450 students in each building

The cost of staffing a 900-student K-5 school with teachers may not at first seem much different from the cost of staffing the two 450-student schools.

However, as enrollment fluctuates, so would the actual class size and staffing needs. The two smaller schools are more likely to have smaller class sizes, as small as 17 students, despite a target class size of 25. Over time, all else being equal, the larger school will have average class sizes two students larger than the two smaller schools, reducing elementary teacher and elementary specialist costs by nearly 10%.

Districts may face pushback to building larger school buildings from stakeholders such as board members or parents who prefer smaller schools. Highlighting the cost differences might inform the debate, but school design features can also help. Some designs allow for school-within-a-school options or a sense of a smaller school by having self-contained wings so children stay in a smaller footprint.

3 Ensure student assignment policies mesh with class-size management strategies

The first two strategies help create schools that more efficiently manage variations in enrollment for a given grade. Student assignment policies have a direct impact on managing enrollment fluctuation, and can help create more classes closer to the district's target class size for neighborhood schools, school choice or magnet school models. Interestingly, the greater a district's student mobility (between districts or schools), the greater the potential benefit from this strategy. Each student that enters or exits the district provides an opportunity to ensure that class-size targets are being met.

Student assignment policies govern which schools a student will attend. These are complex rules that require balancing many competing interests such as giving preference to nearby schools, keeping siblings together in the same school, and providing parents choices between different types of schools, all while balancing transportation costs. Most districts set a maximum enrollment for each school; many set maximum enrollments for each grade, often fine-tuning the number of classes per grade based on student enrollment patterns. A given school might be limited to 500 students, but the number of first-grade classrooms, for example, might fluctuate year to year.

Key to many student assignment policies and related staffing formulas is the concept of maximum class size. If no

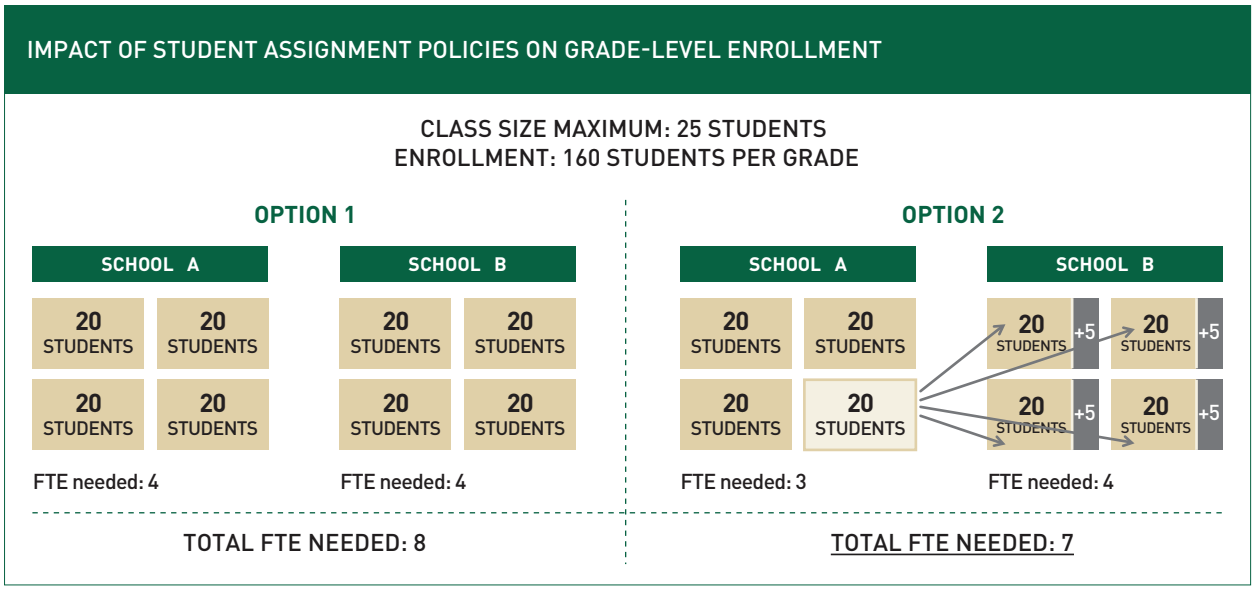
Strategies to better manage class size

classroom can have more than, say 25 students, and 100 students get enrolled in a given grade, four classrooms will be needed, with an average class size of 25, which exactly matches the target. If, however, 80 students are enrolled, four teachers are still required, and the average size will be just 20 students. If the district has one school, there are few cost-effective options available. Large districts, however, have many schools, and opportunities emerge. If a nearby school also had 80 first grade students, they too would need four teachers. If however, school assignment policies directed 100 students to the first school and just 60 to the other, only seven first-grade teachers would be required in total instead of eight (Exhibit 4).

If district assignment policies also incorporated *minimum* class-size targets as well as maximums, then the number of very small (and more costly) classrooms can be reduced. Imagine a K-5 elementary school with three classrooms per grade, and a district policy that set both a maximum class size of 25 and a minimum class size of 21.

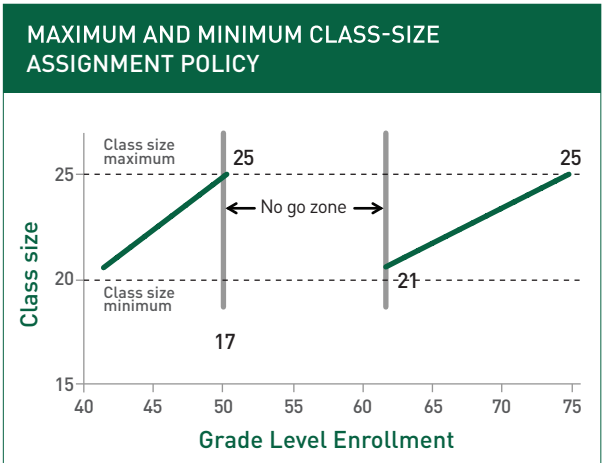
This would mean that under certain circumstances, students would be assigned to another elementary school in the district if that last classroom would have a smaller than target-sized enrollment. For example, if 42 to 50 first grade students selected a school, the school would have two classrooms (Exhibit 5).

Exhibit 4



Source: The District Management Council

Exhibit 5



Source: The District Management Council

If enrollment climbed to 51, the 51st student to the 61st student would be assigned to another elementary school in the district. If however, enrollment climbed to 63 students, another third-grade classroom would be opened.

Having maximum and minimum class sizes built into assignment policies effectively creates "no go zones" for a range of student enrollment.

Managing student enrollment is an already complex challenge, and this strategy adds to the complexity. One of the easier ways of utilizing this strategy is to apply it to managing new enrollments. As children enter the district or move within the district, it is relatively easy to permit enrollment only to schools where a few additional students will not create the need for an additional classroom.

A skeptical reader may be thinking that changing the student assignment policy through minimum and maximum class sizes may save hiring another teacher, but then ends up

Achieving existing class-size targets in middle schools

Many middle schools have adopted the so-called "middle school model" which places a high priority on cross-subject, grade-level teams. This means that each grade has a team consisting of four teachers: one for math, English, science, and social studies. These four teachers teach all the same students, and meet often to discuss student needs.

The education community has lined up for and against the benefits of the middle school model. While the model has many merits, districts must realize that if the model is not managed closely, it can result in middle school classes being well below targeted class-size guidelines.

Here is why. High school teachers are flexible in terms of what grade they teach, but rigid in terms of what subject they teach. For example, a high school math teacher might be asked to teach math at any grade. This provides a level of flexibility in staffing. If a given teacher, who usually teaches ninth grade, does not have a full teaching load, they can be assigned tenth grade classes. By contrast, the middle school model creates rigidity as to the grade and subject that middle school teachers teach. With the middle school model, a sixth grade math teacher may only be expected to teach sixth grade math. Since the seventh grade has its own team, with its own seventh grade math teacher, working across grades undermines the team approach, which is central to the model.

If each teacher on the team teaches five classes per the collective bargaining agreement, then actual class size is not easily controlled. A school with 125 (or any multiple of 125) sixth graders, will have an average class size of 25. If only 90 students (or a multiple of 90) are in the sixth grade then class size will drop to 18.

Districts have a few options to maintain the middle school team model and carefully manage class size. Some schools with 90 or 180 students per grade would assign each teacher four classes averaging 22.5 students, and then ask them to teach a fifth extra-help class, thus eliminating the need for some extra-help teachers. Other districts have modified the team configuration based on student enrollment. For example, some have a cross-grade team that might have three seventh grade and two eighth grade classes one year, and two seventh grade and three eighth grade classes another year. Others have two- or three-member teaching teams in which teachers teach more than one content area.

increasing transportation costs. For most districts, this is a cost-effective trade-off. Hiring a new teacher costs roughly $75,000 in salary and benefits. Transportation costs often run $1,000 to $5,000 a student. Even if ten students need to be bused, the savings are significant.

Rethinking student assignment policies to better manage class sizes across the district is mathematically straightforward, but requires sophisticated implementation. Districts need good data and good data systems. Enrollment planners need to know in real time overall school, grade level, and classroom enrollment figures; and, these figures can change virtually daily as students move in and out of schools. Some districts have this data at their fingertips. Unfortunately, in some districts, central office planners have planned enrollment data, but not actual enrollment, or their data can be months out of date.

4 Use part-time or shared staff at the secondary level

As the first three strategies demonstrate, managing elementary class sizes closely to meet district targets is impacted by grade configuration, number of classrooms at a given grade, and student enrollment. The number of teachers is an output of this process. At the secondary level, often the number of teachers is an input, and class size is the output.

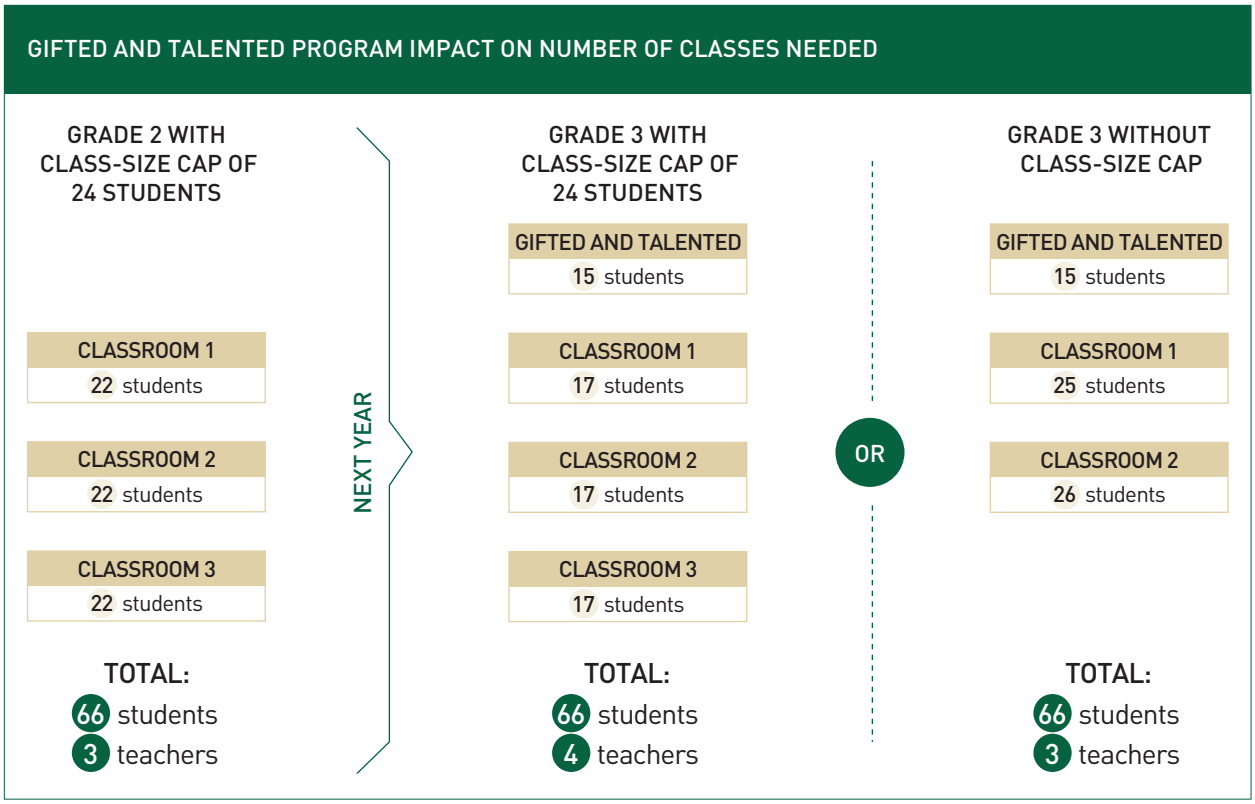
Ideally, teacher staffing at the secondary level is driven by student course selection and district class-size targets. If 1,050 students in a high school sign up for ninth grade earth science and the district has a class-size target of 25, then 42 sections of ninth grade earth science are required. If a full teaching load is five sections, then 8.4 FTE teachers (42/5 = 8.4) are required, recognizing that scheduling decisions will result in some earth science classes over 25 students and some under. More often, however, nine or ten earth science teachers will be assigned because this number of teachers was budgeted or was assigned in years past. The 1,050 students will be split between ten staff, offering 50 sections, with an average class size of 21 students.

Districts often hire full-time staff when only part-time staff is needed. Every time a district employs nine or ten teachers when 8.4 FTE are needed, class sizes are reduced to fill every teacher's schedule. Hiring exactly the staff required at the secondary level is key to reaching existing class-size targets.

Implementing this strategy requires staff that are willing to work on a part-time schedule for part-time pay. Sometimes this is possible, especially for open positions that have many candidates, or for staff that have child or parent-care obligations. For new teachers wanting to get their foot in the door with a district, part-time work can be very appealing. Many such recent graduates work as paraprofessionals, and a part-time teaching position can be more appealing and better compensated than a full-time paraprofessional position.

Another alternative is to share two "part-time" positions across two schools, thus splitting a 1.0 FTE to cover two partial needs. For example, if one high school has a need for two sections to be taught and another high school has a need for three sections, the high schools can share one full-time staff member. This does require each school to have a similar bell schedule. As budgets have tightened, this once highly unusual arrangement is starting to grow more commonplace.

Exhibit 6



Source: The District Management Council

5 Design specialized programs with class size management in mind

As urban districts expand specialized programs like Gifted and Talented, Sheltered English Immersion, themed academies, or foreign language immersion to meet specific student needs or to retain students who might otherwise opt for a charter school, districts are unintentionally decreasing class size below targets and increasing staffing as a result.

In some districts, the guidelines for specialized programs fail to consider the impact on the rest of the school. Often, districts can make small adjustments to how these programs operate and not increase costs. In one district that struggled to keep more advanced students in the district, they created a Gifted and Talented program. As the program was designed and curriculum developed, a decision was made to begin the program in third grade and to limit such classes to 15 students. It was understood that this would slightly increase costs, since the typical class had 22 students. The district had a contractual cap on class size at 24 students. Across the district, it was anticipated that 0.3 extra FTE would be required, given that class size would decrease by 1/3.

Unfortunately, these decisions created much greater costs than anticipated, requiring an extra FTE for each Gifted and Talented class (Exhibit 6). For example, a school with 66 students in second grade would have 3 classes, each with 22 students. Based on the district's Gifted and Talented program policy, only 15 students are selected to be in the program when the second grade students become third graders. Rather than serving these 66 third-grade students with three third-grade teachers, the school required four teachers.

Had the Gifted and Talented class been designed to accept 22 talented students instead of 15, then only three teachers would have been required, not four. Alternatively, removing the class-size cap of 24 would also have allowed all students to be served by three teachers.

Closing thoughts

Increasing class size is one of the most politically challenging issues a district can take on. Fortunately, these five strategies can increase class size for a district without changing class-size targets. By aligning the systems, policies, and processes to achieve existing class-size targets, the financial gain can be had without a great deal of pain.

[1] Martin R. West and Guido Schwerdt, "The Middle School Plunge," Education Next, v.12, No. 2.
[2] United States Census Bureau, 2010 Census.

GETTING STARTED

MANAGING TO EXISTING CLASS-SIZE TARGETS: Systems and Tools to Staff More Closely to Current Policy

Class size is a hotly debated issue in many districts, but even small increases in class size can result in significant cost savings. Many districts have an opportunity to realize savings without the usual political pushback by matching actual class sizes to the targets that they have already set, agreed upon, and approved. Redesigning systems and creating tools can help districts manage enrollment more precisely to achieve their class-size targets.

HERE'S HOW TO GET STARTED:

1. **INVEST TIME, TALENT, AND RESOURCES INTO ACCURATE ENROLLMENT FORECASTING**
   Accurate enrollment projections can help districts create cost-effective staffing plans based on existing class-size targets. Small investments in professional demographers, improved data systems, and real-time attendance data can pay off.

2. **STAFF TO ENROLLMENT**
   Target class size and student enrollment should be the input, and number of teachers should be an output. Using part-time staff at the secondary level and moving staff between schools as enrollment shifts, even after school starts, can keep actual class size much closer to targets.

3. **ESTABLISH AVERAGE CLASS-SIZE TARGETS INSTEAD OF CLASS-SIZE MAXIMUMS**
   In most districts, class-size targets, are, de facto, maximums or caps. If possible, establishing average class-size targets across a grade or school as opposed to hard caps can provide districts considerable flexibility in managing class size.

4. **IF THERE ARE CLASS-SIZE MAXIMUMS, CONSIDER ESTABLISHING CLASS-SIZE *MINIMUMS***
   In most cases, if enrollment exceeds the class-size maximum, another teacher is added, often resulting in much smaller classes. Establishing a class size minimum would mean that, under certain circumstances, students would be assigned to another school in the district if adding another teacher would result in lower-than-minimum class size. Of course, student assignment policies might have to change to accommodate this flexible, cost-effective approach.

5. **SEEK OUT SCHEDULING EXPERTISE**
   Scheduling is critical to managing class size at the secondary level, but creating effective schedules is a rare skill. Charging a "master scheduler" (e.g., a principal with a knack for it, an out-of-district expert, or a central office staffer) with creating schedules for multiple schools can help ensure that existing class-size targets become reality.

***A word to the wise:* DON'T OVERLOOK THE IMPACT OF SCHOOL CONFIGURATION AND SIZE**
Decisions about school configuration and school size seem unrelated to class size, but can actually have a substantial impact on the ability to effectively meet class-size targets. Smaller schools or schools with more grade levels can make it harder to achieve class-size targets. Considering class-size implications of building new schools or rethinking school configurations is essential.

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The research is clear: smaller classes do not raise student achievement, except in the primary grades, and only if classes are sufficiently small, a reality difficult to achieve given today's tight budgets. Notwithstanding the research, smaller classes remain very popular with teachers, parents, and principals.

Lessons from the field

LESSON 1 Accurate, timely enrollment forecasting is critical

LESSON 2 Move staff as enrollment shifts, even after school starts

LESSON 3 Look for class-size management implications in every decision

LESSON 4 Recognize that scheduling is critical to managing class size at the secondary level and that scheduling is a skill

LESSON 5 Move from class-size maximums to average class-size targets

While class size may not have a big impact on learning, it does have an enormous impact on finances. Increasing the average class size by two students, for example, can free up $11-20 million a year or more in a typical district of 50,000 students. In this typical district, approximately $1 million could be saved annually by increasing the average class size from 23 to 25 students in the fourth grade alone (Exhibit 1).

Fortunately, it is possible for many districts to raise class size, re-allocate funds for strategic priorities, and minimize the tough battles. Most districts already have established target class sizes, but in reality, actual class size is often smaller than the targets in place. Raising class size to existing, pre-approved levels can garner savings and minimize pushback.

Some districts, especially those with lower per-pupil spending, have learned five key lessons for achieving class size close to the established target.

LESSON 1

Accurate, timely enrollment forecasting is critical

Most districts already plan next year's staffing based on projected school and course enrollment. If a school is expecting more first graders or fewer students taking biology, staffing is adjusted accordingly. Some districts have built the systems and skills to predict enrollment within 1% of actual. Other districts, however, have much less accuracy in their predictions.

Over- or under- forecasting enrollment by school and course can reduce average actual class size and thereby raise costs. For example, if 2,000 students were expected to take math in a high school, 20 math teachers might be hired; but, if only 1,900 actually end up taking math, then only 19 teachers would be needed. In the other direction, if 125 first graders were expected at a given school, five teachers would be hired, assuming a target class size of 25. If 135 students show up, an extra classroom might need to be opened. If, however, the district knew that 135 first-grade students wanted to attend this school, they may have, through their student assignment policy, accepted only 125 students, and placed the ten additional children in nearby schools where classes are below the target size.

The ability to accurately forecast enrollment varies greatly from district to district. One mid-sized district, for example, has long struggled to staff efficiently due to imprecise enrollment forecasting. The office providing the enrollment data that drives staffing decisions can easily fall victim to numerous organizational shortcomings. Schools often provide outdated and inaccurate current enrollments. High school guidance offices sometimes do not provide accurate course enrollment until after most staffing decisions are already made. Different data systems do not sync, so when a student transfers from one school to another, they can appear on the rosters for both schools. Finally, lack of good cross-departmental communication creates significant inefficiencies. For example, special education and ELL "hold" seats in many classrooms "in case" they are needed. Often these reserved seats go unfilled, sometimes for years. It is not uncommon for a seat reserved for a special education inclusion student to be unfilled, but appear to the enrollment office as filled. As a result, the district might often have classrooms with 15-18 students despite a stated target of 22 at the elementary level.

Some districts have created very sophisticated methods to monitor and forecast enrollment, and thus, can more accurately match staffing to class-size targets. Making enrollment projections an interactive process is one way in which these districts improve their accuracy. In one district, for example, central office prepares the first forecast, then asks principals to revise it based on their knowledge of new construction, shifting housing patterns, and other local factors. Another district employs a full-time planner with training and background in city planning; the district's planner works closely with the city's planning office to monitor new home and apartment construction, track changes of address, and geocode each household in the district. Each year, the district compares actual to projected enrollment, and conducts a root cause analysis to understand any variance so it can revise the forecasting model and/or improve the flow of information for the next forecasting cycle.

Exhibit 1

ESTIMATED SAVINGS FROM BRINGING AVERAGE CLASS SIZE OF ONE GRADE TO TARGET OF 25 STUDENTS

EXAMPLE: 3,800-STUDENTS IN FOURTH GRADE

Average Class Size	Staff Needed	Staffing Costs	Savings from Reaching Target
25	152	$11.4 million	---
24	158	$11.9 million	$0.5 million
23	165	$12.4 million	$1.0 million

Note: Based on average teacher salary plus benefits of $75,000.
Source: The District Management Council

The decision by this district to hire a professional demographer was bold, but the logic was surprisingly simple. Traditional central office staff, especially in the human resources and budget development offices, are charged with managing staff allocations, but do not have training in forecasting demographics, a skill which is commonplace in many government offices and private sector firms. This was not a slight to current central office staff, but rather an acknowledgment of the value of certain skills and training.

Another important lesson is that a district's quest for accurate enrollment cannot end on the first day of school. Enrollment needs to be tracked and refined during the first few weeks. In one district, district leaders receive an update from every school and every classroom on the third day of school. By the seventh day, calls have been made to each family of "no show" students; if they find that students have moved over the summer, staffing is adjusted right away to match actual enrollment. As a result, very few classes are below target enrollment.

Other kinds of highly visible monitoring efforts are helpful, too. In some districts, the CFO leads the effort and the superintendent monitors accuracy of forecasts and reviews enrollment variances on each of the first ten days of school. Since high school class size is dependent on course enrollment and staffing levels, one large district that gives some autonomy to schools still conducts a central office review of each teacher's schedule in each high school. Even though this district is one of the larger districts in the country, they make the

tracking of enrollment and review of staffing schedules a priority.

Districts with effective enrollment forecasting invest time, talent, and resources to ensure that they have timely, accurate information to make these important staffing and class-size decisions. Enrollment and staffing are addressed, assessed, and planned for throughout the year (Exhibit 2).

Exhibit 2

SAMPLE ANNUAL ENROLLMENT FORECASTING AND STAFFING CYCLE

Source: The District Management Council

LESSON 2 Move staff as enrollment shifts, even after school starts

Accurate and timely enrollment forecasting is only helpful if the data is used to drive change. One district establishes its staffing plan around April for the following September. If enrollment changes between May and September (and it does) and pushes some classes above levels allowed by collective bargaining, they add staff; but if actual enrollment is below estimates, staff stay as originally assigned.

This contrasts with other districts that make preliminary assignments for staffing in the spring, but adjust staff assignments and hiring a few times before school starts based on updated projections. Some districts take this type of flexibility further by shifting teachers after school starts based on actual enrollment and after confirming which students have moved or dropped out. The number of teachers moved or classrooms combined is not huge – often involving just 1% to 2% of staff – but, based on these districts' experiences, this approach can

allow actual class size to match target class size with great precision.

There are obvious benefits to providing stability to staff and not moving them around each year or after school starts, but in districts with shifting enrollment, the financial cost of such stability can be high. A few strategies can be used to add flexibility to managing class size, while minimizing the impact on staff. Moving a teacher from one school to another is asking a lot. One district hedges its bets by staffing conservatively, and keeping some teachers unassigned until the first week of school. As actual enrollment becomes known, these unassigned teachers are assigned where class sizes exceed targets. Another district adds a twist to this plan by not actually hiring the reserve teachers, but only budgeting for them. If extra teachers are needed, they can be brought on board; if not, the dollars saved can be repurposed. To ease the burden of hiring quality teachers at the last minute, the district often draws from its pool of newly certified teachers, who are already working in the district as paraprofessionals in hopes of getting a teaching position within a year or two.

Frequent updating of enrollment projections, careful review of actual enrollment by class and course, and building in an ability to shift staff have an additional benefit. They help create a cultural norm that enrollment, not history or staff preference, determines staffing levels. In some districts, there is significant pressure to keep teachers at "their schools." Even more common is the sense that a given number of FTE positions "belong" to a principal, and any reduction can feel like a slight. When staffing is tightly tied to enrollment and well-established class-size targets, the decision to shift staff from one school to another is more transparent and will not be seen as a reflection of any one individual's relative "clout" with central office. Principals will be more likely to understand that the decisions are fair, and will resist the temptation or pressure to engage their families in lobbying district leaders for more staff.

LESSON 3 — Look for class-size management implications in every decision

Districts infrequently change class-size targets, and they never do it without careful consideration. Districts can, however, make decisions seemingly unrelated to class size that have a substantial impact on the ability to effectively meet class-size targets. A few common ones include:

- Special education practices for assigning students to inclusion classes
- When and how students are identified for ELL services
- Switching to K-8 from K-5 schools, especially if the

Does weighted student funding improve class-size management?

A key challenge for central office is knowing how much staff is needed in each school in real time. Great central office data systems can help, but weighted student funding (WSF) can be an effective alternative.

WSF is a funding plan where each school is allocated a sum of money based on the number of students and their needs. The dollars follow the student, and since some students have greater needs, such as being identified for special education, living in poverty, or being a non-native English speaker, more dollars follow some students than others. Rather than central office's assigning a fixed number of teachers to a school and hoping the need was estimated correctly, the school principals each receive a budget in dollars, not specific staff positions, and adjust staffing in real time based on available funds.

Unfortunately, WSF is not a cure-all. In many districts, principals empowered to manage class size through WSF actually drive class size down even further than the central office would have. This happens for two reasons: (1) many principals favor small classes, and (2) they feel more intensely the pressure to keep staff in their current schools and grades.

total enrollment in the school is small
- School choice policies, especially for students who move during the school year
- Policies on part-time staff or staff shared between schools, especially for secondary elective teachers

Some districts very proactively make decisions to make it easier to achieve class-size targets. One district, for example, has a team that includes the CFO and planning office to review nearly all proposed new policy and programs to determine their impact on class size, staffing requirements, and the ability to manage class size in the future. Putting in place appropriate systems and practices can make it easier to create staffing plans that achieve targeted class size. Among the steps districts have taken are the following:

- Building new elementary schools for 800-1,200 students (with wings for school-within-a-school small school environments) rather than the more traditional 300-500 student schools
- Student assignment policies that explicitly consider classroom-by-classroom enrollment at the time selection is made, especially for students moving during the school year
- Ensuring that nearby secondary schools have the same bell schedules, so staff can be shared between schools
- Providing a common curriculum and very similar program offerings across schools to ease the impact of shifting students or staff

Once district leaders deeply understand which factors affect their ability to manage class size to achieve existing targets, they will add a critical new dimension to every policy analysis.

LESSON 4 — Recognize that scheduling is critical to managing class size at the secondary level and that scheduling is a skill

At the secondary level, small classes often occur as a result of the schedule, not student enrollment. For example, 100 students taking statistics should be able to be placed in four classes of 25, but due to scheduling conflicts with other courses taken by these students, this is unlikely to occur. More likely, five classes averaging 20 students, or even six classes averaging 17 students, will have to be offered to accommodate students' schedules. Inefficient schedules can also impede other efficiencies like being able to share a teacher between two schools.

These seemingly unsolvable, frustrating inefficiencies caused by the schedule are actually often caused by the scheduler's inability to schedule, not the schedule itself. Just as some people struggle endlessly to solve a Rubik's cube while others can line up the colors in under a minute, schedules are often more adaptable than they seem when in the hands of a master scheduler.

Districts in which actual class size approaches target class size treat scheduling as a strategically important element of budgeting and managing resources. This takes many forms, including reviewing all schedules at the central office, actively searching for inefficiencies, incorporating staffing efficiency into principal evaluations, and/or actually creating detailed schedules during the budgeting process to support staffing decisions.

Districts leaders who recognize the importance of scheduling also recognize that scheduling is a skill, and a fairly rare skill at that. Too often, the task of scheduling is assigned to the most junior assistant principal or to whomever is willing to work over the summer for a small stipend. And all too often, the staff assigned to build schedules will confess they do not like to build schedules because they are not very skilled at it. In some schools, the person charged with scheduling may know the existing schedule well, but may lack the skill or desire to explore different schedules. Some districts have found ways to successfully access those with strong scheduling skills. Some districts screen principal candidates for their ability to schedule, hire experts on a temporary basis to build schedules over the summer, loan out master schedulers from the central office to schools, or compensate a master scheduler from one school to schedule for three or four other schools.

LESSON 5 — Move from class-size maximums to average class-size targets

Implicit in most discussions about managing class size is the understanding that in most districts, class size targets are, de facto, maximums or caps. Districts with a first-grade target class size of 25 will strive for 25 students in every class, but will not allow 26 or 27 students. When 51 students enroll, three classes of 17 is the solution; the addition of the last student adds $75,000 to the budget. Hard caps create many of the inefficiencies in managing class size.

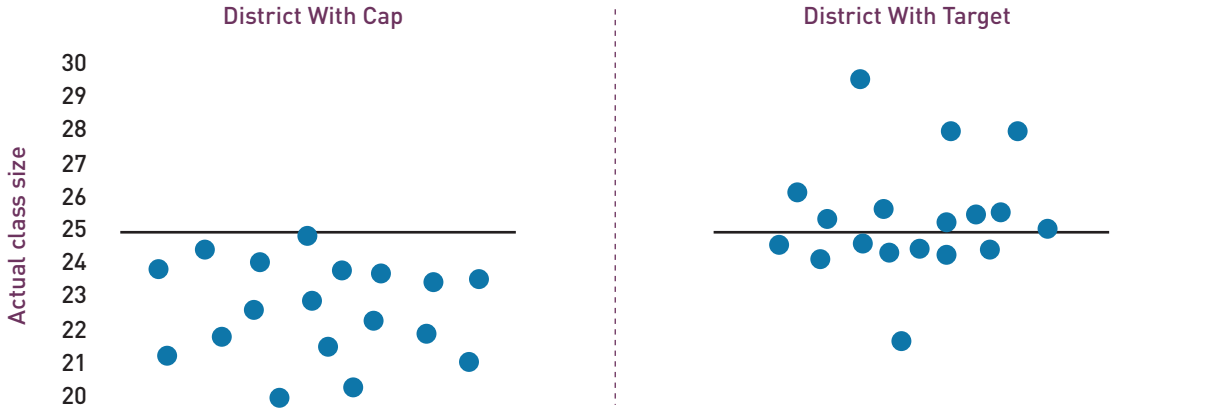
Some districts have provided themselves significant flexibility in staffing by creating average class-size targets as opposed to caps (Exhibit 3). Some districts create targets for entire schools or grades within a school.

One district set its target at 25 students per class on average in each school. In a given school, some classes might have 22 and others 28. They hardly ever add an extra teacher just because a few additional students enroll. Because the average class size for the school is always honored, parents, teachers, and students have grown accustomed to variations in class size. A student might have a small class one year, but then have a larger class the following year. Principals typically have autonomy to decide which grades or classes are bigger than others, ensuring that they can balance sizes out over time.

A slightly more nuanced, but very cost-effective strategy is

Exhibit 3

ACTUAL CLASS SIZES IN DISTRICT WITH CLASS-SIZE CAP VERSUS DISTRICT WITH CLASS-SIZE TARGET
EXAMPLE: 18-CLASSROOM SCHOOL



Source: The District Management Council

to vary average class-size targets strategically. The class-size target might be smaller for grades K-2, or for high-poverty schools, or for gateway courses like Algebra I and English 9. Other grades and classes might have larger class-size targets, but even within these categories, staffing is based on averages, allowing some classes to "go over." When class targets are maximums, it is not uncommon to find that actual class-size is two or three students below the cap. Managing to average class-size targets rather than to maximums could, in some districts, reduce classroom teacher staffing by 5-10% by raising the average class size by just one or two students.

The perfect system

W. Edwards Deming said, "Every system is perfectly designed for the results it gets." For districts that struggle to achieve actual class sizes that match their targets, it is not a reflection of a lack of trying or caring. Typically, it is an indication that their systems are not designed to make managing actual class size easy. Fortunately, districts that have learned how to align their policies, procedures, and practices to carefully manage class size to existing targets have managed to free up substantial funds for more strategic uses.

This chapter is from *Spending Money Wisely: Getting the Most from School District Budgets* by Nathan Levenson, Karla Baehr, James C. Smith, and Claire Sullivan of The District Management Council. To access this chapter and the rest of the series, please go to www.dmcouncil.org. Topics in this series include:

1. **Calculating Academic Return on Investment:** A Powerful Tool and a Great Investment
2. **Managing to Existing Class-Size Targets:** Systems and Tools to Staff More Closely to Current Policy
3. **Adding Precision to Remediation and Intervention Staffing Levels:** Data-Driven Guidelines Improve Schedules, Building Assignments, and Workload
4. **Finding Politically Acceptable Ways to Increase Class Size or Teaching Load:** Freeing up Funds for Strategic Priorities
5. **Strategically Spending Federal Entitlement Grants:** Making the Connection to District Priorities
6. **Ensuring More Students Read on Grade Level:** Cost-Effective Strategies
7. **Improving the Cost-Effectiveness of Professional Development:** Reducing Expenses While Increasing Impact
8. **Rethinking Purchasing:** A Strategic Approach to Increasing the Value of Each Dollar Spent
9. **Lowering the Cost of Extended Learning Time:** Creating Financial Sustainability
10. **Targeting New Investments:** Funding a Better Future Despite Declining Resources

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About the District Management Council

The District Management Council (DMC) partners with public school district leaders to help improve student outcomes, operational efficiency, and resource allocation. DMC was founded in 2004 to address the most pressing and important management challenges facing American educators. The trusted advisor to school district leaders, DMC works with districts on these important issues to achieve measurable results. With the firm belief that leadership and management matter, DMC helps to strengthen and increase the managerial capacity of the people leading school districts to systemically improve the performance of the American public education system. To learn more, visit www.dmcouncil.org.

Support for this series was provided by the Bill & Melinda Gates Foundation.

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