Improving Teaching and Learning When Budgets Are Tight

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Education budgets are imploding at the fiscal seams. A sluggish economy and falling property values are shortchanging public education budgets across the country. At the same time, there are growing expectations for improved student performance, better teachers and closing the achievement gap. Schools and teachers are caught in this double squeeze.

Is there a way to meet these demands? Is it reasonable to ask schools to continue to raise student performance and improve teaching with no additional money and in some cases with less? Does the way forward absolutely require more money?

We believe there is a way to move forward. Schools can improve learning and teaching using research-based and best practices-based strategies that in many cases don’t require more money, and in others where more money will help if it’s spent strategically.

But there are competing views about this. One group argues that more competition will ensure that schools spend education dollars more efficiently, and that the demands on schools today require more choice—vouchers, charter schools, contract schools and other market-driven solutions. Some who support competition also want to give schools more control over spending decisions. These approaches have merit, but competition per se won’t improve schools. After all, two of America’s automobile manufacturing companies went bankrupt in competitive markets. To survive and compete in a vastly different marketplace, they had to redesign and improve the cars they build. So competition only works if it leads to school redesign, and there is scant evidence for that in education so far, but what is important is school redesign regardless of the competitive environment.

Others argue that schools just need more money. But, if that argument were valid, high-spending schools would be doing better than low-spending schools, and that’s not always the case. We’ve found that even when resources increase substantially, schools frequently don’t use the new dollars to strategically improve performance (Picus, Odden, Aportela, Mangan, & Goetz, 2008).

But, we’re confident school performance can improve even when funding is constrained. These conclusions draw from our work in school finance adequacy (Odden & Picus, 2008), our study of schools and districts that have literally doubled student performance on state tests over a four- to six-year time period (Odden, 2009), and our partnerships with districts in reallocating resources to more powerful education visions.
We see five interrelated strategies.

**STRATEGY #1: Resist the Cost Pressures on Schools**

Our current system of local control of education works well, but it tends to boost costs, not student performance. Key factors behind these pressures to increase costs include:

**Smaller classes:** Most districts find that reducing class size by one or two students eats up large portions of the budget and generally has modest impacts on achievement. More specifically, research—mainly the Tennessee STAR experiment—supports class-size reduction only for grades K-3. In that study, larger classes (24-25 students) were compared to similar size classes with an instructional aide as well as to smaller classes (15-17 students). The small class sizes (but not the regular classes with an instructional aide) did increase student achievement by about 0.25 standard deviations for all students (Nye, Hedges, & Konstantopulos, 2002) and about twice that level for low-income and minority, primarily black, children (Krueger & Whitmore, 2001). Subsequent research showed that the positive impact of small classes continued on into middle and high school and beyond (Nye, Hedges, & Konstantopulos, 2001). Unfortunately, there’s no similar research on class-size reduction in upper elementary, middle, and high school grades.

Yet pressure to reduce class size remains a high priority for many school districts. Unfortunately, after the smaller classes are funded, there’s little left to fund anything else.

**More electives:** The public also pressures schools to offer many elective courses—art, music, health, and physical education; career and technical education; advanced classes like Chinese 4 or Spanish 6; fun classes like jewelry making, cheerleading, and on and on. To respond, schools often expand to seven or eight periods a day, an option that increases costs by 20% to 40% compared to a six-period day. Further, because many elective classes are small and often taught by senior teachers, the cost per pupil can be four to five times the per pupil spending on core courses (Roza, 2010). There’s little corresponding pressure—other than from parents of children with disabilities—to provide extra help for struggling students. These include programs such as teacher tutoring, extended-day programming, English as a second language instruction, and summer programs. Since parents of many of these students often don’t have enough political clout to get these services, the calls for smaller classes and more electives often carry the day with local school boards.

**Automatic pay increases:** Nearly all school districts compensate teachers via step and lane salary schedules that produce virtually automatic annual pay increases. Even if the prices for everything else that a school district buys stay the same, districts need more money each year because teachers and administrators have moved up a step of experience, and/or across an education lane, and are due those salary increases. If the entire salary schedule is increased for a cost of living adjustment, the impact of these automatic increases is even greater. This is a key reason why structural budget gaps exist every year, gaps that grow larger in states with more inelastic tax structures.

Since salary structures aren’t linked to the twin strategic goals of improved teaching and higher achievement (Odden, 2008a), salary schedules not only push up costs, but also have virtually no positive impact on system performance.

**Growing benefit costs:** Finally, the public is realizing pension and health benefits are another huge draw on the education dollar. Few districts actually funded retiree health and other benefits, so those costs must be included in every year’s budget. Further, most districts are experiencing large increases in health and pension costs for those still working.

**Increased costs and flat performance:** In sum, schools are buffeted by intense pressures—smaller classes, more electives, automatic pay increases and costly health and pension benefits—all of which
increase costs and none of which have significant positive impacts on student learning. The public pressures school boards, school boards respond, and the system moves on each year costing more. No wonder spending per pupil has risen dramatically in the past three decades while performance has been flat or only modestly increasing.

**STRATEGY #2: Develop a More Powerful School Vision**

Scores of schools and districts that have boosted student performance and closed achievement gaps have used similar processes to attain impressive outcomes (Odden, 2009). These schools and districts:

**Use data-based decision making:** Often, they use state tests to identify macro-problems and issues; benchmark data to monitor student progress throughout the year; shorter-cycle assessments to help frame instructional units before they’re taught; and common formative assessments to assess the effect of collaborative instructional practices on student learning.

**Set very high and ambitious goals regardless of school demographics:** Goals might include doubling student performance on state tests; doubling the percentage of students achieving at the advanced levels on those tests; closing achievement gaps by 50%; and relentlessly pursuing attainment of those goals irrespective of student demographics.

**Adopt new curriculum and textbook materials:** They believe that new and better materials are needed to move the student achievement needle; over time, this includes developing a schoolwide vision of effective instructional practice and expecting all teachers to use those practices.

**Invest in professional development:** This includes summer institutes, instructional coaches in schools, time for collaborative teacher group meetings during the school day, and funds for trainers and related costs.

**Change the work life of teachers:** They organize teachers into collaborative groups (grade-level teams in elementary schools, subject teams in middle schools and course teams in high schools), and engage those teams in data-based decision making to improve instructional practice and target appropriate interventions to struggling students.

**Provide extensive extra help strategies for struggling students:** These include 1:1 teacher tutoring (and no more than a 1:5) and extended-day and summer programs with a strong academic focus. These extend instructional time while holding high performance standards constant.

**Pay attention to teacher and administrator talent:** Distribute the school’s instructional leadership by identifying teachers who are collaborative work team leaders, instructional coaches, or school curriculum council coordinators. They also ensure that high-poverty schools have their share of effective teachers and principals, which can require changing recruitment and hiring practices, and altering teacher transfer policies.

**STRATEGY #3: Identify Necessary Resources to Meet the New School Vision**

Drawing on these schoolwide and districtwide findings, as well as studies of individual programs, we’ve identified the resources needed to support these best practices (see our adequacy studies on www.lpicus.com). In brief, the resources are:

**Small class sizes:** Provide core teachers at ratios of 15:1 in grades K-3 and 25:1 in grades 4-12. However, fund all the resources identified below before expending additional resources on smaller classes.

**Elective teachers:** Provide that 20% of all teachers in elementary and middle schools and 33% of all middle and high school teachers are elective teachers. This would allow all schools to provide a full liberal arts curriculum plus a range of electives, with ample provision for planning and collaborative time for all
teachers.

**Professional development:** Ensure that teachers work—and are paid for—10 pupil-free days above the standard 180 instructional days, and use those days for professional development. Provide school-based instructional coaches at the rate of one coach position for every 200 students. Allocate $100 per pupil for trainers, who could either be central office staff or consultants, and other related costs.

**Multiple resources for struggling students:** Provide one tutor position for every 100 students from a poverty background (with at least one in every school of about 500 students.). Extend the school day and provide summer school programs with class size limited to 15 students. Provide one ESL teacher position for every 100 ELL students. Allocate $25 for every student enrolled in the district for services for gifted students. For students with mild and moderate disabilities, ensure one special education teacher position and half of an instructional aide position for every 150 enrolled students. Ensure full state funding for children with severe and profound disabilities.

**Pupil support:** Allocate funds to support guidance counselors and nurses augmented by additional positions (e.g., family liaison) at the rate of one more position for every 100 students eligible for free- or reduced-price lunch.

**Administrative and clerical support:** Allocate funds for principals, assistant principals, librarian, secretarial staff, and funds for substitute teachers and supervisory aides to cover recess, lunch and bus supervision, as well as janitorial and security staff.

**Instructional materials:** Allocate $250 per pupil for computers and related equipment and technologies, $200 per pupil for instructional materials and short-cycle assessments, and $250 per pupil for student extracurricular activities including athletics, student clubs, and other service opportunities.

These resources and the strategies they support are likely not the only way to dramatically boost student achievement, but they offer a “good approximation” of what we now know from research and best practices about the fiscal side of dramatically boosting student performance.

**STRATEGY #4: Reallocate Resources to Meet the New Vision**

We’ve estimated what these recommendations would cost in each of the 50 states, including adjusting the funding by state-specific percentages of poverty, ELL, and handicapped students, and using state specific average prices (Odden, Picus, & Goetz, 2009). Our research shows that 20 states—mostly in the Midwest and the East—already provide more funding than these recommendations require, often as much as $2,000 to $3,000 more per pupil. Another 20 states provide less funding than needed to support the resources identified above, which means that absent new sources of revenue, districts and schools in those states need to be more strategic about how they use their funds. The other 10 states provide funding at about the level suggested through our research, suggesting that they could come very close to deploying all the strategies behind these recommendations with modest adjustments in their class size practices.

**Schools funded at or above these levels:** Their task is to understand and adopt the vision, and reallocate staffing resources toward these strategies over a number of years.

**Schools facing budget reductions:** Use the core recommendations to help determine which cuts will have the least impact on student performance—for example, slightly larger classes, fewer instructional aides, less focus on pullout remedial programs, and fewer administrators.

**Schools with inadequate resources to fund this model:** We suggest five macro-strategies for allocating scarce dollars:

1. Use these staffing recommendations as a general guideline, and reallocate current staff to these configurations.
2. Be flexible about class size.

3. Organize schools so that all key teacher groups have at least three 45-minute periods a week for collaborative work, even if it means increasing class sizes.

4. Provide all of the resources to help teachers and students—especially instructional coaches and staff for “extra help” strategies—by varying class size, if necessary allowing class size in secondary schools to rise substantially before reducing the instructional coach and extra help staff.

5. If increasing class size still doesn’t enable the school to fund the necessary staff, then consider reducing, but not eliminating instructional coaching, extended day and summer school, and lastly, tutoring staff.

STRATEGY 5: Rethinking Teaching Compensation

It’s time to rethink how educators are paid. We’ve argued elsewhere that the current teacher salary schedule is antiquated (Odden, 2008a). Beyond the first three or four years, experience is not linked to teacher effectiveness, and except for graduate degrees in the area of licensure, neither are education units or degrees. And there is nothing linked directly to student performance. As a result, the current teacher salary structure provides weak if any incentives for the core goals of the education system—improved teaching and learning.

As the country develops new approaches to teacher evaluation, including multiple measures of a teacher’s instructional practice and multiple indicators of impact on student learning, states and districts will have metrics they can use to redesign teacher salary structures. There are several points to briefly note about this salary structure, for which the numbers, steps, and columns are only illustrative:

• First, the various performance categories would be driven by multiple measures of effectiveness—and the higher the effectiveness level, the greater the salary.

• Second, movement up the schedule is determined by the level of effectiveness. Young “super stars,” if they’re really effective, can get to the top levels more quickly; as effectiveness indicators show they meet the standards for the next higher performance category they can skip steps in the schedule and jump up to the higher salary category. But salaries are capped (except for periodic market adjustments) by the top step in each effectiveness level, so if a teacher’s effectiveness stays at level 3, his or her salary will always be lower than the salary for teachers in level 4.

• Third, the largest pay increases are provided when the effectiveness measures indicate performance at a higher level.

• Fourth, this schedule shows some step increases within each level; fewer or more steps could be provided, but the highest step in each category is, and should be, lower than the first step in the next highest effectiveness level.

• Fifth, this basic structure can be augmented with incentives for teachers in areas for which there are teacher shortages, such as math and science, as well as provide an additional incentive for certification from the National Board for Professional Teaching Standards.

This structure would transform how teachers are paid, by linking the level of pay to the level of effectiveness, a goal long sought by policy makers and education leaders. In addition a salary structure of this type is affordable by almost all school districts if they reallocate current salary dollars to this structure over time (Odden, 2008b), and assuming the overall system develops the multiple effectiveness indicators needed to operate it. A similar structure could be developed for principals. School systems could use such structures and NOT provide automatic pay increases every year. Each year, a district would first determine how much additional money was available for salaries. The district would then decide priorities for salary
increases, such as funding all effectiveness level increases first, then subject-area shortages, and then step
increases. In addition, bonus programs for individual teachers or all faculty in grades or schools could—and
we argue should—be provided on top of these base salary schedules (Milanowski, 2008).

This approach to compensation would structure base pay for teachers and principals on their instructional
(or leadership) effectiveness and provide bonuses for directly improving student performance. Finally, if
desired, the system could even eliminate automatic pay increases by specifying an annual salary increase
pool, and then establish priorities for how the pool would be allocated to the various compensation
elements. Personnel benefits The issue of benefits is too complex to cover completely in this article and, in
the short term, there are few options for reducing benefit costs. For the most part, the only realistic short-
term solution is to increase the employee share of the costs in places where employees have, to date, only
paid for a small portion of health and pension benefit costs.

The major longer-term issue is to address pensions for educators. In addition to substantial unfunded
liabilities in many states, a number of research studies now show that educator pensions: are inequitably
distributed; redistribute pension resources from younger to older teachers; discriminate against educators
who move across state lines; and can be "gamed" to pay large pensions by inflating salaries in the last
years of service. Consequently many pension plans are not economically aligned with lifetime pension
contributions and the investment gains linked to contributions to those plans (Costrell & Podgursky, 2010).

Though many believe that the only way to address pension change is to shift pension responsibility from
employers to employees by moving from defined benefit to defined contribution plans (e.g. 401ks), there is
an alternative. Several companies, including IBM, have adopted "cash balance" plans.

Such funds share a number of common qualities:

• Cash balance plans are individually based; each worker has his or her own cash balance fund.

• Both the employer and employee contribute to the fund monthly based on agreed upon relative shares
  from each party.

• They are portable. Contributions are provided wherever one works, eliminating the inequity to individuals
  who move and can’t take their pension benefits with them.

• The value of each individual’s pension fund is linked to the contributions made to it over their work life,
  and can be turned into an annuity at retirement. Payouts would not be artificially increased by significantly
  larger salaries in their last few years of work, artificial retirement multipliers, or other options that often
  inflate pension fund liabilities. Though states would need to determine how pension costs would be shared,
  cash balance plans would eliminate pension underfunding because pension contributions would be made
  monthly by law, would make pension amounts fairer by having them vest immediately with the employee
  regardless of where the individual worked, and link them appropriately to the work life contributions and
  investments gains of each individual.

These macro-principles for resource reallocation have emerged from working sessions with faculty and
administrators in the schools and districts where we’ve worked. In those schools, small class size wasn’t a
prime consideration. Instead, they felt instructional coaches were necessary to improve core classroom
instruction for all students, and they felt time for teacher collaboration during the regular school day was
critical to improve core instruction. They also argued that teacher tutors were the most effective, initial
intervention strategy for struggling students, particularly for reading (Odden & Archibald, 2009).

This overall school vision and these particular staffing formulas and configurations provide guidance for
estimating an "adequate" level of education funding. They can serve as a structure when schools with
greater resources face budget reductions, and offer guidance to schools with fewer resources as they face
further cuts. They can also help schools determine how best to benefit from any increases in revenues.
Conclusion

Despite tight budgets, all schools across the country can and must continue to focus resources on improving instructional practice and student learning. Though some schools clearly have more flexibility than others, most schools probably need to engage in some instructional revisioning and staff reallocation. The current fiscal shortcomings buffeting schools shouldn’t be used as a rationale for failure to make continued progress toward higher levels of student achievement.

Despite the recent budget cuts, the United States spends over $500 billion on public K-12 education including many billions for students who need extra help to meet state standards. The education system must continue to use those resources in the most strategic and efficient ways to boost student learning and close existing achievement gaps. The country needs this performance for its economy, and each child needs it in order to fully participate in family, work, and our democracy in the future.

References


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