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Reinventing School Finance: Falling Forward

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States and school districts are facing unprecedented financial pressure due to the continued poor performance of the United States's economy. Dramatic shortfalls in funding due to reduced tax collections were held off for 2 years thanks to federal stimulus funds, but with these revenues already consumed and little likelihood of more in the near future, school districts are faced with some of the largest funding shortfalls they have ever experienced. This article offers a number of suggestions for ways schools and school districts can reduce spending while maintaining a strong emphasis on improved student performance. These ideas include focusing more resources on core subjects, making trade-offs that include the potential of larger classes in exchange for professional development in the form of instructional coaches, and establishing research-based priorities for the use of existing resources.

As this is written in early 2011, state budgets face a 3rd year of deficits and budget cuts resulting from the economic downturn that began in the fall of 2008. Although there are signs of economic recovery, it appears that state and local government budgets will face considerable shortfalls in fiscal year 2011–12 and possibly for many years beyond. The problem is exacerbated for FY 2011–12 because federal assistance under The American Recovery and Reinvestment Act of 2009 (ARRA) and the Education Jobs Fund of 2010 (EduJobs) will be exhausted in either the current (2010–11) or next fiscal year. The resulting reductions in revenue for states have had dramatic implications for local school districts that in many states are highly dependent on funding from their respective state. Although in many states ARRA and EduJobs funding has cushioned the fiscal blow, the next several years look grim in terms of funding for schools.

All of this comes at a time when there is growing pressure for schools to improve student performance, something that in the past was accompanied by additional funding to acquire more teachers and instructional support personnel and purchase additional learning materials. Schools are now faced with difficult choices as they cope with real decreases in the dollars available to educate the children for whom they are responsible. This represents a substantial change from the past, when even in hard times, schools often received more funding from year to year—just less additional funding than they thought necessary to continue their efforts to reach improved student

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outcome goals. Today, in many states and school districts across the country, there are fewer actual dollars from one year to the next, forcing educational leaders at all levels to confront a very new type of budget shortfall, one that quickly cuts to the center of district budgets—teachers, who have direct contact with students on a daily basis and are responsible for their learning.

It does not appear that these problems will go away in the short term. Thus, schools are faced with the challenge of finding additional resources for schools and/or making substantial funding cuts while being pressured to continue to boost student achievement. This article addresses these issues in the context of what appears to be the new fiscal reality for schools. It offers suggestions regarding ways schools might find additional sources of funding but focuses most of its attention on how schools might analyze current spending patterns to look for alternative uses of resources that focus more closely on research-based strategies that show promise for continuing to improve student learning even in these difficult economic times.

This article has four sections. The first provides more details on the current and future fiscal condition of the 50 states and its likely impact on future school spending. The second section reviews possible sources of new revenues and assesses the likelihood of finding support for new taxes to support education. The third section of this article discusses resource allocation strategies that schools and school districts currently have and ways to redirect those resources and to prioritize the use of existing resources, if expenditure reductions are necessary, to strategies that evidence suggests will continue to help improve student performance. Finally, the last section offers some conclusions about where school funding is likely to go in the near future and what actions school leaders need to take to ensure that the students in their districts continue to learn and achieve at high levels.

EDUCATION FUNDING: WHERE HAS ALL THE MONEY GONE?

The 20th century saw dramatic changes in the way schools were funded (Odden & Picus, 2008). In the early 1900s, school districts relied almost exclusively on local property taxes to fund their programs. Over time, the inequalities in individual district property wealth—and resultant ability to raise revenues—led to states playing a greater role in funding education. Relying on sales and income taxes, states were able to equalize the ability among school districts to raise local school revenues, although the extent to which this occurred varied from state to state and has been over time the subject of considerable litigation about what constitutes equity. In recent years, legal strategies have focused on the concept of adequacy, or how much money is needed to have a reasonable assurance that all students can meet state proficiency standards. As states strive to provide funding for an adequate education, one result has been a further shift of dependence on state-level resources. Although local property taxes are still a major portion of the funding for school districts in states that have addressed adequacy concerns, often the total funding level is driven by the state with local tax rates set largely, if not entirely, by factors outside of a school district's control.

The result of these changes over time has been a dramatic shift in the source of funding from local governments to state governments. At the same time, this has meant less reliance on local property taxes and more reliance on state sales and income taxes. One consequence of this shift in funding has been to move from traditionally more stable revenue sources (property taxes) to revenue sources that vary more with fluctuations in the economy (sales and income taxes). As shown next, however, the recent recession has been so severe—caused in part by a housing boom and resultant drop in housing values—that even property tax revenues have declined substantially, wreaking further havoc on school district funding levels.

Federal funding for education had never exceeded 10% of the total until 2009–10. Because of the severe revenue declines in state revenues, ARRA provided \$100 billion in stimulus funding to states—much of it used for education—and EduJobs provided another \$10 billion in funding for 2010–11, all of it focused on filling education funding holes and saving jobs in school districts. The effect of these resources has been to increase the federal share of school district funding to approximately 20% of the total in 2010–11. Unfortunately, as described next, this funding is not likely to continue into the future and in fact will run out well before the states fully recover from the funding declines of the past 3 years.

Fiscal Condition of the States

Given the increased importance of state funding for education, the severe declines in state revenues in recent years have led to substantial reductions in education budgets in most states. The Center on Budget and Policy Priorities (McNichol, Oliff, & Johnson, 2011) projects that 44 states will face budget shortfalls for fiscal year 2011–12 totaling as much as \$140 billion. This shortfall will emerge on top of large budget deficits from previous years that have led to state budget shortfalls that totaled more than \$460 billion—of which only about \$158 billion was replaced by ARRA and its extensions. In other words, during fiscal years 2008–09, 2009–10, and 2010–11 states were forced to find more than \$300 billion in spending reductions or new taxes to balance their budgets. Table 1 shows the impact of these changes for the last 3 years and the estimated impact for 2011–12. As the table shows, states may face the biggest spending cuts (or tax increases) in 2011–12 due to the noncontinuation of federal stimulus funds.

It is also helpful to review total revenue and spending of the 50 states between fiscal year 2006–07 and 2010–11. Figure 1 shows how overall revenues and expenditures have declined since fiscal year 2007–08 and the dramatic impact of the recession that began to impact state budgets in fiscal year 2008–09. Of particular note is the deficit spending beginning with fiscal

	State Budget Shortfalls, 2008–09 Through 2011–12 (All 50 States and DC)		
Fiscal Year	Total Budget Shortfall	Federal Stimulus Revenues	Net Shortfall (Closed With Budget Cuts or New Taxes)
2008-09	110	31	79
2009-10	191	68	123
2010-11	160	59	101
2011-12 ^a	140	6	134

TABLE 1
State Budget Shortfalls, 2008–09 Through 2011–12 (All 50 States and DC

Note. Values are in billions of dollars. Reprinted from "States Continue to Feel Recssion's Impact," by E. McNichol, P. Oliff, and N. Johnson, 2011, Washington, DC: Center of Budget and Policy Priorities. Retrieved from http://www.cbpp.org.

^aEstimated.



FIGURE 1 50 State General Fund Revenue and Expenditures, FY 2007 to FY 2011 (color figure available online). *Source:* National Association of State Budget Officers (2010a).

year 2007–08, suggesting that for the past 3 years states have been dipping into their rainy-day funds and into budget reserves to balance their budgets—meaning this option for mitigating the impact of low revenues is not likely to be available in the future.

Implications for School Funding

One result of these budget cuts has been reduced spending for K-12 education in many states. The National Association of State Budget Officers (NASBO) estimates that expenditures for K-12 education from state and federal sources grew from \$325.0 billion in FY 2008 to \$335.3 billion in FY 2009 and an estimated \$337.4 billion in FY 2010 (NASBO, 2010b). Although this represents an increase of 3.2% from FY 2008 to FY 2009 the increase from FY 2009 to FY 2010 amounted to 0.6%, and it is anticipated that there could be a similarly small increase for FY 2011. Notably, 22 states provided less state and federal funds for K-12 education in either FY 2009 or FY 2010 than they had in the previous year, and in five of the states (South Dakota, Georgia, South Carolina, California, and Oregon), there were actual real dollar declines in both years (and the number of states increases if the comparison is in dollars per pupil while flat funding combined with enrollment growth produces fewer dollars per pupil each year).

When faced with limited or even negative growth in state and federal resources, school districts in many states are able to turn to increased property taxes to offset the difference. Unfortunately, this option has been less available to school districts in recent years. More and more states have enacted tax limits of one sort or another, either limiting a school district's ability to increase property taxes or requiring super majority votes to enact such additional taxes. When combined with the overall weak economy leading to voter reluctance to enact new taxes and declining property values in many areas of the country, increases in property taxes have been less likely than before to offer relief from funding shortages.

Most economists and economic projections do not see an immediate change in the fiscal circumstances of the states (see, e.g., NASBO, 2010a and McNichol et al., 2011). With the exception of a small number of energy producing states like Wyoming and North Dakota, the lingering high rate of unemployment, combined with low consumer confidence and spending has put downward pressure on both income and sales tax receipts. Although California has received national press for its continuing deficit problems, which for FY 2012 amount to as much as 29.3% of the state's projected FY 2011 budget, it is not alone. Other large states also face massive fiscal hurdles for FY 2012. Illinois' estimated budget shortfall of \$15 billion represents almost 45% of its FY 2011 budget, whereas in New Jersey the shortfall of \$10.5 billion for next fiscal year represents 37.4% of the FY 2011 budget. In Texas, the similar figure is \$13.4 billion or 31.5% of the FY 2011 budget (McNichol et al., 2011).

The result of states' fiscal stress is growing pressure on school districts to either find new sources of funding or to reduce spending while facing continuing pressure to increase student performance. As the following sections demonstrate, new sources of revenue seem unlikely to remedy the kinds of fiscal losses districts appear to be sustaining, but strategic decisions based on research-driven data may help those districts find ways to reduce spending and minimize a negative impact on student learning—in some cases even finding ways to use resources more effectively to improve student outcomes.

ALTERNATIVE REVENUE SOURCES

The most obvious source of new revenues for education is to find ways either to increase local property taxes or to rely on additional revenue from the state. As previously demonstrated, the latter option is not likely to be available in most states for the foreseeable future. Moreover, the federal funds (ARRA and EduJobs) that carried states and districts over for the last 2 years appear to be gone. Although some states have balances in these stimulus accounts, they are generally the states with the least fiscal problems today. Moreover, states must expend many of those funds by September 30, 2011, making them available in FY 2012 but not beyond that (McNeil, 2011).

The traditional approaches to finding additional revenues for schools focus on local property taxes, or increased state revenues. Although many states have attempted to find alternative revenue sources such as state lotteries or specialized user taxes, these often raise relatively small sums of money and frequently aggravate small groups of vocal taxpayers, which often results in their repeal soon after implementation.

Odden and Picus (2008) argued that the most economically efficient taxes are those with a broad base and low rate. They can generate high yields with relatively few economic distortions (Musgrave & Musgrave, 1989, offered an extensive treatment of this issue). Generally this means education funding options would rely on property, sales, or income taxes.

Most states rely on a combination of all three taxes to fund services including schools. In states that do not levy all three (e.g., five states do not have a sales tax and nine do not currently levy an income tax), one option is to establish a new tax. The political opposition to new taxes

probably makes this option unrealistic. Alternatives include raising the tax rate on existing taxes or broadening the base on which the tax is levied.¹

During the current recession, a number of states have attempted to increase a variety of taxes with limited success. Several states (Oregon, California, Connecticut, Delaware, Hawaii, New Jersey, New York, North Carolina, and Wisconsin) raised income taxes in 2009 or 2010, whereas California, Massachusetts, Minnesota, Nevada, North Carolina, Arizona, Kansas, and the District of Columbia increased sales taxes in those 2 years (Henchman, 2009, 2011). In some of these states the taxes are set to expire in the future—or in the case of California, they expired on June 30, 2011, and newly elected governor Jerry Brown was seeking voter approval to continue the increases for another 5 years.

Other alternatives to raising tax rates is to change the base on which the tax is levied. Although this has the potential to increase revenues, many such attempts, such as Florida's effort to apply a sales tax to personal services (e.g., accountants, lawyers, etc.) and California's efforts to tax junk food, have failed in the past. Moreover, in states where things like food and clothing are exempt from sales taxation, including them in the sales tax base makes them more regressive and places a greater burden on low-income households.

Finally, the recent emergence of the Tea Party has ignited stronger antitax attitudes making it harder and harder for elected officials to even recommend any strategy to increase taxes. When combined with the tax increases already in place, and the opposition elsewhere to higher taxes, further enhancements to state and/or local revenues seem unlikely in the foreseeable future. What then can school districts do? The following section offers several approaches to identifying inefficiencies in current education resource use and strategies to reallocate existing educational resources to enhance school efficiency and to reduce expenditures when necessary because of difficult fiscal conditions.

Making School Spending More Efficient

If schools are unlikely to see large increases in funding in the future, their challenge is to find ways to use the resources they have better and use them in ways research suggests will lead to improved student learning. This section discusses eight strategies that districts and schools should consider for finding ways to cut school funding while maintaining a focus on improved student learning. It looks at ways schools can engage in the reallocation of current resources toward alternative resource allocation strategies that can help improve student performance. Before discussing the eight strategies, we discuss two contextual considerations: the need to establish ambitious goals and to determine the highest priorities for freed-up resources should they be available after necessary cuts have been made.

¹If the federal government engaged in reform of the individual or corporate income tax structures by eliminating deductions and lowering the rates but nevertheless producing more revenues, states conforming their own corporate and income tax structures to the federal changes could also produce more revenues, but this possibility—which some might call remote—would address medium but not short-term revenue shortages, so it is not a viable option for the next couple of years.

The Need for Goals

Any engagement in budget cutting or resource reallocation is immensely aided if clear district and school goals are used to guide decision making. In the following discussion—and in our work with states, districts, and schools—we place a priority on student achievement in the core subjects of mathematics, science, English/language arts/reading/writing, history (not social studies), and foreign language. We look for ways to strengthen student performance in these areas by cutting or reallocating resources that are not directly linked to goals related to improving student performance in these areas.

First Priorities

It also helps districts to have a "theory of action" in mind as their leaders assess current resource use. This makes it easier to assess alternative and potentially more cost-efficient as well as simply more effective resource-use practices. Our "theory of action" is developed in our school finance text (Odden & Picus, 2008), and two books that identify in detail strategies schools and districts have used to dramatically improve student learning—virtually doubling student performance over 4 to 6 years in many cases (Odden, 2009; Odden & Archibald, 2009).

Although our theory of action includes many elements, it identifies three critical resource needs that seem to be closely associated with schools and districts moving the student achievement needle by large amounts:

- Time during the regular school day for collaborative teacher work on curriculum and instructional issues.
- Instructional coaches to work with teachers in collaborative groups as they engage in formative student performance data analysis and discover the implications of those data for instructional change.
- Certified teacher tutors who provide extra help, or Tier 2 interventions in the Response to Intervention framework, to struggling students in groups of one to five students.

All three are "costly" resources but can often come about by restructuring the organization of instruction inside schools and freeing up resources for these key purposes (Odden & Picus, 2010).

Eight Strategies for Funding Shortfalls

Next we consider the eight specific strategies that school districts can use to cope with funding shortfalls and reduced revenue expectations.

Salary freezes. In tight budget times, most organizations freeze salaries for everyone in the organization. The goal is to weather what is hoped to be a temporary funding shortfall. This is not a statement that workers do not deserve to be paid what they were promised but simply a reflection of the reality that the funding shortfall is significant and that the best strategy is for

everyone to take a wage "haircut" to recognize a financial reality that is no one's particular fault but that impacts everyone.

For many reasons, school districts have been reluctant to adopt this approach. As a result, costs rise and programs are cut. But it could be argued that in this particular recession, which has been deeper and longer lasting than any since the Great Depression, salary freezes for one or two years are preferable to cutting services (which also eliminates both jobs and benefits for many highly trained and hard-working educators).

In this instance, a freeze is more substantial than just freezing the salary schedule. Even if the salary levels in a district's salary schedule are held constant, adjustments for experience and education will lead to increased salaries for many teachers.

So we suggest that districts and schools seriously consider actual salary freezes when revenue projections are as weak as they have been in the past 2 years. It allows the district to maintain most if not all of its staff and is more generous than a salary freeze and mandatory "furlough" days, which together represent an effective salary reduction and has been the reality for many in state government in recent years.

Class size formulas. A second area for review is class size and the class size "formulas" used in state funding formulas or district resource allocation algorithms. In the last years of the 20th century and the first years of the 21st century, many states and districts enacted class size reduction programs as part of a strategy to improve student learning. In many instances, formulas lowered these ratios to as few as 18 to 20 students per classroom in elementary grades. In our work across the country, we have found the use of smaller classes to be a prime local theory for improving student performance. The fact is, small class sizes are expensive, and the research documenting the effectiveness of small classes has mostly considered grades K-3 and generally concludes that to succeed, class sizes need to be 15. Moreover, the impact on student achievement is significant but not large. Our conclusion is that many of the class size policies and formulas around the country consume large sums of money, have relatively little impact on student achievement, and thus are ripe for change.

We have worked in several districts that use "step" class size formulas. Under these formulas, when an individual classroom enrollment exceeds a fixed number, the school provides the teacher with an instructional aide, and if the enrollment exceeds some larger number, the class is split into two, requiring the school to hire an additional teacher. These strict maximum class size formulas tend to consume large sums of resources and have little if any impact on results. Consequently, they lead to substantial inefficiencies in school district spending.

We have also worked in districts where class sizes temporarily drop for "regular" students when children with special needs are pulled out for extra services. We worked in one district where in some schools English language learners (ELL) compose 33% of the student population, all of whom participated in pullout programs. The district used a "rolling" grade pattern for the pullouts so that the school served ELL students from any one grade at one time during the day. As a result, the remaining students had instruction in class sizes of 12 to 13, but under conditions where teachers were told not to provide instruction in core subjects. That district discovered several "micro-" opportunities to merge these remaining non-ELL classes, and it was able to free up multiple teacher periods that were then available for teacher collaborative time.

One other class size issue that schools and districts might consider is the recommendation that Advanced Placement (AP) classes have no more than 15 students. In fact, most students enrolled in AP classes are highly motivated and can succeed just as well in a class of 25. With the savings in staff resources and time, schools would have the opportunity to help struggling students in non-AP classes throughout the school.

In looking for ways to reduce spending, class size considerations are essential, because class size policies remain the single largest item of resource allocation in schools and dramatically limit resource allocation flexibility when efforts are made to reduce spending "as far from the classroom as possible." Our view is that in times of fiscal stress, districts should review and potentially change all class size policies. Districts and schools discover even small increases in class size—one to two students—can free up significant numbers of staffing positions, providing additional resources to cope with funding reductions; instructional coaches and teacher tutors are one type of additional resource that research has demonstrated can help improve student performance (Odden, 2009; Odden & Archibald, 2009).

Electives. Another place where substantial savings can be found is to review the number of elective courses offered, particularly in secondary schools. A comparison of the number of electives compared to classes in core subjects often shows that in American high schools the number of elective classes has proliferated. Although the question of why there are so many electives is important to the debate over student performance, here we only consider the issue as one of cost effectiveness.

In studies of multiple high schools, Roza (2010) found that expenditures per pupil for most elective classes exceeded that for core courses. She found cheerleading classes at one high school cost \$36,000 per pupil and jewelry making cost \$20,000 per pupil compared with costs of \$5,000 to \$7,000 per pupil for classes such as algebra and biology. This represents a major misallocation of the education dollar—certainly not a use of resources that reinforces the core goals of the education system. This study also showed that two reasons for the high costs of some electives were small numbers of students and the use of the most senior teachers in those classes. Although all schools need to have an array of elective classes as well as core classes, we would argue that spending more on electives than core classes is antithetical to the goal of improved student performance in the core subjects. Elimination of small and expensive elective classes can also be used in conjunction with changes in school schedules described next.

At the elementary level, schools can reduce the cost of electives by placing more students (i.e., merging multiple classrooms) in subjects like art, music, and physical education, and thus providing additional opportunities for regular core teachers to plan and collaborate. Moreover, these larger elective classes would reduce the need for as many elective teachers, providing cost reductions, or in better financial times the savings could be used to reduce class size.

School schedules. Another aspect of the proliferation of elective classes has been the shift in many middle and high schools to a seven- and eight-period day. These shifts accommodate provision of more courses for students, but if teaching loads remain the same, it increases the overall cost and reduces the number of minutes of instruction in all subjects, including core subjects. Decades ago most middle and high schools had six-period days and teachers would teach five of those periods, leaving one period for individual planning and preparation. Under

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those assumptions a school needed 1.2 teachers to cover the six periods and to maintain the pupil:teacher ratio by which a district determined the number of teachers allocated to each school. When schools shifted to a seven-period schedule, teachers continued to have a five-class load, so the school needed 1.4 teachers to maintain the same class size. Schools that implemented eight-period schedules, although preserving the five-period teaching load, needed 1.6 teachers to maintain class sizes.

Because schools rarely extend the school day as the number of periods increases, they compensate by reducing the number of minutes for each class period; thus, a seven-period day can increase elective offerings but also result in increased costs and fewer minutes of instruction in all classes including core subjects. Both of these strategies detract substantially from the goal of improving student achievement in core subjects.

In these times of fiscal shortfall and continuing increased emphasis on student learning in core subjects, districts would be wise to rethink seven- and eight-period schedules in their secondary schools. For example, a middle school of 1,000 students with average class sizes of 25 would need 40 core teachers and another 20% (or eight more) for electives if it had a six-period schedule. If it had a seven-period schedule, it would need 16 elective teachers. Thus, if the school shifted from a seven- to a six-period schedule, it would free up eight teaching positions, some of which could be used to solve a fiscal shortage and some of which could be used to provide teachers with instructional coaches and to provide struggling students with small group tutoring, two "high-cost" strategies that are associated with large improvements in student learning.

Professional development. Current expenditures on professional development should also be thoroughly analyzed, an issue particularly salient for large districts. Studies conducted by a number of researchers, including us (e.g., Miles, Odden, Archibald, & Fermanich, 2004), have found large expenditures on professional development, in some instances rising to as much as \$8,000 per teacher per year. The studies also showed that often little of the professional development provided focused on core subjects such as reading, math, and science. The implication is that larger districts should engage in a fiscal and program audit of their professional development systems. We predict that such analyses would find substantial amounts of money that could be restructured into professional development that is much more effective.

In our adequacy studies with states, we also have consistently recommended that states fund 10 pupil-free days for professional development training. This is in addition to employment of school-based instructional coaches. A number of states have provided resources for these critical components of professional development, but in follow-up studies we find that districts and schools frequently "give" these days away by allowing teachers to use several days for their own purposes and allowing attendance at state union conferences for 2 to 3 days. The result is that the opportunity to provide intensive training in summer institutes disappears (see, e.g., Odden, Picus, Archibald, & Smith, 2009; Odden, Picus, & Goetz, 2006). One way a district can reallocate resources to improve student learning would therefore be to rethink the use of current pupil-free days for professional development and focus as many available days as possible on best used systemic professional development rather than individual teacher or even individual school driven professional development activities.

Paraprofessionals. The use of categorical dollars to hire paraprofessionals represents another area that is ripe for rethinking the allocation of educational resources. Although these dollars cannot be used to solve a state or local budget shortfall, they can be tapped for more effective purposes, thus mitigating to some extent the impact of state and local funding cuts. Our studies (Odden & Archibald, 2001, 2009) show there is significant flexibility in the use of these resources and, with a coherent, whole-school approach schools can use these dollars for instructional coaches, teacher tutors, ongoing professional development, and other strategies that boost student achievement. When state and local general fund dollars are in short supply, rethinking the use of categorical funds should be part of the agenda. For example, our studies show that the many schools that have "traded" the use of categorical dollars for paraprofessionals and used those funds to pay for teacher tutors have been able to show a much larger positive impact on student learning gains (Odden, 2009; Odden & Archibald, 2009).

Technology. It is our observation that much of the K-12 curriculum is now available in online formats at costs substantially below what any district and school spends per pupil. K12.com, for example, provides the full range of courses and classes for student's at all elementary and secondary grades. The cost of online programs varies, but it is often in the range of \$6,000 per pupil, substantially below the cost of public education in virtually all districts. When budgets are tight, it makes sense to investigate the viability of tapping into these online and potentially effective and very cost-efficient programs. Further, nearly all AP courses can be taken online. Again, because it is the more motivated students who take AP classes and generally do better in an online course format, the online option is a potentially cost-effective approach for providing a comprehensive AP offering at any high school.

Most districts and schools view online courses or distance learning as an "add on," something to add to the regular curricular offerings. But as overall K-12 education costs rise and budgets tighten, the viability of having some students take a portion of their public school education in effective, online formats should be investigated.

Cutbacks on the basis of effectiveness and not seniority. Finally, we suggest that the time has come to seriously change the education system to make staff cutbacks on the basis of effectiveness rather than seniority, which has been the tradition. A decade ago this was not possible because there were no good measures of effectiveness. But today we have multiple measures of an individual teacher's effectiveness. These measures make it possible to include effectiveness as a criterion for making staff decisions when cutbacks are needed.

There are significant drawbacks to seniority-based cutbacks, which may even create legal issues in some cases. Recent studies in Los Angeles showed that seniority-based cutbacks would have cut 50% of the teaching staff in some schools and none in other schools. Moreover, the schools with substantial personnel reductions were generally those with large numbers of students from low-income, minority, and ELL backgrounds. Seniority-based cutbacks mean that it is the least experienced teachers, and thus the least expensive, who have to be laid off; because they are less expensive, more teachers have to be terminated to meet a fixed budget level. This is what led to the potential layoffs of up to 50% in some schools. A Los Angeles court recently reached a settlement with the Los Angeles Unified School District that would allow the district to keep less

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experienced teachers at 45 low-performing schools and eliminate the jobs of more senior teachers at other schools in the district. This would enable the district to avoid laying off up to half the teachers at its lowest performing schools. Although basing layoffs on measures of effectiveness is a longer term strategy that often must be negotiated with teacher bargaining units, given the national emphasis on having an effective teacher in every classroom, now is the time for districts to begin consideration of such practices when possible.

As just described, we believe the goal of effective cost reductions is to identify research-based strategies that maximize improved student performance when a school district finds it has to make reductions in force closer to the classroom than it would generally like to do. This is a new reality in many school districts, which after years of avoiding personnel reductions within teacher ranks really have no alternative given the limited number of administrative and support staff remaining, and the often substantial size of needed budget cuts in relation to the current budget.

CONCLUSION

In a time of growing fiscal constraint, school districts continue to reduce services in all parts of the education program but often work to minimize the reductions in core teachers, all with an eye to keeping class sizes as small as possible. Yet research suggests that there are multiple, more resource-efficient strategies to support teachers and students in their learning that districts can implement without additional personnel or costs. Often small increases in class size, coupled with increased support from instructional coaches or more highly focused interventions for struggling students, can help improve the quality of instruction and learning and keep students from falling further behind. Finding ways to identify these options is the first step to making substantial improvements in student learning. Implementing them in today's school systems is often hard because of political and contractual constraints, but with leadership and effort, it is often possible to demonstrate the potential of cost-effective strategies that enhance school district efficiency and at the same time help students meet state-established performance goals. Finding ways to do this is essential in today's fiscal environment where additional revenues are unlikely to provide a path to school improvement in the near future.

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