Introduction

Public education is expensive. The cost of teachers, facilities, buses, school lunches, and all of the other components that make up the nation’s public education system cost nearly $600 billion in 2007-08. Without question, when it comes to providing every child with a quality education, money matters.

Or, more specifically, money matters when spent wisely. Sometimes public-policy debates become wholly focused on increasing the budget for schools without the partner conversation about how states and districts can best utilize school dollars. Conversely, policymakers can tout the need for improvements without investing the resources to support effective implementation of proposed changes.

But experience and research actually find that improving student achievement is clearly about both—more money, spent wisely. There is little evidence that money alone results in better outcomes for students.¹ How money is spent is also critically important.

Over the past several years, national economic conditions have placed fiscal pressures on state and local governments—and education has experienced the resulting state and local budget cuts. Under these intense fiscal pressures, it becomes increasingly important to ensure that existing dollars are spent as wisely as possible. Policymakers will also need to find ways to reallocate existing resources to make new investments in strategies that improve outcomes for underserved kids, at the same time as they identify additional dollars to invest in K-12 overall.

The nation needs to continue to spend significant resources, and additional resources, on primary and secondary education. But policymakers must ensure that those resources are spent wisely, and in a way that maximizes the impact on student achievement. The current national economic challenge has spurred a growing body of research and thought leadership around effective resource utilization and budget reallocation, much of which can provide useful guidance to policymakers on a tight budget who remain committed to improving student achievement.

This paper covers where school dollars are spent, effective strategies for school districts and states to align spending with desired outcomes, information about the debates on school funding adequacy and equity, and some of the proven investments that make the biggest difference for students.
Where is the Money Going?

Education is a people-intensive service, and people cost money. As a result, salaries and benefits make up more than 80 percent of current expenditures. On average, the bulk of public education expenses are related to instruction (more than 60 percent), followed by student and staff support expenses (14 percent), operation and maintenance (10 percent; including transportation and food service), and lastly, administration (8 percent).

This broad breakdown of education spending is helpful but does not tell the more nuanced story of whether all of the dollars are being well spent. To determine this, districts need to ask a question that may seem obvious, but is remarkably rare: Are the programs that are currently being funded doing enough to drive improvements to student achievement?

District budgets are publicly available, but typically say little about whether resources are allocated in a way that has the greatest impact on student learning. Instead, decision points tend to center solely around the number of teachers on staff, operational costs, and other general expenditures, not which programs should be eliminated or enhanced and whether teachers are being prepared, deployed, and supported in ways that maximize their impact on students.

Valuable data can be unveiled by digging into district numbers from a programmatic and impact perspective, all of which can be used to inform future budget and allocation decisions. Breaking budgets down into per-pupil costs generates a vivid picture of where dollars are going and how funding allocations match up with district priorities.

More often than not, this type of analysis will reveal that actual district spending is poorly aligned with stated priorities for improving student achievement. In other words, the “old way” of spending and delivering programs may no longer be the right way. With access to the detailed data, districts and advocates can identify which funding is being spent most effectively, and reconsider whether funding for less effective programs should continue.

Once school and district leaders gain a clear understanding of where their money is going, they will be better-positioned to reallocate resources in ways that will accelerate achievement and minimize the negative impacts of belt-tightening. This deep analysis can be done by analyzing program expenses and program impacts and considering alternate ways to deliver non-core or low-enrollment courses.

Analyzing District Productivity

Beyond analyzing in-district spending programs, states and independent analysts have begun to review productivity across districts to compare return on investment and identify districts that are
getting the greatest “bang for the buck.” When district leaders couple this data with a detailed analysis of how the money is being spent in their own district they can gain valuable insight into how to use their resources more efficiently and effectively.

The Center for American Progress⁶ (CAP) is currently using state-reported data to calculate return on investment for districts across the country to generate a national discussion around productivity. An online interactive map identifies districts that generate higher than average achievement per dollar and illustrates how widely productivity varies among states and districts. State and local advocates and policymakers can use CAP’s database to compare districts and identify areas for further examination in the interest of improving productivity.

Standard & Poor’s conducted a similar review in Kansas and identified a handful of resource-effective districts that spent less than average amounts but achieved better results. The report⁷ identified 18 practices that contributed to the increased productivity, including:

- **Aligning spending with strategic priorities, especially student performance goals.** One district required that all requests for significant purchases be justified based on their alignment with the district’s strategic plan.
- **Aligning faculty teaching assignments with student needs.** This can be achieved by assigning the lowest-performing students to the most experienced teachers, and maintaining low student-teacher ratios in the earliest grades, where they have the most impact.
- **Eliminating or combining bus routes** to more efficiently spend transportation dollars.
- **Adjusting the school-day schedule to increase the time that students spend on reading and math.** One district shifted the elementary schedule to enable students to spend 90 minutes on reading and math each day, double the amount of time previously spent on these core subjects. Students also spend an additional 30 minutes on math three times a week and 30 minutes on writing each day.
- **Extending the contract year** to increase teacher development and planning time.

These and other strategies enabled the Kansas districts to prioritize effective teaching, resulting in increased student achievement. The fundamental approach to analyzing resource-effective districts and subsequently identifying highly productive practices is within the capabilities of those interested in improving district resource-allocation practices.

Several states have established formal mechanisms to review school district expenditures and offer suggestions for improvement. The Ohio Auditor’s Office conducts performance audits of selected school districts and makes recommendations for savings and efficiencies.⁸ Similarly, the Virginia Department of Education conducts school division efficiency reviews designed to help districts identify resources that can be redirected to classroom instruction.⁹ Only a few such in-
depth audits and reviews can be conducted each year, but states can model these approaches and target this work at districts that have the most to gain.

Even absent such formal state-level structures, business managers typically have access to data that can help districts identify ways to save money by comparing their costs with that of other districts for meals served, bus miles traveled and per-square-foot maintenance and utility costs of buildings. Additionally, many states are exploring regional, collaborative approaches to some services. Some states are beginning to collect and publish comparison data on a wide range of costs to help support these types of analyses. These comparisons are relatively simple when states require common accounting practices and have data-collection mechanisms that allow for easy data analysis.

Policymakers and advocates may wish to commission or support these efforts to improve return on investment in their states and lay the foundation for creating a culture geared toward prioritizing the effective use of resources.

Funding Equity

State-to-state, district-to-district, and even school-to-school funding inequities were evident long before the fiscal downturn forced policymakers to cut education budgets. State-to-state inequities need to be resolved at the federal level, but state leaders can address local inequities to ensure that all students are provided with equal opportunities to learn, whether they are at a traditional or charter school, or in a rural, urban, or suburban district.

Over the past four decades multiple waves of litigation and school finance reform efforts at the state level have been prompted by continued concerns around both the adequacy and equity of school funding. The earliest funding lawsuits, beginning in the early 1970s, focused on equity between school districts within a state, challenging state school finance systems that, plaintiffs argued, distributed funding based on local property wealth and locally generated revenues. This prompted a series of state school finance reforms and the development of new funding formulas that sought to equalize funding between higher- and lower-wealth districts. These changes were meant to eradicate what had become “education by ZIP code,” the acceptance that schools in poor communities just weren’t as good as schools in wealthier communities because they had greater needs and less funding.

Equity is a key goal in school finance reform, but research and experience show that some methods are more successful than others in reconciling differing concepts of equity and delivering improved results for children. For example, in 1993 Texas attempted to implement very redistributive mechanisms that limited the ability of affluent communities to increase their
spending on education through property tax increases; when these communities did raise property taxes above a certain level, a large amount of the increased revenue was redistributed to poorer communities. But these measures did not lead to improved funding for low-income students or improved student achievement—rather, property values and overall education spending declined. Instead of trying to equalize resources across districts by limiting or highly taxing the amount of funding more affluent districts can raise, a better approach may be to focus on adequacy—ensuring that all schools have the resources they need to educate students, which typically includes additional funding for schools serving high concentrations of students in poverty, who may need more resources and support in order to succeed academically.

In spite of the significant attention on equity, and the recognition that it takes additional resources to meet the educational needs of students in poverty, research shows that districts serving poor students still get less—rather than more—resources in many states: a review of 2004 data by the Education Trust demonstrated that the highest-poverty districts in 26 states received less state and local per-pupil funding than the lowest-poverty districts. The differences varied widely: while Illinois provided $1,924 less per pupil in its highest-poverty districts, Minnesota provided $1,349 more. According to the report, Illinois, Michigan, Montana, New Hampshire, New York, and Pennsylvania spend more than $1,000 per child more in low-poverty versus high-poverty districts. Similarly, 12 states—Colorado, Illinois, Kansas, Montana, Nebraska, New Hampshire, New York, North Dakota, South Dakota, Texas, Wisconsin, and Wyoming—spend more than $1,000 per child more in low-minority versus high-minority districts.

Another equity problem arises when school districts allocate funds among buildings in ways that too often shortchange high-poverty schools and low-income students. A recent analysis by the U.S. Department of Education looked at 2008-09 school-level expenditures and found that more than 40 percent of schools that receive federal Title I money to serve disadvantaged students spend less state and local money on teachers and other personnel than schools that don’t receive Title I funding at the same grade level in the same district. According to the report, providing low-income schools with comparable spending would cost as little as 1 percent of the average district’s total spending, and would add up to 15 percent to the budget of schools serving high numbers of students living in poverty.

The federal government is also working to address within-district funding inequities. In discussions around the reauthorization of the Elementary and Secondary Education Act, President Obama has recommended reforming Title I allocations to ensure the equitable distribution of funding between high- and low-poverty schools within districts. Title I expenditure requirements for district-level spending in Title I buildings used to be based on average teacher salaries which effectively masked inequities in resource allocations to buildings. Efforts are under way to change this to base expenditure requirements on actual salaries.
Advocates for charter schools have long argued for greater equity in funding for this increasingly large segment of public education delivery. Several research studies document the often wide disparities that exist between traditional school funding and charter school funding.\(^{15}\) Much of the difference can be attributed to additional local (non-state) revenues available to public schools that are not available to charters, as well as disparities in access to facilities funding.

### Funding Adequacy

Moving beyond equity, in the 1990s, the emphasis of school finance litigation and reforms shifted to “adequacy,” the question of whether schools were receiving enough funding to provide a quality education. Numerous states commissioned adequacy studies, but defining what “adequate” spending is in education remains elusive. States used different approaches to attempt to identify the adequate amount of funds needed to support a quality education. There are four common approaches, ranging from the Professional Judgment approach, in which an expert panel determines the configuration of an educational program that can deliver certain outcomes; to the Successful Schools approach, which identifies successful schools and examines how they spend their money. There is no consensus about which of these approaches is best or most accurate.

A 2004 *Education Week* review of the 36 state-commissioned adequacy studies conducted in 17 states between 1998 and 2004 found tremendous disparities in the amounts determined to constitute “adequate” funding—ranging from a low of about $5,000 per pupil per year to a high in excess of $15,000.\(^{16}\) There is little evidence that the states that made significant investments in education as a result of adequacy lawsuits made any notable gains in student achievement.\(^{17}\)

### Human Capital Investment and Management

You can’t educate students without teachers, so it should be no surprise that personnel costs make up approximately 80 percent of most school instructional budgets. That said, research has found that a substantial portion of this spending is allocated in ways that are not aligned with what is most important to improving student outcomes.

Take, for example, how educators are compensated. Teacher salaries generally grow using a classic “steps and lanes” schedule that is based on years of experience and credentials attained, not student achievement. Research shows that only the experience of the first three to five years of teaching, and possibly a master’s degree in mathematics (for secondary math teachers), actually impact student outcomes. District salary schedules frequently “backload” pay increases
into the later years of a teacher’s career, when research shows little return for additional experience.\(^\text{18}\)

Another example is the trend toward reducing class sizes. Districts have made significant investments in reducing class sizes, but research has shown that reduced class size only really affects achievement in some student grade levels and subjects, and only when the reduction is sufficiently large. Smaller class sizes can have a positive impact at the elementary level and for certain populations, such as students with special needs, but there is little evidence that reducing class size has much of an impact with traditional students in higher grades. Smaller class sizes are tremendously popular with parents and the general public, but require additional teachers and can be expensive to pull off effectively.\(^\text{19}\)

A third example is how layoff decisions are made. Most districts make reduction-in-force decisions using “last in, first out” (LIFO) policies that dismiss teachers in reverse order of seniority. This ignores teacher effectiveness and often leaves the least effective ones in the classroom. Because the least senior teachers also typically earn the lowest salaries, LIFO policies can require district to lay off more teachers than if they based layoffs on effectiveness. LIFO policies tend to disproportionately affect poor and minority students, because schools and programs serving the highest populations of these students tend to have the least senior teachers.\(^\text{20}\)

These and other costly practices can be resolved with changes in regulation and policy that are designed to align human resource management around the goal of improving student achievement. Among the changes that states and districts should consider:

- **Reduce the link between teacher compensation and factors not shown to improve student achievement**, such as longevity and graduate education, and tie compensation to other factors that are more relevant to effectiveness, contribution to the school, and job responsibilities.\(^\text{21}\) Many states and several districts are redesigning their compensation systems to create a direct link between teacher effectiveness and compensation.

- **Implement meaningful teacher-evaluation systems** that are driven by student achievement data and designed to identify the effectiveness of each teacher. The results of these evaluations will inform decision making about teacher assignment, retention, and professional development.

- **Look closely at the effectiveness of small classes** and determine whether increasing the number of students in some classes can be accomplished without reducing student achievement. In many cases the most effective teachers may be willing to take a few additional students.

- Give superintendents explicit authority to **consider the individual effectiveness of teachers** in addition to (or in lieu of) seniority when making layoff decisions.\(^\text{22}\)
Another area where cost savings can be found and reform is possible is in employee health care and other non-pension benefits. Teachers generally receive health, life, and dental insurance benefits in one-size-fits-all packages that add significantly to total costs. Efforts to identify efficiencies in procuring these benefits or reducing the need to use them can often yield significant savings.

Researchers have shown that replacing these one-size-fits-all packages with so-called “cafeteria” plans could result in significant cost savings. Cafeteria plans, used widely in the private sector, provide employees with a menu of benefit options from which they may select those that match their needs and preferences. The employer places an upper limit on what it will spend per employee, and the employee can choose how to apply those funds across benefits. Those who select lean benefit packages can add the difference to their salaries; those who want more than the district agrees to fund can pay the difference. Adopting such plans in the public education sector could free up resources for other forms of compensation.

The ultimate goal should not be to spend less on human capital, but to achieve greater results from the dollars invested in educators. Understanding the possible trade-offs—for instance, slight increases in class size to allow for higher teacher salaries—can support allocation decisions that are beneficial to teachers and educators and that prioritize and incentivize improved student achievement.

Special Programs

Some students will always require more than just traditional schooling to be academically successful. Students with disabilities, English language learners and those from low-income or otherwise at-risk families require additional supports and services to achieve at high levels. Federal and state funding is available to defray some of the cost of many of these supports, but is not always spent effectively.

Many districts choose to provide these students with “pull-out” services, arguing that they will benefit more from individualized support in a substantially separate classroom than they would if integrated with their peers. These programs require additional staffing and do not necessarily enhance academic outcomes; some actually argue that most of these students would benefit more from an inclusionary setting, where they could interact with and learn from their peers. Students in districts that provide supports in the context of the rest of the educational program tend to be more successful.

Special education has become a major cost-driver in school budgets. More than 20 percent of total education spending pays for special education services, even though students with special needs account for only 13.2 percent of the total student population nationally. Spending on
special education has grown significantly over the past several decades, outpacing the growth of general education spending.\textsuperscript{25}

State and district financing systems provide additional funding for students with special needs to cover the additional costs associated with providing special services. There is some evidence that this practice creates an incentive for districts to classify struggling or “borderline” students as having disabilities and a disincentive for districts to intervene early to prevent learning disabilities and achievement gaps.\textsuperscript{26} There is no consensus on this point, but the most cost-effective strategy is to address the real needs of each student as early and effectively as possible.

The federal Individuals with Disabilities Education Act (IDEA) ensures educational services to all children with disabilities. Parents have the right to ask for a wide range of special services to meet their children’s needs, but districts are not barred from finding the most cost-effective ways to deliver those services. That said, few do so: Despite budget concerns, many districts have continued to opt for expensive, individualized programming, including costly out-of-district services for students with severe special needs that the district itself is not equipped to meet.\textsuperscript{27}

In-district special education classes are often under capacity, in part because school districts develop Individualized Education Plans (IEPs) without considering available school and district capacity. As a result, districts frequently offer all programs at every school, leaving classes filled to between 50 and 75 percent capacity.\textsuperscript{28}

One way to manage special education costs is to implement effective intervention strategies early on in a child’s education. There is widespread consensus that effective early intervention is more cost-effective in the long run and can reduce the rate at which children are officially “identified” as having a disability. Federal law allows schools and districts to use up to 15 percent of special education funds for prevention services, and a growing number of schools and districts are using early intervention and/or Response to Intervention (RTI) approaches with their youngest children.\textsuperscript{29} The Center for Comprehensive School Reform and Improvement, which supports schools in implementing comprehensive school reforms, argues in favor of this approach, noting that resources should be devoted to “the prevention of academic problems, rather than to remediation.”\textsuperscript{30}

Strategies for improving the cost-effectiveness of special services provided to students with special needs include:\textsuperscript{31}:

- Better integration of students with special needs into general education classrooms.
- Rethinking how support staff is deployed to meet the needs of the students who require additional support.
- Using more-sophisticated metrics to gauge the effectiveness of instructional approaches in special education programs.
Instructional Practices, Innovation, and Technology

The need to operate with fewer resources has prompted both traditional and charter schools to step out of their comfort zones and experiment with new uses of technology to enhance productivity and deliver better results given limited resources. Schools like the Rocketship Education schools in California are exploring unique ways to integrate “blended learning,” and meet each student’s needs through a combination of technology and face-to-face instruction. These programs invest heavily in professional development for teachers.32

Innovative approaches to the pace of student learning can also lead to improved productivity.33 States such as Oregon and Ohio are putting policies in place to offer high school credit based on mastery or proficiency. This provides an alternative to the Carnegie Unit approach, which defines earned credit based on hours of seat time over an academic year. The proficiency-based approach allows students to earn the credits required for graduation more quickly and to graduate high school with valuable college credits.

The more traditional Carnegie Unit approach forces schools to “package” instruction in courses that span the semester or the year, rather than allowing students to learn at their own pace. Researchers suggest that reliance on this model forces some students to spend too long in the same class and others to repeat it in its entirety, leading to “higher costs without improved outcomes.”34 Allowing students, when necessary, to take more time to master a subject at their own pace is a more cost-effective approach than allowing students to fail and then have to retake a course.

Nationwide, 13 states now have virtual schools, some of which provide a complete educational experience; others provide learning opportunities meant to supplement traditional in-school learning. These programs have the potential to save on facilities costs and help with school overcrowding. These schools are funded in a variety of ways—through direct state appropriations, through per-pupil-based formula allocations similar to those of traditional public schools or charter schools, through course fees, or through some combination approach.35 According to a U.S. Department of Education study, the most successful uses of technology are those that blend online and in-person instruction, enabling students to continue to benefit from face-to-face interaction with teachers and their peers.36 Researchers found that the greatest impact was achieved when the instruction was collaborative or teacher-directed, not when students just worked independently.37

Virtual learning is still new in the public education environment, and techniques and pedagogy are still developing. Traditional teaching methods do not translate easily into the online environment, and the standard curriculum does not work as well through virtual methods. States committed to this method, such as Florida, have invested the time and resources in the development of policies and training to enhance online learning opportunities.
Many other states have not developed the policies needed to foster online learning as an option. Most existing state funding policies do not accommodate student participation in online learning as either a supplement to their learning or as part of their regular academic program, leading to funding conflicts. States need to examine financing mechanisms to identify and resolve any existing barriers to the innovative use of technology to enhance alternative methods for learning.38

Because these models are relatively new, there is little evidence of their broad impact on student learning. It is clear, however, that existing policies and funding systems can restrict the ability of schools and districts to use technology in new ways to enhance student learning. Eliminating these constraints—while maintaining accountability for student outcomes—can open the door for further productivity-enhancing innovations.

**Conclusion**

More money, spent wisely, absolutely can help to improve public education. Policymakers need to closely examine how they are currently spending their resources, reallocate resources to best meet their goals, and seek additional funding to make investments in the strategies that matter most for students.

Specifically, states should consider:

- Analyzing spending to make sure that only the most effective programs and services are being funded; and possibly reducing or eliminating funding for programs that are least effective.
- Aligning spending with the district’s strategic priorities.
- Ensuring that spending is distributed equitably across all schools within the district.
- Aligning spending on human capital with priorities that drive student performance.
- Reviewing spending on special education services carefully to ensure that student needs are met in the most efficient way.
- Clearly defining adequate and equitable funding and continuing to make progress toward those goals.

Funding reform efforts have resolved some of the equity issues and research has uncovered multiple ways to allocate resources to support effective instruction rather than just accept the status quo.

Even in this age of limited resources, every child—regardless of skin color, income level or ZIP code—is entitled to a high-quality public education. In order to ensure that they get it,
policymakers, elected officials, educators, and voters must learn from the evidence and wisely allocate education resources to effective strategies aligned with student achievement goals, search for needed additional funding, and spend it wisely.

5 Ibid.
8 Ohio school district performance audits can be found by going to http://www.auditor.state.oh.us/auditsearch/search.aspx and entering “performance audit” in the “Report Title" field.
10 For instance, see the Ohio Education Fiscal Data Project at http://education.ohio.gov/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=1438&ContentID=48701.


13 Ibid.
19 Ibid., 2.

27 Hawley Miles and Frank, 8.
28 Ibid., 9.
29 Hawley Miles and Frank. 9.

34 Ibid., 5.
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