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EDIFICE COMPLEX

WHERE HAS ALL THE MONEY GONE?

A POLICY REPORT FROM COMMONWEALTH FOUNDATION





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Edifice Complex: *Where Has All the Money Gone?*

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Introduction

If something is worth doing, it is worth doing right. Nowhere is this truer than in the public's most important venture, K-12 education. In the United States, the public education industrial complex dwarfs even the military industrial complex in size, with 50 state boards of education, more than 14,000 local school districts, over \$500 billion in taxpayer expenditures, and more than three million teachers. Pennsylvania public schools spend more than \$21.8 billion annually, serving 1.8 million students and employing 255,000 teachers, support staff, and administrators (slightly less than half are classroom teachers).¹ In Pennsylvania, per-pupil K-12 public education spending, controlling for cost of living, is sixth highest nationally. Yet Pennsylvania students score only about average on the U.S. Department of Education's National Assessment of Educational Progress (NAEP) standardized tests, which are often referred to as the "nation's report card."²

From the 1986-87 to the 2005-06 school years, Pennsylvania taxpayer spending on government-run K-12 schools increased from \$6.6 billion to almost \$22 billion—a 72% increase after adjusting for inflation.³ Current spending costs nearly \$4,400 in state, local, and federal taxes per Pennsylvania household. Between 1996-97 and 2005-2006, Pennsylvania's public schools added over 43,000 staff—teachers, administrators, and support staff—while enrollment increased by only 26,000. Thus, for every new student, schools added 1.6 staff.⁴ But can \$21,827,691,342.60 buy a quality education for all Pennsylvania students?

Pennsylvania continues to rank near the bottom in SAT scores, finishing 47th among the states in average total score in 2006. Among the 13 states (including DC) with a 70% or higher participation rate, Pennsylvania ranks 11th in average SAT Score. The increased investment in education has not led to improved scores. The average composite score for Pennsylvania students has changed only marginally since 1987; the 2006 results were 0.3% below what they were in 1987.⁵

Nearly half of all Pennsylvania 11th-grade students are below their grade level in mathematics, and 35% are below proficient in reading. Proficiency rates on the state test get worse as our children get older. In other words, the more time students spend in public schools, the further behind they fall.⁶ Worse yet, Pennsylvania students score far worse on the national NAEP test than the state tests indicate. In 2005, NAEP results indicated that most 8th-grade students in Pennsylvania were below their grade level (only 36% proficient in reading and 31% in math).⁷

Finally, a recent report from the Manhattan Institute indicates that Pennsylvania's real graduation rate is 81%, but only 40% of students graduated ready for college in 2002.⁸ Clearly, more spending on education hasn't improved Pennsylvania's performance.

Why don't Pennsylvania public schools do better?

The answer is not that traditional public schools spend too little, but rather, they often spend public money serving the egos of school superintendents and school boards instead of the learning needs of children. Many school districts suffer an "Edifice Complex," putting buildings ahead of teachers and kids. To cure the Edifice Complex, increased public cyber schooling, as demonstrated by Pennsylvania's 11 cyber charter schools, helps children by putting public money where it belongs—in teachers and instructional materials rather than in "Taj Mahal" buildings. Like most private-sector organizations, cyber schools are using the Internet to revolutionize how they serve their clients. School districts would do well to adopt the innovations pioneered in public cyber charter schools. Instead, associations of school boards have decried public cyber schools and called for reducing their funding.

Does more education spending help students?

If more money would help American public schools, then truly no child would be left behind.⁹ As Theodore Hershberg, who directs the University of Pennsylvania's Operation Public Education, points out:

Since 1970, notwithstanding an increase in real spending of over 100% per pupil, a decrease of 22% in the pupil-to-teacher ratio, and doubling of the number of teachers with master's degrees, student achievement has remained largely flat.¹⁰

Indeed our nation's public schools "are still failing far too many of our children, despite an investment of \$500 billion annually."¹¹

Likewise, spending differences between districts do not lead to better performing schools. As Hershberg and others point out, while high spending districts occasionally have relatively high test scores, wealthy areas have children who are easier to educate, with greater percentages of intact families and college graduate parents.¹² In other words, districts like Radnor in Delaware County and New Hope-Solebury in Bucks County boast high test scores, not simply because of high spending, but primarily because they teach the children of doctors, lawyers, and corporate executives. Conversely, the Pittsburgh Public Schools, are among the highest spending in the state, coming in tenth out of 500 school districts at \$17,975 per student in 2005-06,¹³ but have not excelled academically. Similarly, Harrisburg and Duquesne City are both among the top 25 spending districts in the state—spending over \$15,000 per child—but nonetheless have not done well academically.

In our own analysis, we find that spending across districts correlates very weakly—when it does correlate—with measures of academic performance.¹⁴ When controlling for other variables, we find that total spending by a district is statistically significant, but substantively insignificant. Spending increases of \$10,000 per pupil correlate with an increase in the percentage of pupils proficient in reading and math, and in the graduation rate, of

only a few percentage points. Differences among student populations—the percentage of low-income and minority students—is much more significant in explaining variations in districts’ academic performance.¹⁵

In an analysis of educational performance, spending, and other variants at the state level, Andrew LeFevre finds virtually no relationship between spending and performance.¹⁶ He writes, “Differences in educational inputs measured by this study (students per school, students per district, student to teacher ratios, per pupil expenditures, teacher salaries, and funds received from the federal government) do not explain differences in student achievement.” LeFevre also notes that variables with weak relationships to performance have the opposite effect of expectations, higher federal receipts and a lower student-to-teacher ratio have a negative relationship to student performance. The only variable with a weak, positive effect on learning is fewer students per district. LeFevre also finds that changes in SAT scores have no significant relationship to changes in any of the institutional factors.

Can schools make a difference at all?

Increasingly, scholars and educators realize that the amount of money matters less than how it is spent. For example, Catholic schools typically spend less than half of what traditional public schools spend, yet achieve comparable outcomes for most student demographic groups, and somewhat better outcomes among African-American students.¹⁷ Similarly, some of the more effective public charter schools like the KIPP Network (with 52 schools in 16 states) achieve remarkable academic results teaching disadvantaged students, even while spending the same or less than traditional public schools who fail many of those same students.¹⁸

Education spending can go to a variety of uses, only some of which help children. For example, hiring consultants and constructing extravagant buildings employs many people and can make superintendents popular, but does not help students learn. Indeed construction spending seems to have no impact on learning at all.¹⁹ Similarly, increased spending on central office bureaucrats does little to teach students. Central office administrators are likely to keep their jobs even if students fail to learn.

In fact, very few studies link spending of any type to improved performance. One exception may be teacher salaries, as some studies suggest that classroom spending may improve public education. Though Stanford University economist Eric A. Hanushek is generally skeptical of efforts to improve schools by increasing spending, he nonetheless admits that increasing teachers’ salaries may have long-term positive impacts.²⁰ Similarly, in a creative meta-analysis, Penn State-Harrisburg Dean of Public Affairs Steve Peterson finds that increasing teachers’ salaries seems to improve student learning, while increasing most other educational expenditures, such as lower class size, does not.²¹

More Construction, Less Instruction

According to the Pennsylvania Department of Education (PDE), Pennsylvania public school districts spent a mean of \$11,485 per student in 2005-06, ranging from a low of \$8,225 for the Valley View School District in Lackawanna County to a high of \$27,106 for the Richland School District in Cambria County.²² Controlling for cost of living, our pub-

lic school expenditures are among the highest in the nation. Indeed, even Valley View public schools spend far more than most Pennsylvania Catholic schools (and, as discussed below, more than the average cyber school spends per-pupil).

Two categories of spending that certainly are not linked to performance are spending on luxurious buildings and additional bureaucrats—yet these categories continue to grow as a percentage of total education spending. From 1996-97 to 2005-06, overall public school spending increased 59% (32% after adjusting for inflation)—a 51% increase in instructional expenditures, a 62% increase in administration and support services, and a startling *103% increase in spending on construction and debt*. During this time, construction spending increased from 8.7% to 11.3% of total expenditures, while the proportion spent on instruction declined.²³

Pennsylvania teachers are, on the whole, reasonably well paid, with mean salaries ranging from \$78,881 in Council Rock (Bucks County) to \$32,629 in Turkeyfoot Valley (Somerset County) for the 2004-05 school year. As the cost of living varies greatly across Pennsylvania—a \$50,000 salary goes further in low-cost areas than in the pricey Philadelphia suburbs—it is useful to compare teacher pay to the average pay of workers in local areas. Notably, in 493 of 496 school districts for which data exist,²⁴ teachers make more than the mean annual salaries for all wage employees in the county of their school district. Most teachers also receive excellent benefits and summers off to pursue additional employment.²⁵ Pennsylvania public school teachers earn, on average, 149.96% of the mean countywide annual salary for all full-time positions.

Yet there is seemingly little tendency for higher spending districts to better target resources to the classroom. Indeed, higher spending districts spend a *lower* percentage of total expenditures on instruction.²⁶ Similarly, we found a negative correlation between total school spending and real teacher pay²⁷—in other words, higher spending districts do not reward their teachers better than lower spending ones.

While higher spending school districts spend a smaller percentage of their budgets on *instruction*, they spend a greater percentage on *construction*. Higher spending correlates positively with the percentage of expenditures spent for construction.²⁸ Amazingly, this relationship actually *grows stronger*²⁹ when controlling for enrollment growth from the 2002-03 school year to the 2005-06 school year. *In other words, when given additional resources many local school boards and superintendents seem inclined to support football fields and Taj Mahal buildings rather than teachers and books.*

Most disturbingly, we found a surprisingly strong inverse (negative) correlation between the percentage of total education spending going to construction and that going to instruction: $-.87$.³⁰ One rarely finds such a strong correlation in social scientific research. In other words, *school districts that choose to spend more on construction end up spending less on instruction*. Notably, this inverse relationship between instruction and construction stays almost exactly the same³¹ when controlling for changes in enrollment, and for size of school districts.³² Further, instructional spending does not correlate strongly with the percentage of spending going to administration or miscellaneous categories—seemingly, tradeoffs only occur between instruction and construction.³³

This recalls the alleged comments of one school superintendent who, after gaining ap-

proval for a major construction project, privately mused about whether Music or Foreign Language would suffer budget reductions in future years.

It is hard to blame school boards and school superintendents for focusing on buildings and grounds. After all, it is easier (and more costly) to put up new walls or stadia than to improve teaching or stop bullying. Better buildings and grounds make school superintendents feel useful. Getting such projects approved may earn one a reputation as a “can-do” leader suitable to run a larger or more prestigious school district. New buildings may even serve as symbols of the local public schools. Local Home and School Associations, and even supposedly hard-headed business leaders, may succumb to a kind of “palace envy” when neighboring school districts sport fancy buildings.³⁴ Yet bricks and mortar cannot teach children—teachers and instructional materials do.

A Better Way—The Cyber School Alternative

These spending trends help explain why an increasing number of Pennsylvania parents are choosing cyber schools. Nearly 16,000 students enrolled in Pennsylvania public cyber schools in 2006-07. This represents an increase of 33% from the previous year, and a dramatic increase from about 1,800 students in 2001-02—the first year public cyber schooling was made available to Pennsylvania school children.³⁵ Nationally, 173 virtual charter schools serve 92,200 students in 28 states.³⁶

What are public cyber schools? Pennsylvania cyber charter schools offer education online by providing students with computers, Internet hookups, books, instructional materials, and assessment devices. Most allow students to interact with teachers 24-7 with online lessons and assignments. In addition, most Pennsylvania cyber charters are “blended” schools, having both on-line and brick and mortar components, though the latter are typically smaller and far less costly than traditional public schools.

To clear up any confusion, cyber charters are *public* schools managed like private schools. Like traditional public schools, cyber schools are authorized and held accountable by public bodies, must use the PSSA tests and report the results, and cannot impose religion or discriminate in admissions. Yet like private schools and public charter schools, cyber charters have the managerial freedom to hire their teachers, and can fire those who don’t perform well. They are also market-driven entities, since their funding is based on the number of parents who *choose* to send their children there, rather than allocations from politicians. Operators must appeal to parents or risk going out of business, so cyber schools must ultimately focus on meeting the needs and demands of school children and their parents.

As the BellSouth Foundation reports, “the costs of operating a virtual school are about the same as those of a regular brick and mortar school,” with less spending on construction and more on instructional materials, teachers salaries, and technology.³⁷

There is evidence that public cyber charter schools use their resources more efficiently than do traditional public schools. Public cyber charters get significantly less funding than the \$11,485 that traditional Pennsylvania public schools spend per-pupil. Public cyber schools spend, on average, \$8,137 per-pupil—only 71% of what school districts spend. Even ignoring construction and debt, cyber schools get far less funding for current expendi-

tures, spending only 77% of what school districts do. Cyber schools partially compensate for a lack of funding by focusing on instruction and student services, rather than buildings and administrative costs—less than 2% of public cyber schools’ money goes to construction, debt, or facility operations, compared with over 13% for traditional public schools.³⁸

Per-Pupil Expenditures, 2005-2006, by Category

	Instruction	Support Services	Non-Instructional	Current Expenditures	Construction and Debt	Total Expenditures
Public Cyber Schools (Weighted Average)	\$5,106	\$2,926	\$15	\$8,047	\$324	\$8,371
Statewide (School Districts)	\$6,591	\$3,380	\$202	\$10,173	\$1,312	\$11,485
Cyber Percent of School Districts	77.5%	86.6%	7.5%	79.1%	24.7%	72.9%

Source: Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; <http://www.pde.state.pa.us>

How Cyber Schools Benefit Children

Traditional public schools often struggle to serve non-traditional students, and their bureaucratic routines and standardization leave many students behind, as a long line of research shows.³⁹ As the *Pittsburgh Post-Gazette* reported in 2005, students choose public cyber charters for many reasons: “[S]ome students are recovering from an illness, were bullied, disliked peer pressure or are school-phobic. Some are taking a last chance to complete high school, and others are using it to move ahead at their own pace. ...Some rural students don’t want to spend hours in a school bus.”⁴⁰

Small, rural districts with few resources may have particular trouble serving students with special needs, whether those are gifted students needing enrichment, or special education students needing accommodations, or both. Notably, each of the six Pennsylvania school districts that have lost 2.5% or more of its students to public cyber charters (Apollo-Ridge, New Kensington-Arnold, Brownsville, Tulpehocken, Northgate, and Northeast Bradford) fall into this category. Public cyber schooling enables gifted students to take college courses and spend time productively rather than in boredom. It also allows children who are ill or have special needs to excel.

Cyber schools also typically serve students from struggling school districts. The percentage of students shifted to public cyber schools does not correlate with school districts’ spending or institutional variable, but strongly correlates with districts’ performances. Cyber school students tend to come from districts with low graduation rates, low SAT verbal scores, and low PSSA reading and math scores. Cyber school students also come disproportionately from school districts with significant low-income student populations.⁴¹ Public cyber schools serve a higher proportion of low-income students than traditional public schools. About 43% of all cyber-students are considered “low-income” compared to 34% in all public schools.⁴² Thus public cyber schools help to erase the infamous “digital divide.”

Beyond money, public cyber schools succeed at serving individual students' needs because they are able to better use another precious resource: time. As Pennsylvania Leadership Charter School (PALC) Head Teacher Karen Joseph put it during an interview with the principal author,

We can get more done academically because there's no lunch break, no moving from class to class, no disruption from disciplinary situations, no walking the kids to and from the bus or study hall, no calling roll since the software does it automatically, so that leaves more one-on-one instructional time.

Beth Williams agrees that the cyber model allows more one-on-one time with students, which enabled her daughter to thrive at Achievement House cyber charter. In an interview, Beth said:

She had always struggled with math, but here she had a teacher who besides being really good during the class period spent more time with her and really helped her understand. She ended up joining the math club, which was a hoot when you think about how she had done before. The teachers here were just really easy to work with; just send them an e-mail and they will get right back to you.

Public cyber education also involves no commuting, which means less time stuck in traffic on school buses burning fossil fuels. Cyber schooling also enables teachers who have family responsibilities or physical disabilities to keep teaching.

Second, because cyber schools empower students, Karen Joseph said in an interview that they:

take advantage of kids' enthusiasm. In science class in a regular school, let's say a kid is fascinated by airplane lift and you tell him to look up Bernoulli's principle, well then the bell rings and there's the next class and the next class and by the end of the day the momentum is lost. He's forgotten about it. But in our science class if a kid is enthused about something he can spend the next eight hours on it if he wants to, as long as he gets his other work done on time.

Third, cyber schooling encourages teachers to build academic relationships with students. As an Achievement House parent said during an interview:

My daughter is learning at a faster pace at the cyber school. In fact, her math teacher saw that she was a little bored and he invited her into his stats, class so she was in two classes. She had gained that much more from going to the cyber school because our brick and mortar local school does not even offer statistics.

The very nature of the on-line medium means that teachers are technologically savvy, using the Internet to put all possible educational resources right at the students' fingertips.

Fourth, on-line education improves communication. As one PALC teacher put it, "the students here will tell you things they would never tell you face to face, and certainly not

in front of a class. There's less peer pressure." Similarly, Achievement House parent Juli Ambrose reports that cyber schools "don't have kids acting up because the teacher can go off line and straighten it out with that one student without the whole group being involved."

Fifth, charter schooling encourages student responsibility by giving students more discretion to set their own goals in accordance with their individual learning needs. Finally, cyber charters partner with parents. As PALC CEO Jim Hanak puts it, "I tell new teachers to think of each parent as a teachers' aid, so you are not alone because if you have 60 students then you also have 60 aids to help out." Ambrose added, "I love that I can sit in on the classes and see just what they are doing, which is really nice."

Even though public cyber schools serve many hard-to-educate students, research suggests that they succeed. As Education Sector analyst Bill Tucker told one of the authors:

*The small body of research focused on the effectiveness of virtual K-12 schooling programs supports findings of similar studies on virtual courses in higher education. They find "no significant difference" in student performance in on-line courses versus traditional face-to-face learning.*⁴³

For many parents, safety is a key reason to choose cyber. Often local public schools are either unwilling or unable to crack down on bullying. Two cyber parents recalled in an interview that:

My daughter started out in [a traditional] public school and then in fifth grade it was a whole different school, the girls turned catty and also turned on some of the teachers, and she really took it personally. She had physical problems in her upper GI track, and was tested, and it turned out it was just stress from the school...there are 800 kids in one class and the teachers just can't really control that many. There is lot of bullying and the teachers really don't have a handle on it.

My daughter was picked on for being smart. The pressures were bad. It was either put her into the cyber school or home school her, so we put her into the cyber school and it has been the greatest thing we have ever done...in [traditional public school] the teachers and administrators say they crack down on bullying, but when the popular kids are bullying they just think it is funny. When we would go in for teacher meetings they would be like "we had no idea," but then they would not do anything...We put up with the bullying from 6th through 8th grade, and finally in 9th grade the first day she was like "I can not go back in." And now to be truly honest she is like a changed girl. She is so much happier. She is writing stories. She is reading. Before she was so out of it she didn't want to do it because school would so emotionally drain her.

Until all traditional public schools can create safe environments, it is difficult to blame parents for going cyber.

How Public Cyber Schools Help Traditional Public Schools

Recently, officials of the Pennsylvania School Boards Association and the Pennsylvania State Education Association have joined forces to oppose public cyber charter schools, arguing that cybers drain funds from traditional public schools.⁴⁴ Yet evidence suggests that the public cyber schools *help* rather than harm traditional public schools, in at least four ways.

Enrollment management. Statistically, the average Pennsylvania public school district has 4,204 students (average daily membership for 2005-06 school year), and lost only approximately 31.6 students to cyber charter schools, or 0.8%.⁴⁵ Only six of Pennsylvania's 501 school districts have lost 2.5% or more of enrollment to cyber charters. Further, despite the growth of cyber schooling, in a recent three-year period (fall 2002 to fall 2005) the average school district gained 44.1 students, suggesting that for most districts, increased cyber enrollment has not ended growth. Indeed, for 255 of 501 Pennsylvania public school districts that grew from fall 2005 to fall 2006, increased cyber enrollment may help school budgets by delaying or avoiding costly school construction and renovation projects.

Normal growth and decline in enrollments driven by demographic forces like births and migration dwarf that from public cyber charters. Over 100 Pennsylvania school districts added more than 106 students from fall 2003 to fall 2005, while more than 100 lost 58 or more students in the period. Each change dwarfs the growth in cyber charter student bodies in both size and speed. If school districts have the administrative competence to adjust to normal demographic changes, they can similarly adjust to parents' choices to serve their children's needs.

Public cyber charters also allow traditional public schools to have lower class sizes. While most research suggests that lowered class size does not improve student performance, certainly most parents and teachers would prefer small to larger classes for their children and students.

Financial Management. Statewide, public cyber schools only receive about 73% of the funding, per-pupil, that traditional public schools spend. When a child leaves a traditional public school for a charter school (cyber or brick-and-mortar), the charter school receives a portion of the district's previous year per-pupil spending. This portion includes instructional and support services, but excludes transportation, construction, facilities, and many other expenditures.⁴⁶ Thus, school districts keep a sizable percentage of their per-pupil expenditures for children leaving district schools—upwards of 30%. The state of Pennsylvania also provides reimbursements to school districts for children attending charter schools—on average about 25% of the cost to districts. In other words, school districts keep nearly half of their previous year's per-pupil spending for children who leave their schools. This gives the school district more resources for its other students—effectively *increasing per-pupil spending*. Again, Pennsylvania cyber charters typically receive a mean of seven to eight thousand dollars per child, compared to a mean of \$11,377 for traditional public schools.

Student Fit. Public cyber schools serve many special education students whose parents felt under-served by traditional public schools. Eight Pennsylvania cyber charter operators were interviewed by the lead author, and each indicated that they served special education populations from 20% to 100% greater than the state mean.

As one teacher told the lead author in an interview, his cyber school officially has 42% more special education students than the state mean, but “it’s probably higher than that. A lot of kids who would be diagnosed and drugged at my old [traditional public] school do not seem to need it here.”

Traditional public school educators complain about public dollars going to public cyber charters rather than to their schools, but they forget that special education is notoriously expensive. Serving more special education students on-line—when their parents choose it—has the potential to help students and save school districts money.

Public cybers help traditional public schools adjust to student fit in a second way. In order to meet their academic goals under *No Child Left Behind*, traditional public schools increasingly urge academically weak students to try cyber schooling, as a second chance. This gives such students a second (and sometimes last) chance at a high school degree, and also relieves traditional public schools of the burden of serving students they can’t or do not know how to teach. Several cyber operators report that guidance counselors in traditional public schools routinely urge their low-performing students to try on-line education at a public cyber charter. Similarly, as a recent U.S. Department of Education report suggests, public cyber charters can help traditional public school districts meet the student choice provisions of *No Child Left Behind*, which state that traditional public school districts must give choices to low-income students stuck in failing schools.⁴⁷

Innovation. Finally, public cyber schools serve as educational laboratories by pioneering educational practices that traditional public schools are likely to adopt in the future. Several cyber operators report that traditional school administrators have visited their schools to get ideas about how to set up cyber elements in traditional public schools. So far, however, traditional public schools have been slow to pick up the cyber innovations and advantages. As one cyber operator put it, a local public school district had tried to duplicate his on-line offerings, but did not know how. They put traditional, veteran technology teachers in charge of the effort. Unfortunately these veterans failed to grasp the key benefits of on-line learning, such as not being bound by the traditional 45-minute class schedule and 8:30-3:30 school schedule, and being able to hire the best teachers from all over the Commonwealth rather than being restricted to the local market. Over time, however, it seems likely that traditional public schools will learn to adjust. As Education Sector analyst Bill Tucker notes, just as Apple’s iTunes is changing the music industry, over time, so too will cyber learning demonstrate that “innovative reforms can be readily integrated into the public school system.”⁴⁸

Conclusion

Despite their successes, public cyber schools have come under increasing attack from school boards and some legislators. Legislation introduced by Rep. Karen Beyer (HB 446) and Rep. Greg Vitali (HB 1655) would limit public cyber schools’ independence and drastically reduce funding for cyber students. Among the leading critics is Tim Allwein of the Pennsylvania School Boards Association. In an opinion piece, Allwein alleges that cyber schools (1) Are not accountable to parents and taxpayers, (2) Maintain excessive fund balances and keep too much money, and (3) Receive more money than they “need,” despite having lower “overhead costs.”⁴⁹

But, as this report has demonstrated, these claims are a gross distortion of the record of public cyber schools, and fail to account for the reasons behind their growing popularity: the failure of school districts to serve all their students' needs. These same criticisms could be levied at school districts:

- Public cyber schools complete every accountability and performance measure that district schools do (including standardized testing) and more. In addition to the accountability measures to which school districts are subjected, cyber schools must renew their charters periodically, and underperforming cybers can lose their charter to operate. Cyber schools also meet the most critical accountability measure of all—parents. Cyber schools only receive funding when parents choose them—thus they compete both with district schools and with each other to attract parents.
- Public cyber schools have a much better record than school boards in spending money wisely. While district schools have been funneling money into more administrators and new buildings to satisfy their Edifice Complex, cyber schools have been focusing on instruction and student services. Furthermore, an analysis of school districts' general fund balances indicates that 186 districts (37%) have fund balances greater than the 12% allowed by law.⁵⁰
- Public cyber schools receive no funding for buildings, transportation, or “overhead.” In fact, as described above, cyber schools *receive*, on average, \$2,000 less per-pupil for instruction and services than the average school district spends. Our findings suggest that school districts receive more taxpayer funding than they “need,” often splurging on new facilities instead of focusing on instruction.

Instead of attacking cyber schools, school reformers should attempt to apply the public cyber school model to school districts. Schools must become more focused on instruction, better equipped to handle individual students' needs, and more reliant on parental involvement. To achieve this end:

- Families should be able to choose the public school they send their children to, and schools should compete to attract students.
- State and local funding should follow the child⁵¹—schools should only receive funding when families choose to send their children there.
- All public schools should have charters that have to be renewed periodically. When schools fail to perform up to standards, they should have their charters revoked.

By adopting these types of reforms, school boards can perhaps find a cure for their Edifice Complex and start focusing on what is best for their students. When schools compete, kids win.

Endnotes

1. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; K-12 Statistical Reports: "Public, Private and Nonpublic Schools: Enrollments," "Public Schools Professional Personnel Averages and Rankings," "Public Schools Support Personnel," <http://www.pde.state.pa.us>. These are 2005-06 numbers and have grown since.
2. Greg Foster and Marcus A. Winters, "Throwing Money at Education," *Philadelphia Inquirer* July 14, 2003 (B2).
3. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; K-12 Statistical Reports, <http://www.pde.state.pa.us>
4. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; K-12 Statistical Reports: "Public, Private and Nonpublic Schools: Enrollments," "Public Schools Professional Personnel Averages and Rankings," "Public Schools Support Personnel," <http://www.pde.state.pa.us>.
5. College Board, "SAT National and State Summary Reports," <http://www.collegeboard.com>.
6. Pennsylvania Department of Education, "State Report Card," <http://www.paayp.com>
7. National Center for Education Statistics, "The Nations Report Card," <http://nces.ed.gov/nationsreportcard>.
8. Green, Jay P. and Marcus A. Winters, "Public High School Graduation Rates, 1991-2002," Manhattan Institute, <http://www.manhattan-institute.org>.
9. The Kansas City school experience is one of the most notorious examples of trying to improve school performance through higher spending. At the orders of a federal judge, Kansas City schools more than tripled per-pupil spending between 1985 and 1992. While the school buildings improved dramatically, student test scores showed no gains and the already high dropout rate for African American students increased. See Ciotti, Paul, "Money and School Performance," *Cato Policy Analysis* 298, March 16, 1998, www.cato.org.
10. "Value-Added Assessment and Systemic Reform: A Response to the Challenge of Human Capital Development," *Phi Delta Kappan* 87: 4 (December 2005), pp. 276-83.
11. *Ibid.*
12. Theodore Hershberg, "Assessing Our Past and Our Future through Value Added Assessment," presented at the annual Pennsylvania Coalition of Charter Schools conference, April 30, 2007 at Hyatt Regency Philadelphia at Penns Landing. PowerPoint slides available at <http://www.cgp.upenn.edu/pdf/Value-Added%20for%20Web.pdf>.
13. We do not count the Bryn Athyn School District, since it pays other districts to educate its children. We also did not count in the rankings three districts with widely unstable year to year spending, probably reflecting short term capital costs.
14. The correlation coefficient between total expenditures per-pupil was .07 with "reading proficiency (percent of all students)", .08 with "math proficiency (percent of all students)", .11 with "graduation rate" and .11 with "Avg. SAT Verbal score" and .09 with "Avg. SAT Math Score." When controlling for low-income students, all correlations drop, and none is statistically significant.
15. Regression results, along with downloadable versions of the data used, are available at www.CommonwealthFoundation.org.
16. LeFevre, Andrew T. (2006), Report Card on American Education: A State-by-State Analysis, American Legislative Exchange Council
17. Howell, William G. and Paul E. Peterson, with Patrick J. Wolf and David E. Campbell (2002). *The Education Gap: Vouchers and Urban Schools* (Washington: Brookings Institution).
18. See <http://www.kipp.org/>, or Robert Maranto and April Gresham Maranto (2006), "Markets, Bureaucracies, and Clans: The Role of Organization Culture," pp. 145-64 in Frederick Hess ed. *Educational Entrepreneurship: Realities, Challenges, Possibilities*. Cambridge: Harvard Education Press.
19. On the lack of impact from construction spending, see Harold Wenglinsky's "When Money Matters: How educational expenditures improve student performance and how they don't," (Princeton: Educational Testing Service, 1997). On how school bureaucrats and school boards may use construction and contracting spending to help themselves politically, see Joe Williams' *Cheating Our Kids* (New York: Palgrave-Macmillan, 2005) On the lack of impact from increased spending generally, see Jay P. Greene's *Education Myths: What Special Interest Groups Want You to Believe About Our Schools—And Why It Isn't So* (Lanham: Rowman and Littlefield, 2006).
20. "Spending on Schools," pp. 69-88 in Terry M. Moe edited *A Primer on America's Schools* (Stanford: Hoover Institution Press, 2001).
21. "The Political Context of Students' Educational Performance: Does Spending Matter?" (In. Press.) Notably, a number of studies suggest that lowering class size may actually harm schooling since to lower class sizes

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- schools must hire more teachers, forcing less attractive school districts to become far less selective regarding who they hire to teach.
22. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; K-12 Statistical Reports, <http://www.pde.state.pa.us>
 23. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data, <http://www.pde.state.pa.us>.
 24. The exceptions are three districts in high cost sections of Chester county. For mean salary data we used Bureau of Labor Statistics data as reported by Michael Butson of the Pennsylvania Center for Workforce Information & Analysis.
 25. For a good discussion of teachers salaries, see Hanushek's "Spending on Schools," *op.cit.*
 26. A correlation between spending per-pupil and instruction percentage of $-.46$ ($n=501$, statistically significant at $p=.000$). This negative relationship actually grows a bit stronger when local cost of living is controlled for.
 27. Correlation of $-.20$ ($n=501$, statistically significant at $p=.000$)
 28. Correlation of $.49$ ($n=501$, statistically significant at $p=.000$)
 29. Correlation of $.52$.
 30. The authors anticipated a correlation between two percentages, but as there are multiple other categories of spending, the strength of this correlation is surprising.
 31. Correlation of $-.86$
 32. In fact, the correlation between construction spending (both as a percentage of total spending and in per-pupil terms) is not significant.
 33. Pennsylvania school districts, in the aggregate, spend 57% of their budgets on instruction, 11% on construction, and 6% on administration, with about 25% going to everything else—including student services, transportation and facility operations.
 34. See for example, David Tyack and Larry Cuban's *Tinkering Toward Utopia* (Cambridge: Harvard University Press, 1995), p. 16.
 35. Pennsylvania Department of Education, K-12 Statistical Reports: "Public, Private and Nonpublic Schools: Enrollments," <http://www.pde.state.pa.us>
 36. Bill Tucker, *Laboratories of Reform: Virtual High Schools and Innovation in Public Education* (Washington: Education Sector Reports, June 2007), pp. 2-3.
 37. Augenblick, Palaich, and Associates, *Costs and Funding of Virtual Schools*, October 2006.
 38. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; <http://www.pde.state.pa.us>. Data is for 2005-06
 39. For a good summary of the research, see Robert J. Franciosi's *The Rise and Fall of American Public Schools* (Westport: Praeger, 2004), pp. 87-88.
 40. "Cyber Schools spring up in state," by Eleanor Chute, *Pittsburgh Post-Gazette*, May 8, 2005; available at <http://www.post-gazette.com/pg/05128/500990.stm>
 41. The correlations between districts' percent of ADM enrolling in cyber school and other variables is: Low-Income students percentage $.28$, Graduation Rate $-.22$, SAT Verbal mean $-.15$, PSSA reading percent proficient (all students) $-.26$; PSSA math percent proficient (all students) $-.27$.
 42. Pennsylvania Department of Education, K-12 Statistical Reports: "us Percent of Enrollment from Low-Income Families by Local Education Agency", <http://www.pde.state.pa>. Data is for 2004-05; percent for all public schools includes both cyber and brick-and-mortar charter schools.
 43. *Laboratories of Reform: Virtual High Schools and Innovation in Public Education* (Washington: Education Sector Reports, June 2007), p. 1.
 44. "PA cyber school debate unites school boards, teacher union," *Associated Press*, Martha Raffaele, May 12, 2007.
 45. Pennsylvania Department of Education, "Enrollments in Cyber Charter Schools, School Year 2006-07," unpublished data provided to authors upon request.
 46. Per-pupil special education costs follow special needs students, but are not included to the funding formula for traditional students.
 47. Bryan C. Hassel and Michelle Godard Terrell, *How Can Virtual Schools Be a Vibrant Part of Meeting the Choice Provisions of No Child Left Behind* (Washington: U.S. Department of Education, 2004).
 48. *Laboratories of Reform*, p. 1.
 49. Allwein, Tim, "Cyber Schools Need to Face Reality," *Pittsburgh Post-Gazette*, May 30, 2007, www.post-gazette.com.
 50. Pennsylvania Department of Education, Financial Summaries of Annual Financial Report Data; <http://www.pde.state.pa.us>. Data is for 2004-05. The fund balance law does not apply to cyber schools, but only

to school districts; thus Allwein's criticism that cyber schools aren't complying with a law they aren't required to seems ironic, given many of the school districts he represents are flouting the law which applies only to them.

51. See *Fund the Child: Tackling Inequity and Antiquity in School Finance*, Thomas B. Fordham Foundation, June 2006. *Fund the Child* present a model of weighted student fund in which each school gets funding on a per-pupil basis—with a funding level for traditional students, a higher funding level for low-income students, and additional funding for special needs students.

All quotations not cited were obtained from interviews conducted by the principal author between January and May 2007.



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