THE LEARNING REVOLUTION

HOW CYBER SCHOOLS & BLENDED LEARNING

TRANSFORM STUDENTS' LIVES

The Learning Revolution:
How Cyber Schools and Blended Learning Transform Students' Lives
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Executive Summary

Caela is a 13-year-old girl from Lake Ariel, Pa. Between kindergarten and sixth grade she was hospitalized 16 times from bronchitis, pneumonia, allergies and asthma. In fifth grade, she missed 83 days of school; in sixth, 67. In 2010, Caela enrolled in Pennsylvania Cyber Charter School and completed a full year's worth of English and science courses in just five months. Moreover, because she was not subjected to the germs and viruses spread by other students, Caela avoided serious illness all year. Caela is one of almost 30,000 students in Pennsylvania being served by cyber schools.

An increasing number of parents are choosing one of the commonwealth's 12 public cyber charter schools for their children every year. By allowing children to learn online and at home, cyber schools cater to students with a variety of unique needs: those who are either gifted or struggling academically; those who have demanding sports or performing arts schedules; children in rural areas with limited educational opportunities; and those like Caela who suffer from health problems. In the last 10 years, enrollment in public cyber schools has ballooned from 1,848 to 27,779 students.

Despite their popularity among parents and demonstrated academic successes, cyber schools have come under attack from public school boards and some lawmakers. Several pieces of legislation have been introduced in the General Assembly that would limit cyber schools' independence and drastically reduce funding for students. These proposals respond to claims that cyber schools are "unaccountable" and that they drain money from traditional public school districts.

These charges overlook the fact that cyber schools face the same accountability measures as public schools, including state testing, audits, and site visits. The claims also fail to highlight that cyber schools receive a fraction of what school districts spend. On average, cyber schools spend only three-quarters of what district schools spend per student, about $3,400 less per child. Moreover, cyber school funding represents 1% of all public school spending; school districts spend 10 times this amount on construction and debt alone.

Another growing trend is blended learning, or "hybrid schools." In contrast to cyber schools, blended learning provides a physical location for learning, while combining online learning and face-to-face class time with a teacher. Blended learning gives students some control over their location, time, direction and pace of study. Across the nation, school districts, charter schools, and private schools are looking to blended learning as a model for delivering quality instruction that meets individual students' needs.

Online learning serves a significant and growing number of students, and represents a significant shift in how we educate Pennsylvania's children. In light of the growth of cyber and hybrid schools and the debate over their accountability, this Report seeks to help Pennsylvania residents understand more about cyber charter schools, whom they serve, and how they operate.

What are Cyber Schools?

Cyber schools are public charter schools that allow students to interact with teachers through the Internet while they learn from home. Across the United States, there were 225 cyber charter schools in 26 states, enrolling more than 138,000 students in the 2010-11 school year.[1] Cyber schools provide Internet resources and web-based curricula to educate students. Some schools use curriculum providers, such as K12 and Connections Academy, which offer services and materials to public schools, cyber charter schools, and individual families.

Cyber schools provide an educational plan designed for each student. An individualized plan means that students can learn at their own pace, start at different grade levels in different subjects, and advance several grades in one year. Curricula typically include textbook readings, supplemental online resources, regular testing, meetings and ongoing one-on-one discussions with teachers, and field trips. Cyber schools are responsible for providing each student with materials for courses, including computers, printers, Internet services, textbooks, and other instructional resources.

Chart 1: Total Enrollment in Pennsylvania Cyber Schools

Source: Pennsylvania Department of Education. *Public School Enrollment Reports*
http://www.portal.state.pa.us/portal/server.pt/community/enrollment/7407
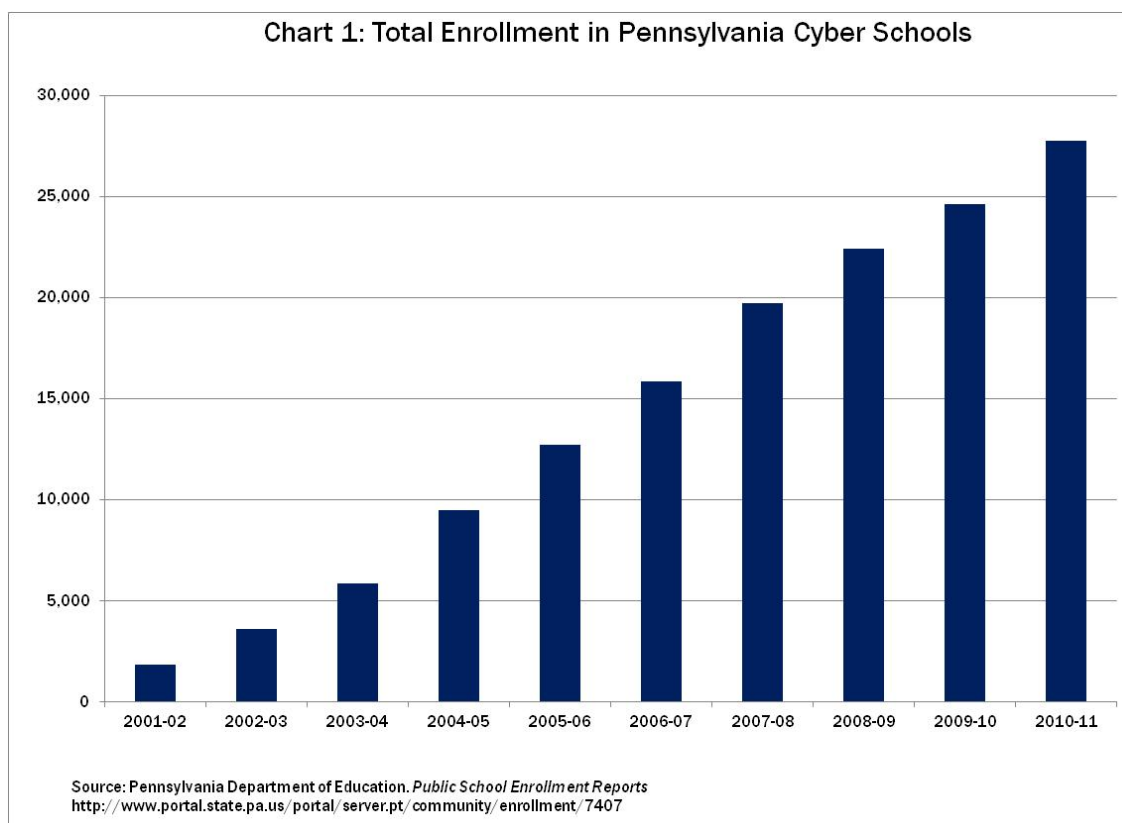
Pennsylvania cyber schools have experienced remarkable growth as more and more parents choose to send their children to one of the state's 12 cyber schools. Cyber school enrollment in Pennsylvania increased from 1,852 in 2001-02 to 27,779 in 2010-11—an increase of nearly 1,400% over a decade.[2]

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[1] Center for Education Reform, interview by author, July 20, 2011.
[2] Pennsylvania Department of Education, "Public School Enrollment Reports,"
http://www.portal.state.pa.us/portal/server.pt/community/enrollment/7407.

The Pennsylvania Department of Education (PDE) authorizes cyber schools' charters and allows them to have open enrollment, meaning parents from any part of the state can enroll their children in the cyber school of their choice. In the 2010-11 school year, cyber students came from all 500 of the state's school districts. As the largest district in the state, and one of the lowest performing, Philadelphia accounts for the most cyber school students, with 3,363 in the 2010-11 school year. Yet as a percentage of total enrollment, cyber schools represent only 1.4% of all public school students, and no more than 7.3% of students from any district in the state.[3]

As public institutions, cyber schools cannot teach religion and must enroll any student who applies regardless of previous test scores, ethnicity, or gender. Cyber schools are also required to provide special education services to students who need them.

How are Cyber Schools Funded?

Pennsylvania cyber schools receive state and local funding from students' resident school districts based on enrollment. For each student attending a cyber school, the district pays a per-pupil payment *minus* all per-pupil expenditures for adult education programs, community/junior college programs, student transportation, facilities acquisition, construction and improvement services, other financing uses (i.e., debt payments), and all federal funds received.[4] The resulting funding for cyber schools averages about 76% of school districts' spending per student.

Many school district officials complain that cyber schools draw too much money away from districts, claiming that since they do not need classrooms for instruction, cyber schools should receive less funding than the current fractional formula. However, a study by the BellSouth Foundation notes, "the [projected] costs of operating a virtual school are about the same as those of a regular brick and mortar school."[5] Although cyber schools do not require daily classroom space, they are required to pay for instructional materials, computers, internet access, and technological infrastructure—with substantially less funding than public school districts' budgets.

In addition to the funds required to adequately equip their students, cyber schools are also frequently forced to rent buildings for state testing. Because cyber schools attract students from multiple districts across Pennsylvania, organizing testing days is a mammoth task. The Pennsylvania Cyber Charter School, for example, spent $875,000 in 2011 to rent 30 halls across the commonwealth for state testing, provide materials and supplies, and send staff to administer the tests to some 5,000 students over three days. The school paid for staff lodging, meals, stipends and travel expenses, and ensured no family had to travel more than one hour to a testing site. Despite the coordination required, the school still managed to secure a 97% participation rate for the tests. [6]

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[3] Pennsylvania Department of Education, unpublished data provided to Commonwealth Foundation on request.
[4] Pennsylvania Department of Education, Charter School Funding, Form PDE-363,
http://www.portal.state.pa.us/portal/server.pt/community/financial_documents/7676
[5] Bill Tucker, *Laboratories of Reform: Virtual High Schools and Innovation in Public Education,* Washington: Education Sector Reports, June 2007.
[6] Fred Miller, Communications Coordinator, The Pennsylvania Cyber Charter School, interview by author, August 5, 2011.

Cyber school spending still represents only a fraction of total public school spending. In 2009-10, cyber schools received about $270 million in total funding, which accounts for only 1% of all public school spending. By comparison, school districts spent more than *10 times* that amount on construction and debt payments in 2009-10.[7]

Chart 2: School District vs. Cyber Schools Costs, 2009-10

Sources: Pennsylvania Department of Education, General Fund Balance: 1996-97 to 2009-10, and Expenditure Data for All LEAs, http://www.portal.state.pa.us/portal/server.pt/community/data_and_statistics/7202
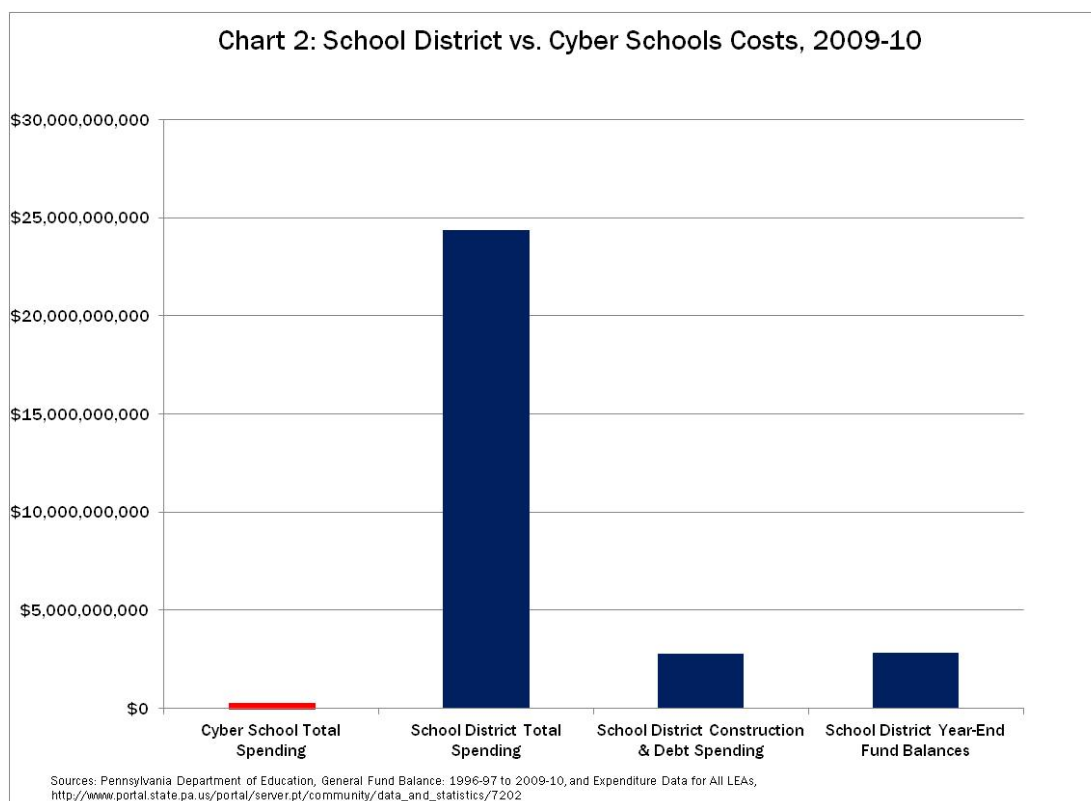
Who are Cyber School Students?

Cyber schools serve students from a variety of backgrounds and experiences. Gifted students and those with special needs require the added flexibility that cyber schools can provide. Others enroll in cyber schools for health reasons. Many students come from low-income families. In the 2009-10 school year, slightly more cyber students came from low-income families compared to the state average: 40.5% compared to 39%.[8]

Cyber charter schools also tend to attract students who are struggling academically, such as dropouts or children with learning disabilities. In the 2009-10 school year, special education students accounted for 13.7% of cyber school enrollment, a ratio similar to the 14.9% statewide average.[9] In the 2009-10 school year, 26% of cyber school students came

[7] Pennsylvania Department of Education. "Summaries of Annual Financial Report Data: Expenditure Data for All LEAs, 2009-2010." http://www.portal.state.pa.us/portal/server.pt/community/summaries_of_annual_financial_report_data/7673/afr_excel_data_files/509047.

[8] Pennsylvania Department of Education. "2010 PSSA Mathematics, Reading, Science and Writing State Level Proficiency Results" and "2010 PSSA Mathematics and Reading School Level Proficiency Results - School Totals," http://www.portal.state.pa.us/portal/server.pt/community/school_assessments/7442.

[9] Pennsylvania Department of Education, Bureau of Special Education, "Special Education Statistical Summary, 2009-2010." http://penndata.hbg.psu.edu/documents/PennDataBooks/Statistical_Summary_2009-2010.pdf.

from districts failing to meet Adequate Yearly Progress requirements. That is, parents of many students believe their children were not being well served by their assigned school.[10]

Table 1: Enrollment by Student Type, Pennsylvania Cyber & District Schools			
	Percentage of Cyber Students	Percentage of District Students	School Year
Special Needs	13.7%	14.9%	2009-10
Low-Income	40.5%	39.0%	2009-10
Sources: Pennsylvania Department of Education, 2010 PSSA Mathematics, Reading, Science and Writing State Level Proficiency Results, http://www.portal.state.pa.us/portal/server.pt/community/school_assessments/7442; Bureau of Special Education, Special Education Statistical Summary, 2009-2010, http://penndata.hbg.psu.edu			

How do Cyber Schools Benefit Students?

Students attending cyber schools benefit in many ways. Classroom distractions and pressures are not a problem for cyber students as they study at home. Because cyber schools are accessible from computers, students are safer and studies are not disrupted by a long commute, regulated class schedules, or other students. Students also learn to develop personal discipline and time management since they are required to document a specific amount of instructional time each day.

Cyber schooling facilitates more direct student-to-teacher interaction and communication. Each student typically has a personalized education plan, which is especially helpful for students who are academically gifted or challenged, or severely ill and disabled. Since cyber schools require parental or designated responsible adult supervision, students, teachers and parents are all highly invested in the education process.

Cyber schools are capable of offering services to students that may not otherwise be available. For example, small, rural school districts do not usually have enough resources to fully serve students with special needs, including gifted students or those with learning or physical disabilities. An individualized plan helps all students, struggling or advanced, to achieve improved performance.

Caela Collins of Lake Ariel is emblematic of the type of student cyber schools can help. Born at 26 weeks and weighing only 1-1/2 pounds, she had severely underdeveloped lungs that left her battling bronchitis, pneumonia, allergies and asthma—and 16 hospitalizations— from kindergarten to sixth grade. In fifth grade she missed 83 days of school; in sixth, 67.

"If there was a germ in that school it found my daughter, one virus after another," said her mother, Terri Collins. Despite her frequent absences, Caela was an excellent student, earning A's and B's. She enrolled in Pennsylvania Cyber Charter School in November 2010, and flew through her English and science courses months ahead of schedule. The best part of cyber school, her family says, is that Caela hasn't been sick once and is now off all of her medications.[11]

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[10] Pennsylvania Department of Education, "District AYP Status 2003-2010," http://www.portal.state.pa.us/portal/server.pt/community/school_assessments/7442; unpublished data provided to Commonwealth Foundation on request.
[11] Teresa Collins and Pennsylvania Cyber Charter School, interview by author, July 2011.

In other cases, the opportunity to attend cyber schools can save children's lives. Because of a near-fatal blood clot, an ill-placed bump or shove could have killed seventh-grader Chaz Tocci. Chaz was a special needs child with attention deficit hyperactivity disorder, Tourette's Syndrome, and obsessive-compulsive disorder. Charlie and Marylin Tocci pulled Chaz out of public school and enrolled him a cyber school. But because Chaz missed 21 days of school—waiting for the paperwork to go through—the West Shore School District brought truancy charges against his parents. Calling the school district charges "callous and inexcusable," the Toccis successfully fought the charges in March 2011, enrolling their son in a cyber charter school and protecting his life.[12]

How do Cyber Schools Benefit Taxpayers?

Because their average spending per student is much lower than regular public schools, cyber schools save taxpayers money every year. In the 2009-10 school year, the average cyber school expenditure per pupil was $10,935. The statewide average spending per student by school districts that year was $14,315—about $3,400 more than cyber schools.[13]

Table 2: Per-Pupil Expenditures, by Category (2009-10)					
	Instruction	Support Services	Non-Instructional	Construction and Debt	Total Expenditures
School Districts	$8,301.48	$4,152.49	$219.35	$1,641.70	$14,315.02
Cyber Schools	$7,539.88	$2,976.31	$25.74	$393.11	$10,935.04
Cyber Schools as Percent of Districts	91%	72%	12%	24%	76%
Source: Pennsylvania Department of Education. Summaries of Annual Financial Report Data: Expenditure Data for All LEAs, 2009-2010. http://www.portal.state.pa.us/portal/server.pt/community/data_and_statistics/7202					

Cyber schools spend less on both regular and special needs students compared to public schools: about $2,700 less per student in regular education, and some $6,000 less per student in special education. Overall, cyber schools save taxpayers $83 million a year—offering a public education for less while meeting individual children's needs.

Do Cyber Schools Drain School District Budgets?

Contrary to opponents' claims, cyber schools benefit children in school districts. Cyber schools receive, on average, about 76% of the per-pupil costs of a traditional district school. Until eliminated in the 2011-12 state budget, school districts received a state reimbursement of up to 30% of the total funding given to charter school students, which includes those at cyber schools. Even without the reimbursement, however, a school district retains about 25% of funding for a student it no longer has to educate.

Additional funding for students no longer in the district schools provides the district the ability to increase per-pupil spending for students remaining in the district schools. Similarly, when students transfer to cyber schools, brick and mortar schools experience

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[12] Jeff Frantz, "Family Wins Truancy Fight Against School District," *The Patriot-News*, April 6, 2011.

[13] Pennsylvania Department of Education, "Summaries of Annual Financial Report Data: Expenditure Data for All LEAs, 2009-2010," http://www.portal.state.pa.us/portal/server.pt/community/summaries_of_annual_financial_report_data/7673/afr_excel_data_files/509047.

smaller class sizes, which can help mitigate the need for new construction and reduce over-crowding.

Table 3: Taxpayer Savings from Cyber Schools, 2009-10					
	Number of Cyber School Students	Cyber School Spending Per Student	School District Spending Per Student	Difference	Cyber School Savings
Special Needs (Excluding Gifted)	3,369	$18,105	$24,141	$6,036	$20,335,284
Non-Special Needs	21,234	$9,797	$12,499	$2,701	$57,357,068
Total	24,603	$10,935	$14,315	$3,380	$83,157,745
Because of averaging, totals may not add up. School district enrollment is 1,701,246, of which 265,427 are special needs students.					

School district administrators often complain that regardless of the money retained, losing a few students from a class means their schools can no longer cover fixed costs. But that is not the case. For example, the Philadelphia School District—which has the highest number of cyber school pupils—spent $13,272 per student in 2009-10. The district had to pay $8,184[14] for every non-special needs charter school student, retaining $5,089 for every child that left.

In the Philadelphia School District, the cost for a classroom of 22 students is $291,993. Fixed costs, generously estimated at 60% of spending, would represent $175,196 for that classroom. Even if two-thirds of students left for cyber charter schools, the district would retain enough funding to cover its "fixed costs." In fact, the district would have smaller classes, while spending would rise to $22,200 per student for those who remain in the district.[15]

Despite educating students for less taxpayer money, some legislators and public school districts continue to depict cyber schools as a drain on government coffers. In June 2011, Rep. James Roebuck, House Education Committee Democratic chairman, introduced a bill to reduce payments to cyber charter schools, shifting the cost to the state. The bill would also cap charter school (including cyber school) fund balances to 8-12% of their budgets, though school districts do not have similar limits except for when issuing new debt.[16] Indeed, school districts' reserve funds are more than 10 times the total budgets of all cyber schools.

In September 2010, Pennsylvania Auditor General Jack Wagner issued a report criticizing the funding mechanism for charter schools. The report argued that because each school district receives a different amount of funding per student, payments to cyber charter

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[14] Pennsylvania Department of Education, Charter School Funding, "2000-2001 through 2009-2010 Selected Expenditures per ADM."
http://www.portal.state.pa.us/portal/server.pt/community/charter_school_funding/8661.
[15] Pennsylvania Department of Education, "Summaries of Annual Financial Report Data: Expenditure Data for All LEAs, 2009-2010,"
http://www.portal.state.pa.us/portal/server.pt/community/summaries_of_annual_financial_report_data/7673/afr_excel_data_files/509047.
[16] "Roebuck Introduces Funding, Accountability Reforms for Pa. Charter, Cyber Charter Schools,"
pahouse.com/Roebuck, June 13, 2011, http://www.pahouse.com/PR/188061311.

schools also vary by district, and do not match the "actual cost" of educating cyber charter students.[17]

While this is true, it reflects the system of funding education in Pennsylvania, in which school districts spend widely different amounts per student. Moreover, education tax dollars do not belong to school boards, but are for the education of children; to suggest students in cyber schools should receive less support than students in brick and mortar schools raises serious questions of equity. But these proposals are solutions in search of a problem: Cyber school spending represents about 1% of the $26 billion spent on public schools in the commonwealth.

How are Cyber Schools Held Accountable?

The Pennsylvania Department of Education continually assesses cyber schools' progress and performance. The Department annually evaluates each school's compliance with state laws and ensures fulfillment of its charter. The PDE has ongoing access to all student and staff information, instructional materials, and facilities. All cyber school students must be in attendance 180 days and 900 hours (990 hours for grades 7-12) during the school year. Pennsylvania requires teachers, with few exceptions, to be certified by the state. Almost 99% of cyber school teachers are certified,[18] well above the 75% state certification threshold required for charter schools.[19]

Cyber schools must meet every accountability and reporting measure as traditional public schools do—and more. All students are required to participate in Pennsylvania System of School Assessment (PSSA) tests and schools are rated on Adequate Yearly Progress (AYP) for No Child Left Behind. Like school districts, all cyber schools must comply with the following mandates and reporting requirements: Child Accounting System, Electronic Dropout and Graduate Report, Elementary Secondary Public School Enrollments, Financial Accounting Information, Limited English Proficiency-District Level, Limited English Proficiency-School Level, Secondary Course Enrollment, Social Security Reimbursement, Support Personnel, Financial Audit, State Audit, Federal Audit, Annual Financial reports, and General Fund Budget PDE 2028.

Beyond the public school measures, cyber schools must submit an annual charter school report, comply with cyber charter school renewal procedures and the Pennsylvania System of Cyber Charter Review.[20] Cyber schools are usually required to renew their charter every five years,[21] and if they fail to demonstrate compliance with state laws and educational standards, their charter will be denied or revoked—a risk that public schools do not face.

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[17]Auditor General Jack Wagner. "Special Report: The Commonwealth Should Revise Its Charter and Cyber Charter School Funding Mechanisms," September 2010, http://www.auditorgen.state.pa.us/reports/performance/special/speCharterFundingReport100510.pdf

[18] Pennsylvania Department of Education. *2010 Charter Annual School Reports,* http://www.portal.state.pa.us/portal/server.pt/community/annual_reports/7357/2010_charter_school_annual_re ports/704673

[19] Pennsylvania Department of Education. "Summary of Charter School Legislation," http://www.portal.state.pa.us/portal/server.pt/community/charter_school_regulations/7359/summary_of_charter _school_legislation/508170.

[20] Agora Cyber Charter School, Summary of Annual Report Requirement.

[21] Pennsylvania Department of Education, *2010 Charter Annual School Reports,* http://www.portal.state.pa.us/portal/server.pt/community/annual_reports/7357/2010_charter_school_annual_re ports/704673.

Finally, cyber schools face the highest accountability standard—*parental choice.* Cyber schools receive funding only when parents choose to enroll their children in these public schools-of-choice. If a parent is dissatisfied with a cyber school, not only do they have the option of returning their child to their resident district school, but they can also enroll him or her in any of the other cyber schools in the state.

Aren't Cyber Schools Performing Poorly?

Cyber schools receive less funding per student and educate a high percentage of low-income students and students transferring from poorly performing school districts; more than one-quarter of cyber school students came from districts failing to meet AYP requirements.[22] Recently, academic performance at cyber schools has drawn criticism. In particular, critics point out that only four of 11 cyber schools operating in 2009-10 made AYP, the federal benchmark measuring school performance.[23] Yet cyber schools collectively met 177 of 205 AYP targets that year, and 58% of cyber school students were enrolled in the schools that made AYP. A unique feature of cyber schools is that parents anywhere in the state can choose any one of the 12 cyber schools in Pennsylvania for their children if they feel one school performs at a higher level.

To meet AYP in 2009-10, schools must reach goals in three categories: 90% attendance with an 85% graduation rate; every measurable demographic group (categories are organized according to race, special education and economically disadvantaged status) must reach 56% proficiency in math and 63% in reading on state tests; and 95% of students overall and within each group must take the test. Failing in any one category of AYP means a school will fail to meet AYP overall.[24]

For the purposes of AYP, there is a discrepancy between how school districts and cyber schools are treated. Each is designated as a "local education agency" by the Commonwealth of Pennsylvania, which means cyber schools are categorized similarly to school districts.[25] But despite being classified the same way, school districts have an easier time meeting AYP: they need to satisfy only test participation and academic performance goals for one age group, whether elementary, middle or high school. Individual schools, however—including cyber charter schools—must meet AYP standards in every sub-group, or they fail.[26]

Cyber schools are also more like school districts, rather than individual public schools, in their enrollment and scope of education. In 2010-11, for example, the largest cyber school, Pennsylvania Cyber Charter School, had 9,651 students. The second-largest,

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[22] Pennsylvania Department of Education. "District AYP Status 2003-2010." http://www.portal.state.pa.us/portal/server.pt/community/school_assessments/7442; unpublished data provided to Commonwealth Foundation on request.

[23] Morgan-Besecker, Terry, "Studies Show Cyber Schools Not Making Grade," *The Times-Leader*, July 18, 2011, http://www.timesleader.com/news/Studies_show_cyber_schools_not_making_grade_07-17-2011.html.

[24] Pennsylvania Department of Education, Academic Achievement Report: 2009-2010, "AYP Facts." http://paayp.emetric.net/.

[25] Maurice Flurie, CEO, Commonwealth Connections Academy, interview by author, July 28, 2011; Morgan-Besecker, Terry, "Studies Show Cyber Schools Not Making Grade." *The Times-Leader*, July 18, 2011, http://www.timesleader.com/news/Studies_show_cyber_schools_not_making_grade_07-17-2011.html.

[26] Pennsylvania Department of Education, Academic Achievement Report: 2009-2010, "AYP Facts." http://paayp.emetric.net/.

Philadelphia's Agora Cyber Charter School, enrolled 5,861.[27] Eight of the 11 cyber schools reporting data in 2009-10 enrolled students from kindergarten through 12th grade, unlike most individual public schools.[28]

Cyber schools stand to lose their charters and be shut down if they persistently fail, creating an incentive to improve that regular public schools lack. Most importantly, cyber schools face the greatest accountability measure—they only receive funding when parents choose them as the best school for their child.

Table 4: Enrollment in Cyber Charter Schools, Fall 2010	
School Name	Number of Students
21st Century Cyber Charter School	686
Achievement House Charter School	536
Agora Cyber Charter School	5,861
Central PA Digital CS	127
Commonwealth Connections Academy	4,424
Pennsylvania Cyber Charter School	9,651
PA Distance Learning Charter School	327
PA Leadership Charter School	2,155
PA Learners Online Charter School	467
Pennsylvania Virtual Charter School	3,353
Susq-Cyber Charter School	192
Total	27,779
Source: Pennsylvania Department of Education, "Public School Enrollment Reports," http://www.portal.state.pa.us/portal/server.pt/community/data_and_statistics/7202	

What is Blended Learning?

In contrast to cyber schools, in which students study online and largely at home, blended learning involves a combination of online learning and face-to-face class time with a teacher. But blended learning is more than just regular classroom teaching with extra high-tech bells and whistles: the technology gives students some control over their location, time, direction and pace of study. All kinds of schools, whether public or private, can offer some form of blended learning. Schools that offer instruction online and at a bricks-and-mortar site are often called "hybrids."

The main advantage of blended learning is that it allows teachers to adapt quickly: instead of teaching at one pace aimed at the "middle" ability level of the class, teachers can use online tools to tailor instruction and practice to individual students' needs. Take New York's School of One, which functions in three of the city's public schools and offers math programs:

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[27] Pennsylvania Department of Education. "Public School Enrollment Reports."
http://www.portal.state.pa.us/portal/server.pt/community/enrollment/7407.
[28] Pennsylvania Department of Education. "2010 Charter Annual School Reports."
http://www.portal.state.pa.us/portal/server.pt/community/annual_reports/7357/2010_charter_school_annual_reports/704673.

The classroom is an open space that runs the length of the building wing, but is subdivided by bookshelves into workspaces where small groups of students work with the teacher or individually with laptops. The first sight that greets the eye is an airport-style video display, listing not cities and flights, but students' names and how they will receive their instruction during that period. For those who are starting on the computer, a press of a button will take them to a lesson provided by 1 of more than 50 content providers. Each lesson runs about half an hour, and students may switch from one content provider to another on the same skill. Others work in small groups with a teacher, who typically oversees two or three groups of students, the content and groupings informed by data from the student's work online.

Like many schools that use a hybrid model, School of One's computer systems create real-time progress reports for each student, which teachers can review any time during the day—even during class. Teachers can then target a student's problem areas by assigning them to a small group or even another instructor.[29]

The ability to customize education for each student using adaptive "learning management systems" has greatly enhanced students' performance at many hybrid schools. Carpe Diem Academy in Yuma, Ariz., is a charter high school that has gained national prominence for its results. More than 57% of the students are economically disadvantaged,[30] and it costs only $5,300 to educate each student per year. At the same time, Carpe Diem is more effective: it places in the top 10% of scaled scores in the state, and has been the top school in its county for the last four years.[31]

Because blended learning offers a flexible way to improve student learning and overall educational productivity—often with fewer resources—incorporating it may be the best way for schools facing persistent budget shortfalls to maintain standards.[32]

Blended Learning in Pennsylvania

In December 2010, Agora Cyber Charter School—Pennsylvania's second-largest cyber school—opened its blended learning center for grades 3-12. The Agora Learning Center focuses on remedial lessons in math and language arts, and students go in four times a week for three hours at a time. Classes have no more than a 15-to-1 student-teacher ratio, and additional workshops and extracurricular activities also take place at the center. Like most hybrid programs, Agora's center is technology-heavy, combining interactive whiteboards with face-to-face tutoring and material from the online K12 curriculum. The design helps to give students highly individualized attention.[33]

Cyber schools can also integrate blended learning opportunities into their school year. One innovative example is the Mobile Classroom of Harrisburg's Commonwealth Connections Academy. The 38-foot orange bus is outfitted with computers, satellite and

[29] Schorr, Jonathan and McGriff, Deborah. "Future Schools." *Education Next*, Summer 2011.

[30] U.S News & World Report. "Best High Schools 2010: Carpe Diem Academy."
http://education.usnews.rankingsandreviews.com/best-high-schools/listings/arizona/carpe-diem-academy.

[31] Carpe Diem School. "Carpe Diem Schools." YouTube, http://www.youtube.com/watch?v=-s_O65rWV10.

[32] Schorr, Jonathan and McGriff, Deborah, "Future Schools," *Education Next*, Summer 2011.

[33] Agora Cyber Charter School, "The Agora Learning Center," http://www.k12.com/agora/how-it-works/learning-center.

wireless internet, microscopes, interactive smartboards and digital media. In one year, a troop of teachers made between 400 and 500 field trips to students across the state, and the vehicle can roll in anywhere from a state park to the parking lot of a Wal-Mart. With all of its features, the mobile classroom is equipped to offer full science labs (complete with frog dissections, water sampling and soil testing) as well as art shows and book fairs. Students in rural areas with limited educational options have especially benefited from the science labs.[34]

The Pennsylvania Cyber Charter School, the state's largest cyber school, offers a type of blended learning, or "bricks-and-clicks" program. Called "Building Blocks," it is an 8:30 a.m. to 2:30 p.m. supplemental, hands-on learning program for 4- and 5-year-old kindergarteners. "It looks and feels like a kindergarten and is taught by certificated early childhood teachers, but is not a 'school' because PA Cyber is the school," explained Fred Miller, the school's communications coordinator. "Parents guide the child in the PA Cyber curriculum at home with online teachers. Building Blocks classes reinforce reading, writing, math, social studies, and provide arts, music and physical education experience." The first site opened in Baden, outside Pittsburgh, in 2010, and proved popular enough with K5 parents that PA Cyber has added a first-grade class for Fall 2011. Enrollment has doubled from an initial 50 to 100 students, and the school intends to open other sites in Pittsburgh, Harrisburg and elsewhere in the state.[35]

Parental and student demand for blended learning—partly driven by the greater choice offered by cyber schools—is high in Pennsylvania, prompting some school districts and intermediate units to offer their own programs. The Capital Area Online Learning Association (CAOLA) began in June 2009 with 14 students taking an online summer program. The association uses the online lab and self-blend models outlined below. By the fall of 2010, more than 1,200 students in 20 school districts were taking 3,332 courses. Districts pay membership fees to participate and to use learning programs from online providers. In several cases, districts have found that using CAOLA saves money because they do not have to hire a teacher for less-than-full class sizes: one district paid $28,211 to offer 36 courses to 40 students—much less than the traditional bricks-and-mortar option would have cost.[36]

For Naveda Walker, blended learning has been a lifesaver. The 14-year-old found herself bullied and beaten in the Philadelphia School District, enduring punches to the face and a concussion from a group of girls as she made her way home from school one day. Naveda's desperate mother enrolled her daughter in Agora Cyber Charter School, but Naveda found learning at home away from friends to be isolating. So she joined Agora's blended learning center, which offers on-site classes four days a week, where she has found the students and work "more focused." She told the *Philadelphia Inquirer*: "It's a better decision than going to a public school."[37]

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[34] Commonwealth Connections Academy. "Our Mobile Classroom—Education on the Move!" http://www.connectionsacademy.com/pennsylvania-cyber-school/our-school/mobile-classroom.aspx; Maurice Flurie, CEO, Commonwealth Connections Academy, interview by author, July 28, 2011.

[35] Fred Miller, Communications Coordinator, The Pennsylvania Cyber Charter School, interview by author, July 22, 2011.

[36] Staker, Heather Clayton. *The Rise of K-12 Blended Learning.* Innosight Institute, May 2011.

[37] Graham, Kristen A., John Sullivan, and Susan and Snyder. "Going Online to Avoid Violence." *The Philadelphia Inquirer.* April 10, 2011. http://articles.philly.com/2011-04-10/news/29403554_1_agora-cyber-charter-online-courses-students.

How Does Blended Learning Work?

According to the Innosight Institute, a think tank that looks for innovative solutions to social problems, blended learning falls into six basic models along a scale:

- Teacher-driven: Students learn primarily in a traditional classroom, but the teacher employs online tools at the back of the class or in a lab to supplement the regular curriculum.
- Rotation: Within a fixed schedule, students rotate between self-paced online learning and sitting in a physical classroom with a teacher. The teacher usually oversees the online work.
- Flex: An online platform delivers most of the curriculum, with teachers available as needed to provide in-person tutoring and small-group instruction.
- Online Lab: An online platform and online teachers deliver the entire curriculum, but in a brick-and-mortar lab setting with non-expert supervisors. Students often take traditional courses in addition to their online program.
- Self-blend: The most common form of blended learning in American high schools, in which students take one or more courses online to supplement their regular learning, and always remotely.
- Online-driven: An online platform and teacher deliver the entire curriculum. Face-to-face time may be optional or mandatory, and some programs offer extracurricular activities or bricks-and-mortar segments.[38]

Suggestions to Reform and Improve Policies for Online Learning in Pennsylvania

Pennsylvania has one of the best environments in the United States for online learning. The Evergreen Education Group, which does annual reviews of the legal environment for online learning in the country, classed Pennsylvania as one of only 11 states with a clear operating law for online schools; which allows enrollment from multiple school districts across the state; and which makes publicly available information about online schools and how their students perform.[39]

Education officials and charter school opponents must recognize that cyber schools and blended learning are popular, viable, and quality educational options for Pennsylvania children. Instead of trying to suppress innovation and stifle competition, school officials should partner with cyber schools to help boost academic quality and school accountability. Pennsylvania schools would experience markedly improved test scores if the entities choose to work together, and adopt the best practices they can learn from each other, instead of vying for political superiority.

The field of online learning is new and rapidly evolving, however, which means schools often run into regulatory roadblocks because laws do not adapt as quickly as educational needs. As a first principle, parents should be able to choose the public school to which they send their children, whether it is another school within a district, across district lines, a charter school or a cyber charter school. In addition, the Foundation for Excellence in

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[38] Staker, Heather Clayton. *The Rise of K-12 Blended Learning.* Innosight Institute, May 2011.

[39] John Watson *et al. Keeping Pace With Online K-12 Learning: An Annual Review of Policy and Practice*, Evergreen Education Group: 2010, http://www.kpk12.com/wp-content/uploads/KeepingPaceK12_2010.pdf.

Education has outlined several best practices in policy to facilitate online learning. In the following major areas, Pennsylvania could improve its state laws:

- **Have a state funding model that pays institutions in installments, creating incentives for completion and achievement.** The current public school system pays institutions for attendance, regardless of how well students do. But cyber schools and blended learning programs can save money on facilities and transportation, and help allocate scarce financial resources more efficiently by matching students in any part of the state to educational opportunities that best suit their needs. In addition, all public schools should receive funding only when families choose them, and all public school funding should follow the child.
- **Treat all educational providers (public, private and online) the same.** Charter schools and cyber schools have additional standards they must meet, and stand to lose their charters and funding if they fail. Regular public schools do not face such high levels of accountability, but should, with each having a performance contract that is regularly reviewed. All underperforming public schools—whether cyber or traditional district—should face sanctions when they fail to meet their performance contract measures.
- **Certification: Allow alternative teacher certification based on experience in online instruction or performance, and allow online instructors certified in other states to teach in Pennsylvania.** Current certification requirements include having a minimum college GPA of 3.0 and six semester hours each in English and math.[40] Teachers who have been certified in other states must satisfy multiple criteria for certification in Pennsylvania. The process includes providing copies of teacher certifications and educational diplomas; official transcripts; notarized copies of National Board certificates; and having testing centers officially report teachers' test scores.[41]
- **Administering student assessments online.** For cyber schools, renting test sites, shuttling teachers and staff back and forth, booking hotel rooms and countless other costs and planning go into administering mandatory state tests such as the PSSA. Allowing students to take tests online would not only cut schools' costs, but would offer greater flexibility and efficiency, particularly if testing periods could be extended or broken up. For example, third-party providers with test centers already in place could offer exam sites and monitoring. [42]

Studies have demonstrated the important role of parents in the educational process of their children. Cyber schools have become a viable, cost-efficient, accountable, and quality educational option for tens of thousands of students and their families. Blended learning also offers much promise: By incorporating interactive learning and technology, it gives schools the opportunity to track student learning and pace instruction for every child, improving academic performance and interest. Online learning can save money on facilities and hiring teachers—while expanding educational opportunities for children—creating a

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[40] Pennsylvania Department of Education. "Important Certification Requirements." PA Certification. http://www.education.state.pa.us/portal/server.pt/community/pa_certification/8635/important_certification_req uirements/506743.

[41] Pennsylvania Department of Education. "Out of State Prepared-Certification Checklist for PA Certification,". http://www.portal.state.pa.us/portal/server.pt?open=514&objID=506870&mode=2.

[42] Foundation for Excellence in Education. *Digital Learning Now,* http://www.excelined.org/Docs/Digital%20Learning%20Now%20Report%20FINAL.pdf.

way to maintain academic standards in an era of stretched school budgets. As examples from Pennsylvania and across the country show, no single model of online learning will fit every school or community, but it is rapidly shaping the way America educates its children for the better.

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The Commonwealth Foundation (CommonwealthFoundation.org) is Pennsylvania's free-market think tank. The Commonwealth Foundation crafts free-market policies, convinces Pennsylvanians of their benefits, and counters attacks on liberty.

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