Virtual Schools, Actual Learning

Online Education Becomes a Valid Option

No. 80
December
2011

A Pioneer Institute White Paper

by William Donovan

PIONEER INSTITUTE
PUBLIC POLICY RESEARCH

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Executive Summary

For more than 30 years innovations in information technology have been sweeping through the global economy, sometimes altering the way industries operate, other times threatening their existence. Bookstores, newspapers, music producers, even the postal service are just some of the sectors that have seen their business models radically changed by computers and the Internet.

In education the historical model has remained essentially the same. While educators have steadily incorporated technology into the process, teachers and students still meet in a building each day as they have done for hundreds of years. That place known as "school" serves as a center of learning, socialization and personal development.

State and local school officials are starting or expanding K-12 virtual schools because they provide new learning opportunities for a host of students.

But technology is now disrupting the traditional education template as well. Virtual schools, in which students learn through courses offered, overseen and assessed through the Internet without traveling to a bricks-and-mortar location, are rapidly becoming a popular and important option in the education mix. Thirty states, as well as Washington, D.C., have statewide full-time online schools with many showing annual growth rates of 25 percent.[1] Nationally, there are an estimated 200,000 full-time virtual school students, according to the International Association for K-12 Online Learning (iNACOL).[2]

State and local school officials are starting or expanding K-12 virtual schools because they provide new learning opportunities for a host of students. Children suffering from medical issues or physical disabilities; others who avoid school because of bullying; those who live in rural areas; and other youths who are needed at home to help as a caretaker or with the family income. Youngsters pursuing careers in athletics or the arts, whose schedules make it difficult to attend daily classes, are also completing their school work during more convenient hours.

Additionally, virtual schools are providing cost-effective options to public schools system for students who must be at home at a time when there is a funding crisis in public education and many districts are wrestling with overcrowding in their classrooms.

Yet for all the promise of virtual schools many states are proceeding cautiously. Quality control is a common concern. Are the courses equal to those taught face-to-face? Are teachers receiving the proper training for online instruction? Is the social development of children who take their courses online suffering compared to students who mingle with peers in classrooms and hallways?

Yet for all the promise of virtual schools many states are proceeding cautiously.

There is also the question of how virtual schools and online learning are shaping the future of education. Many traditional schools already incorporate online course work into their curriculum. Numerous experts believe that online presence will evolve into "blended learning," a combination of online instruction at home and classroom work at the school. In fact the Act Relative to the Achievement Gap of 2010, which enables the formation of virtual innovation schools, defines a virtual school as a place other than a public school building where students receive at least 80 percent of their instruction online. The remaining 20 percent could include local school participation.

This paper is intended to provide background information for those exploring full-time virtual schools and online learning. It draws on interviews with education officials, virtual school directors, district superintendents, researchers and non-

profit executives, as well as data generated by previous studies on the topic.

The growth of virtual schools has been a grassroots movement, led by districts and individual states, rather than a policy orchestrated by the federal government. Consequently its development has been uneven around the country. Florida opened one of the first state-wide virtual schools in 1997, which has evolved into the largest school. California has at least 16 full-time virtual schools available to students living in specific counties. One software vendor, K12 Inc. of Herndon, Virginia, says it provides programs for more than 60 full-time virtual schools in the U.S.[3]

Massachusetts is well behind the leaders in offering a full-time virtual school, though students at nearly 200 public and private schools have access to courses offered through Virtual High School (VHS), an online education collaborative based in Maynard, Massachusetts.

Massachusetts is well behind the leaders in offering a full-time virtual school.

Massachusetts' first and only state-wide virtual school, the Massachusetts Virtual Academy at Greenfield, was started in 2010 through the "Innovation Schools" initiative within the state's Act Relative to the Achievement Gap of 2010. It permitted educators to form in-district schools that operated with greater flexibility than traditional schools, but kept the public funding for them within the district.[4]

During the Virtual Academy at Greenfield's first year, about 300 students enrolled statewide. Its unique funding mechanism required by state rules – directly billing "sending districts" rather than having their per-pupil expense withheld by the state – surprised those districts who were unprepared for the bill. But it also opened the eyes of many school superintendents who underestimated the demand among students and families for a virtual school in Massachusetts.

Further, the first year experience of Greenfield school officials in setting up the Virtual Academy at Greenfield provides many valuable lessons to state officials and other Massachusetts districts on the practical problems that arise when creating a virtual school under traditional school regulations and restrictions.

As the 2011-2012 school year began an eventual expansion of the virtual school concept in Massachusetts was seen by one state education official as not just a desire by advocates, but a "train coming down the track" to be implemented and managed in "the best possible way."[5]

Background

Online learning comes in a variety of forms. In a virtual school students attend full-time and progress through the grades. In a supplemental online program students attend part-time, while also earning credits from another institution. A blended program can be a combination of full-time, supplemental and traditional education. Traditional schools also offer online courses and in some states students are required to take one online course as a graduation requirement.

Virtual Schools are educational organizations that may be run by state agencies, such as in Florida, Illinois and West Virginia; regional agencies and consortia, as in the nonprofit Virtual High School in Maynard; local public school districts such as the Houston Virtual School; and more than 80 "cyber-charter" schools that received a charter from a local district, state board or other sponsor.[6] As with traditional schools they typically have a principal, guidance, courses, extracurricular activities, class discussions, parent-teacher organizations, special education teams and other services, all offered through an Internet-based model.

While the term "virtual school" provides a useful image, more specifically the breakthrough is the connection via the Internet of teachers and courses to children and adults who have been out of reach in the past. It's a dynamic advance in the decades-

old practice of distance learning. The progression of instruction that began by mail, expanded to radio airwaves, moved on to television broadcasts and advanced to videoconferencing, has reached a higher level. "Today's online learning applications take advantage of a wide range of Web resources, including multimedia, Web-based applications and new collaboration technologies."[7]

[The] term "virtual school" provides a useful image, more specifically the breakthrough is the connection via the Internet of teachers and courses to children and adults who have been out of reach.

Proponents of online learning see it as "a solution to close achievement gaps, improve student progress toward proficiency, increase graduation rates, and improve the distribution of high-quality teachers for students, regardless of geography or distance."[8] Certainly its popularity is widespread and growing. In a review of online learning studies, the U.S. Department of Education found that more than one million K-12 students took online courses in 2008.[9] A Boise State University study concluded that K-12 online learning increased from 50,000 enrollments in 2000 to more than two million enrollments in 2009.[10]

As the activity accelerated, policymakers and practitioners have sought data on the effectiveness of K-12 online learning. In fact, according to the federal Department of Education, few rigorous examinations have been published.[11] A search of the research literature comparing the learning effects of online versus face-to-face instruction for K–12 students from 1994 through 2008 found just five published studies meeting meta-analysis criteria. Still the Department of Education concluded that students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction.[12]

That conclusion wasn't the reason the state of Florida awarded "Break-the-Mold" grants totaling $200,000 to two districts to work together to create a virtual school in 1996. Rather, Florida school officials and state legislators saw practical benefits to online learning. One was to serve students in rural areas whose schools did not offer many courses that were available in larger, more populated areas. Another was to relieve the state's overcrowded public schools.[13]

For the first six years funding for the program was inconsistent as legislators monitored its progress. Finally Florida Virtual School (FLVS) was established in state law as its own statewide school district. But its funding model changed. Rather than financed through a line-item in the state budget, it was reimbursed per full-time equivalent student upon successful completion of the course. That meant taxpayer dollars that districts previously received for each public school student they enrolled followed those students for the portion of their courses served by FLVS. Criticism of FLVS, though not overwhelming, became more vocal.

Florida school officials and state legislators saw practical benefits to online learning.

Similarly there have been opponents to virtual schools in other states. In 2001, public school districts in Pennsylvania filed suit against virtual schools in their state, characterizing them as essentially home schools funded by taxpayer dollars and claiming they were draining them financially. The districts ultimately lost their suit.[14]

When the Appleton School District announced plans to start Wisconsin's first virtual school in 2002 it was opposed by the Wisconsin Education Association Council (WEAC), the public education employees union. The WEAC argued that the Wisconsin Virtual Academy violated open

enrollment laws and used unlicensed parents as teachers. The school opened, but years of fighting in the courts and the state legislature followed. In early 2008 hundreds of parents and students rallied at the state capital to keep the virtual school operating.[15] Compromise legislation was finally passed in the spring of that year.[16]

Online education continued to expand within traditional schools. In 2006, Michigan became the first state to require all students to complete an online class in order to graduate from high school. In 2008, Alabama added a high school graduation online learning requirement. Florida passed a similar law in 2011.

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"Personalized" Education

Virtual schools are part of what many educators hope is a transformation in the way students are taught using technology. Florida Virtual School was set up as a public entity working with Florida schools to fill gaps they couldn't serve. It was also intended to provide "healthy competition to challenge the status quo" and redesign the education system "around the needs of the students rather than the adults."[17]

A key concept that was applied at FLVS was deemphasizing "seat time" and putting more weight on student performance. According to Julie Young, president and chief executive officer, FLVS was "competency-based from Day One."[18] The goal was to have students know the material well when they left the school. If they failed or did poorly they repeated the course and retested.

Expecting students to pass a course is not novel. But at traditional schools, teachers are required to cover subject material within a marking period. Students who struggle learning the lessons can ask for extra help or work with a tutor, but from September to June the class as a whole continues along.

Virtual students do not need to be bound by the calendar. Florida Virtual School lives by the motto "Any Time, Any Place, Any Path, Any Pace." If a student isn't ready to move on he or she continues to work on the material in question.

This "personalization" of education is seen as one of the major advantages of online learning. Rather than having students attend a class for a certain number of days - their seat time - and count that as their learning, online education accommodates different learning rates in children. In other words, it recognizes that not all students need the same number of days.[19]

"Right now the common phrase is that we specify the amount of time (in schools) but the amount of learning is variable," says Bill Tucker, managing director of Education Sector, a Washington, D.C.-based education think tank. "The flip to that is to specify the amount of learning and the amount of time is variable. It sounds simple but it's pretty profound because it begins to get into one of the big changes a lot of folks are talking about in competency-based learning."[20]

Virtual students do not need to be bound by the calendar. Florida Virtual School lives by the motto "Any Time, Any Place, Any Path, Any Pace."

This competency-based learning need not be entirely online. School of One, a math program in several New York City middle schools, uses technology to personalize instruction. Individualized lessons are designed according to a student's needs and ability to learn. Students are assessed at the end of each math period to determine if they understand the material they just completed. Then a computer algorithm analyzes their results, considers their needs and creates an individual schedule for each student for the following day.[21]

Colorado's Adams County School District 50, a district of about 10,000 students, adopted an innovative district-wide learning model in 2008. Grade levels were eliminated and students were grouped by ability, regardless of their age. Students climb a series of 16 levels, advancing at their own pace after proving they know the material. The program began in a single elementary school, spread district-wide for K-8 students and will continue to expand until full K-12 implementation is reached in 2013.[22]

Seat time is also important to reform-minded educators because it is used by the states to determine funding for virtual schools. Susan Patrick, president of the International Association of K-12 Online Learning (iNACOL), calls that practice the "single biggest barrier across the country" to virtual school expansion. "In online learning a student may not be in a specific geographical location. They may be within a school taking the class or they may not be. But it shouldn't matter. The learning should matter."[23]

After school officials in Greenfield, Massachusetts started their virtual school, they soon concluded there were impediments to using the traditional 180-day calendar. "If students are not available on Wednesday, they can complete our required five to six hours of work on Saturday," said Susan Hollins, superintendent of Greenfield Public Schools. "We require 180 days of schooling each year but what difference does it make what days the students have instruction? The virtual model gives more flexibility to students and makes traditional attendance and absence models less of an obstacle to completing a full school year."[24]

Cost vs. Traditional Education

The cost of online education is seen as another benefit of virtual schools. Studies have shown that it is less expensive on a per pupil basis than educating in a traditional school.

In fact virtual schools and traditional schools have many of the same expenses. Both need teachers to teach the courses. They both require resources for instruction. Physical offices are needed to provide administrative, academic and technical support to students and teachers. Each has the cost of infrastructure, such as computer networks, to be used in the classes to one degree or another.

Unlike a physical school, however, a virtual school does not require a large facility since it does not house students and teachers. Costs associated with transportation, cafeterias, meals, libraries, gymnasiums and utilities are also eliminated. A virtual school typically needs a physical location as a place to administer the program, host staff training and meetings, and locate equipment. Related costs could include a Learning Management System (LMS) on which to place and offer online courses, computers, printers, software, mobile phones or long-distance telephone service, and technical training and support.[25] Depending on the state, they can also include setting up locations to administer mandatory statewide examinations.

> Some of the same virtues that make online learning attractive to educators cause concern for legislators and state administrators, because they turn the traditional model on its head.

Several attempts have been made to nail down the cost differences between virtual and traditional schools during the past decade. In 2006 Augenblick, Palaich, and Associates, a Denver-based education consulting firm, released a report for the Bell South Foundation which said the operating costs for a virtual school designed to serve about 500 full-time students were between $7,200 and $8,300 per full-time student after initial start-up costs of $1.6 million.[26] That range was lower than the U.S. average per-pupil operating cost of $9,145 in 2005-2006 for traditional public schools.[27] But the $8,300 upper estimate was higher than the average per-pupil operating expenditures in 18 states.[28] The

authors ultimately stated that "The operating costs of online programs are about the same as the operating costs of a regular brick-and-mortar school." However they also noted that they did not include transportation and capital expenses, which would have weighed in favor of virtual schools.[29]

In another study, researchers at the University of Florida in 2008 surveyed 20 virtual schools in 14 states and found that the average yearly cost of online learning per full-time pupil was about $4,300.[30] In 2007-2008 the U.S. average per-pupil operating cost was $10,297.[31]

Though savings exist, they vary by state. In 2007 the Florida Taxwatch Center for Educational Performance and Accountability determined that the Florida Virtual School, with 214,000 course enrollments, cost Florida taxpayers about 17 percent less per pupil than Florida's traditional schools.[32] Similarly, Pennsylvania's virtual charter schools operate with an average of 27 percent less money per student than the state's conventional districts.[33]

Quality Control Concerns

Some of the same virtues that make online learning attractive to educators cause concern for legislators and state administrators, because they turn the traditional model on its head. Historically students have attended a central location to take classes taught by approved teachers, teaching courses accepted by a central authority, which insured that all students were exposed to the same material.

Students attending virtual schools are spread out beyond that central spot. Some are great distances from others. Full-time K-12 students take courses from the same virtual school, but they might also supplement those courses from virtual schools outside of their district. Those outside virtual schools are beyond the authority of the district administrators where the students live.

That situation raises red flags for districts regarding the quality of education that students are receiving elsewhere. Because it "destandardizes and decentralizes educational delivery, digital education is far harder to bring under the yoke of the quality-control systems and metrics that have been devised for traditional school structures," according to a study on K-12 digital learning for the Thomas B. Fordham Institute.[34]

In Massachusetts state officials favor broader oversight of the Virtual Academy at Greenfield than only Greenfield's school officials and school committee, because it is open to students statewide. Representative Alice Peisch, co-chairwoman of the Joint Committee on Education in the Massachusetts Legislature, says that when a virtual school is operated by a district and the supervision of the school is a school committee that is elected by voters in that district, but the majority of the students are from outside, the parents of those students are without a voice in its management. However, they would be represented through state-level regulation.

> [D]igital education is far harder to bring under the yoke of the quality-control systems and metrics that have been devised for traditional school structures.

"I'm not suggesting that the Greenfield school is not of high quality," says Rep. Peisch. But "there's nothing to protect the interests of the students who are not from that district."[35]

Dr. Susan Hollins, superintendent of Greenfield Public Schools, says that parents of Virtual Academy at Greenfield students write to the principal or to her as superintendent if they have a concern. Additionally, "like other parents using the choice model for a school in another district, if the parent finds the virtual school not to their liking, they just choice out. It is a completely voluntary decision to attend or not."[36]

Most states address the statewide oversight issue by treating virtual schools as charter schools

and placing them under their charter school regulations. That way state officials have a direct role in authorizing a school to open and monitoring its performance. In the fall of 2011, Jeff Wulfson, associate commissioner of the Massachusetts Department of Elementary & Secondary Education, said that is the Board of Elementary and Secondary Education's preferred model for virtual schools in Massachusetts.[37]

Another area of concern in all states has been professional development of online teachers. There are differences between teaching online and in a face-to-face classroom. They include an understanding of the psychology of online learning, meeting the needs of students with disabilities in an online classroom, promoting student responsibility for learning, encouraging parental involvement and skilled use of technology, among others.[38]

The U.S. lags behind many countries in preparing its K-12 teachers to teach online, according to a study by Boise State University.[39] Very few teacher education programs in the U.S. offer a curriculum for online teaching, leaving districts, states, and virtual schools to train online teachers. That places an added financial burden on school districts and state governments to provide training that classroom teachers would normally receive at a university.[40] It also creates inconsistencies in training across programs and that result in differences in the quality of virtual schools, exactly the sort of oversight issue that has legislators and administrators guarded.

The U.S. lags behind many countries in preparing its K-12 teachers to teach online.

Some universities have teamed with virtual schools in their states to offer training. Boise State University, for example, is working with the Idaho Digital Learning Academy to design a statewide teacher training portal. The University of Central Florida has a teaching internship program with the Florida Virtual School to allow teachers to student-teach in online courses. Michigan State University is providing online internships in partnership with Michigan Virtual High School. American University in Washington, D.C. is working with K12 Inc. to train new virtual teachers across the country.[41]

A national survey of 830 online teachers from virtual schools, supplemental online programs, and brick and mortar programs offering online courses found that online teachers are "highly experienced," with 56 percent reporting 6-to-15 years of total overall.

Online teachers generally aren't novices to their profession, however. A national survey of 830 online teachers from virtual schools, supplemental online programs, and brick-and-mortar programs offering online courses reported by Boise State in 2010, found that online teachers are "highly experienced," with 56 percent reporting 6-to-15 years of total overall teaching experience and 24 percent reporting they had been teaching 16 years or more. About 12 percent of brand new online teachers had never taught face-to-face. Nearly all of the respondents - 99 percent - were credentialed teachers and 60 percent held a Master's degree or higher.[42] Massachusetts law requires all virtual school teachers to have a Massachusetts teaching certificate.

Massachusetts

Nearly 200 Massachusetts schools participate in online learning through Maynard-based Virtual High School,[43] a non-profit consortium that offers credit-bearing high school courses to students in the U.S. and overseas. Member schools participate by sponsoring courses each semester and paying a membership fee, giving them the right to enroll their students in other VHS online classes.

But Massachusetts has been far less proactive than many other states when it comes to virtual schools. The Massachusetts Virtual Academy at Greenfield was opened in 2010 under the "Innovation Schools" initiative within the state's landmark education reform act. "Innovation schools" are essentially district-authorized public schools under district governance. Designated schools can operate with greater flexibility than traditional district schools, as charter schools do, but they retain their public funding.

The Massachusetts Virtual Academy at Greenfield was opened in 2010 under the "Innovation Schools" initiative within the state's landmark education reform act.

According to Hollins, the Virtual Academy at Greenfield was at first a response to the needs of a local student with cancer who could not go to school and to a highly publicized high school suicide in nearby South Hadley that stemmed from teenage bullying. "We realized there were students and districts who needed or wanted a not-in-brick-and-mortar public schooling option, and opened a school so students who needed or wanted this option in Massachusetts had this option."[44]

Initially, Greenfield planned to open a school for 1,500 students in kindergarten through Grade 12. But the state Board of Elementary and Secondary Education capped enrollment of new virtual schools at 500 students,[45] preferring to move more conservatively until it had studied them further. It also required 25 percent of those students to reside in the school district that is operating the virtual school, though it granted a waiver for Greenfield.

The fact that many states are far ahead of Massachusetts in developing virtual schools may be surprising to some, but not alarming to Massachusetts officials. Rep. Peisch says that one reason the state has not been proactive in starting virtual schools is because education officials have focused on other priorities, such as improving performance.

"Massachusetts still ranks the highest in terms of student performance," says Peisch. "I suspect if your performance is not as strong as it is here, you might be looking for different ways to improve it. Conversely when performance is strong, I'm not suggesting you don't still need to improve, but there's concern about changing what's working."[46]

She points out the state's high rank in the National Assessment of Educational Progress (NAEP) test, the largest nationally representative and continuing assessment of what American students know in various subject areas. Additionally, Massachusetts students from the 2011 graduating class outscored students nationwide on the ACT assessment of college readiness.

The fact that many states are far ahead of Massachusetts in developing virtual schools may be surprising to some, but not alarming to Massachusetts officials.

Associate Commissioner Wulfson speculates that home schoolers, who are active users of online courses, are more common in other states. Also virtual schools have never been "on the front burner" in Massachusetts when districts stated their priorities.[47]

But he says that attitude changed when the bills went out in 2010 from Greenfield and districts saw how many of their students had transferred to the Virtual Academy at Greenfield. In Massachusetts a school district can opt to participate in "school choice," meaning it is willing to accept students who live in another district. In return the district is paid approximately $5,000 per student in tuition. The state deducts that money from the state-aid for education allocation that is given to the student's home district. While it is money the

district would have received, it isn't money out of pocket to them.

But during its first year the Virtual Academy at Greenfield was required to bill the sending districts, who were startled to receive an invoice. This was money out of their pockets and the size of the bills, depending on how many students from their districts enrolled in the virtual school, alerted them to the demand for full-time online education. Suddenly, superintendents and local officials who paid little attention to virtual schools before were focused on their revenue aspect.[48]

For Greenfield school officials, sending out invoices to other districts was an administrative task they were unprepared to manage given that its student-body came from 115 school districts. But invoicing turned out to be one of several issues they encountered that highlight the difficulties a virtual school can have operating under traditional school governance, particularly when the state has little experience with full-time virtual schools.

About 95 percent of the parents participated in the MCAS program set up by Greenfield for their virtual school students throughout the state.

Accepting special education students. According to Hollins, the guideline for students with an educational handicap and an Individual Education Plan (IEP) was that the virtual school could not make a decision about admission for that student. The students had to go back to their home districts, request an IEP team meeting and then explain what a virtual school was. But the Virtual Academy at Greenfield was new and difficult to explain. She said members of her staff became involved and participated at almost every team meeting held. "We did not disagree with explaining the virtual school to sending district IEP teams or even having their advice, but the required process inadvertently put barriers up for those children where the law says you are supposed to have equal access to educational opportunities," she says.

Billing other districts. To be reimbursed by sending districts Greenfield officials had to create a system to send invoices to the more than 100 communities in the Commonwealth who had students in the Virtual Academy. Some of them defaulted, arguing that a tuition bill they receive from outside of the "school choice" system must come from a private school. Some districts required tuition agreements and placement agreements as they have with private schools. A few school districts refused to meet with the families of children requiring special education even though it was in the state's administrative rules setting off a chain of grievances to the district and state.[49]

Managing the MCAS exams. The Massachusetts Comprehensive Assessment System (MCAS) is the Commonwealth's statewide testing program. Students in select grades in the state's public schools are required to take the exams, which are administered by local school districts. But the 300 students at the Virtual Academy at Greenfield lived in 115 school districts, according to Hollins, creating a logistical nightmare. Using a map of Massachusetts, school officials placed colored pins in the cities and towns where their students lived. Then they chose five regional test sites based on density and rented halls in places such as hotels to host the exams. Finally, they directed the families to the testing center closest to their homes.

How do school officials track attendance for a student who attends class virtually?

School officials worked with the Department of Secondary and Elementary Education on how the MCAS requirements for test security and implementation could be managed. They also directed the families of students to the testing center closest to their homes. About 95 percent of

the parents participated in the MCAS program set up by Greenfield for their virtual school students throughout the state.[50]

Student Attendance. How do school officials track attendance for a student who attends class virtually? Most states mandate a minimum number of hours of instruction for their bricks-and-mortar students. At Idaho Virtual Academy parents submit a weekly log of their child's hours.[51] The Virtual Academy at Greenfield follows its students through a tailored software program. "We have to know what everyone is doing every day," says Hollins. "We have to know the minute they sign on. We can see what emails are sent from teacher to the student. Five days without signing on the teacher is in contact with the family and alerts the principal of the school. After 15 days of no activity a student is disenrolled and we notify the sending district."

Will school districts outside of Boston be large enough to support their own virtual school?

Next Steps in the Bay State

To promote the further growth of virtual schools in Massachusetts, state officials must devise a policy that considers how a statewide virtual school should be managed and if district-based virtual schools would work in Massachusetts. Steps were taken in May of 2011 when the Board of Elementary and Secondary Education endorsed a plan that would remove virtual schools from the innovation school program and place them under the charter school program.[52] Such a move, which requires legislative approval, would give the Board a stronger role in authorizing schools and providing quality control. Pending approval, other virtual schools could begin opening in Massachusetts in September of 2012.

District-wide virtual schools are attractive to many advocates because they would only be open to students from that district and be managed by the district superintendent and school committee. But there also needs to be sufficient demand to make a program work. Massachusetts is not a large state geographically. Will school districts outside of Boston be large enough to support their own virtual school?

"It's a very tiny number who want this," says Hollins. "It's somebody who doesn't want to be in the public schools. These are individual situations where something isn't working. Massachusetts is not like other states that are rapid growth states or poorly rated. We have high standards, fabulous teachers and pretty good public schools. I don't think the numbers will ever be high here, but for some students and families, this is the option they need."[53]

The Future of "School"

Will virtual schools one day replace traditional schools? Will there come a time when all students stay at home, taking all their courses online? Virtual school advocates do not expect that to happen nor have that as a goal. Rather, they expect a greater recognition of full-time virtual schools among state policy makers and regulations that will allow greater enrollment and easier access.

Will there come a time when all students stay at home, taking all their courses online?

They also expect further incorporation of digital learning into the daily classwork at traditional schools. The subtle change will be in "blended learning," a combination of online education with bricks-and-mortar instruction.

Michael Horn, executive director of education with the Innosight Institute, a think-tank in Mountain View, California, and co-author of *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*, which examined virtual schools, expects that full-time virtual schooling will "probably cap at about 10 percent of the population or so." Additionally, he expects that by 2019, 50 percent of all high

school courses will be online in some fashion.[54]

Blended learning combines face-to-face and online learning opportunities. The strategy is often used to accommodate different learning styles and to enable students to work outside of usual school hours, in ways that are not possible with full-time conventional classroom instruction. The amount of online learning that is included and the way it is integrated into the curriculum can vary across schools.

"The first online programs were purely virtual at a distance to connect teachers and students," says Patrick of iNACOL. "What is happening now and what is going to happen in the future is that all of those tools that allow teachers to personalize education, provide instant feedback, allow students to go at their own pace, that are designed into online courses will continue to blend into the classroom. The classroom will no longer be a lecture environment with a single teacher and 30 kids lined up in rows with a single text book all moving at the same time."[55]

[V]irtual school proponents say the more dramatic impact on traditional schools will be in how that place called "school" will be viewed.

Further, virtual school proponents say the more dramatic impact on traditional schools will be in how that place called "school" will be viewed. They foresee it becoming more of a social center and less of a place where lectures and book learning take place.

"You might see 10-15 years from now, particularly in high school, far more open school models where school is a place where kids do their band and sports and art projects," says Horn. "It becomes really a community center. You can take courses at the school, but you can also do it at home in a more flexible environment."

"Not all students will go to the building every day," agrees Young of the Florida Virtual School. "Not all students need that. Some kids need to go there to eat. Others love the building. But that place called 'school' will become much more like a community center than an institution."

Endnotes

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