Online Learning 101

Starting a Virtual School And Its Challenges

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by William Donovan

Preface by Julie Young
President & CEO, Florida Virtual School

PIONEER INSTITUTE
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Contents

Preface: The Lessons We Learned i
by Julie Young, President & CEO, Florida Virtual School

Executive Summary 1

Background 2

Florida Virtual School 3

Why Create an Online Program or Virtual School? 4

Start With Reachable Goals 5

How Much Will This Cost? 5

Bell South Study 6

Costs at One Blended Learning Program 7

How Do You Fund Online Learning? 8

What Resources Are Needed to Create an Online Learning Program? 9

Picking a Provider 10

Online Teachers 11

Professional Development 12

Conclusion 13

About the Author 14

Endnotes 16

Preface: The Lessons We Learned

by Julie Young, President & CEO,
Florida Virtual School

Like many good projects, Florida Virtual School (FLVS) was born of a $200,000 Florida Department of Education (FLDOE) Break the Mold Grant. The grant was originally awarded to two Florida districts: Orange and Alachua County. The FLDOE, in effect, brokered a partnership between the two districts since both had applied with similar ideas.

On December 2, 1996, I began the most exciting adventure of my life as the principal of what was then the Orange County *Web School*, soon to become one of the most successful education innovations in the past 20 years. When I was hired, I was handed a two-page concept paper and asked "How do you feel about leading a program with no rules and no roadmap?" My answer was a resounding YES!

The Orange County contingent began with a team of nine professionals housed in cubicles at the Orange County Education Leadership Center. As we look out at our more than 2,200 staff today, those of us in that original team are amazed that our entire staff once fit in one elevator. Together we began the journey to invent a new educational option that would revolutionize this thing called *school*.

The Commissioner of Education at that time, Frank Brogan, directed us to do something really different for kids. We were given the latitude to change the rules and to create our own for this new educational venue in order to better serve students. From that directive and a small group of passionate educators with a *mission* to transform education one student at a time, coupled with the wisdom of a very forward thinking legislature and governor, pure Kindergarten-12 virtual education was born.

From the question, "What if we designed a school based on a student's individual needs rather than on adults' schedules?" came year-round rolling enrollment, a remote workforce, 24/7 access to courses from anywhere at any time, mastery learning based on a student's personal academic and emotional needs, and the performance-based funding model that would soon rock the education sector.

Today, we have more than 120 courses, core, advanced and elective, serving more than 200,000 public, private, and home educated Florida students as a statewide district of the Florida Public School System. An additional 3,000 students from around the world attend the FLVS Global School. Modeling our philosophy after *Prisoners of Time*,[1] FLVS operates under the premise that without the bounds of time and space, teachers can instruct students one-on-one, taking them from where they are to where they need to be. Under the motto of, "Any Time, Any Place, Any Path, Any Pace™," Florida Virtual School is now the largest and most successful public Kindergarten-12 virtual school in the world, known for its sincere focus on always putting our students at the *center of every decision we make*.

Starting a virtual school is not for the faint of heart. We know the challenges, not only in logistics but also in winning over stakeholders and influencers. We were fortunate in Florida. We were supported and appropriately funded to do the research; we had the ability to take time to make mistakes and adjust. I'm amazed at how often I hear that someone has been charged with starting a virtual program or school for their district or state as "other

duties as assigned" often with little to no real direction on what I call "the why behind the what." What problem are you trying to solve, or what opportunity are you trying to create?

The first step in the process should be to determine your needs. What population will you serve? Will it be through a blended approach, an online approach, or a purely virtual approach? How will you fund your program today and tomorrow? Determining a sustainable funding model was one of the keys to the growth and longevity of FLVS.

Your next step will be to determine your infrastructure. What systems will you need, and how will you educate yourself on the vast array of options now on the market? What data will you need to produce for compliance and accountability? What type of support will you provide for your staff in the way of equipment and stipends? Some programs expect their employees to personally provide all of their equipment and phone expenses. We provide all the necessary equipment and services needed so there is no reason for less than excellent communication with students and parents.

Carefully consider your instructional model which will drive almost all of your future decisions. So often it is easier not to rock the boat than take advantage of all online learning has to offer in the name of student success. Online learning can free a student from failing simply because the school year ends. It can eliminate a student being passed on when he has not learned the material he needs to know in order to be successful at the next level. It can allow a student who is ill to continue to be "in school" while struggling through chemotherapy a thousand miles from home. It can save a child who is being bullied for how she looks, where she lives, or what type of tennis shoes she wears. Finally, it can breathe new life into a teacher, allowing him the time to build a relationship of trust and love with each student and to base his instruction on the individual needs of that child.

Yet, I still see programs that are basic replicas of the classroom using computers rather than books and homes rather than school buildings, losing the opportunity for a student to be in control of his own learning, catching up or accelerating without being subject to the peer pressure we know is negatively affecting thousands of students worldwide. I encourage you to take a risk; fight tooth and nail to design a program that maximizes this new way of learning rather than simply replicating what schools have been doing for a century.

Your next step is to hire only the best, realizing that teachers who are fabulous in a brick-and-mortar classroom are not necessarily fabulous online. One of our key challenges has been to ensure teachers truly understand what they are signing up for. Working from home may seem attractive, yet, the tangling of your personal life and your work world can quickly become difficult to manage. Our hiring process is extensive for this reason. We spend a great deal of time educating our applicants about what working for FLVS is like and what it is not. Childcare is required even though you are working from home. Being on call to students when they need you at 8 p.m. is a fundamental shift from students only having access to their teacher during traditional school hours.

What will your personnel model look like? Will you hire full-time or part-time teachers and support staff? Do you have the liberty to hire outside your district, state, or country?

What legal and compensation issues will this pose? We have tried just about every model over the past 15 years and different solutions work at different times in your organizational maturity.

Professional development will be your key to success. If the virtual environment, with its innate flexibility of time, space, and pace is maximized, teaching virtually can feel like restarting your career. Onboarding and training are extensive. We provide mentors for all of our new staff. The program has morphed over the years as we have grown and learned more about where online teachers struggle and what they need, as well as adding all of our support staff into the mix. Will professional development be face-to-face, online, on-demand, or a hybrid? Whatever you do, don't skimp!

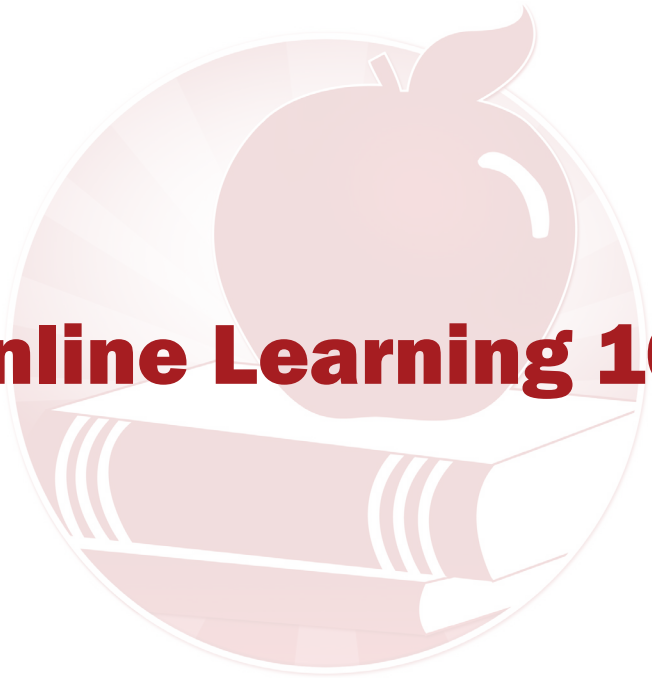
Finally, the million dollar question: will you build or buy? FLVS began building courses out of sheer necessity. When we began this journey, virtual courses did not exist. In addition, we wanted to create lively, engaging learning experiences for our students, not simply an online textbook. Today, there are many course options available. When debating whether to build or buy, consider both cost and maintenance. Although building may be cheaper, everyday maintenance may surprise you along with the fire drill development that results from the standards changes that seem to continue year after year.

Remember, courses are not textbooks or lesson plans; they are software. For our first four years, our teachers developed their own courses. That sort of worked as long as there was only one teacher, the one who developed it, teaching the course. The courses became personalized to the owner, thus the model was not scalable. Today, when possible, through partnerships and purchases, we work to find existing content around which we can wrap the FLVS model and the national standard while filling any gaps with our writers. Additionally, we have a team of instructional designers, software developers, and Web developers, including students, who make up our curriculum development team.

At the end of the day, one thing has not changed: teachers are still the heartbeat of a sound education system. Teachers today are pressured to do more than ever, and they bravely attempt to be all things for their students—including counselor, teacher, and even sometimes the only parent a student will know. Online learning can give teachers access to tools and resources that empower them to personalize learning as never before. It still takes, however, the commitment and passion of a teacher who truly loves the students.

Fortunately, there are many teachers who fit this description and are willing to do what it takes to help students learn. With their passion and everyone's willingness to challenge the status quo on behalf of kids, we are transforming education one student at a time.

Julie Young helped launch Florida Virtual School® (FLVS®) with the goal of making high-quality, online instruction accessible for students throughout the Sunshine State. FLVS has since become the largest provider of Internet-based courseware for middle and high school students around the globe.



Online Learning 101

Executive Summary

In today's world, what could be simpler than teaching children online? Create a web site, fill it with content, bring in teachers and watch the kids learn. After all, these New Millennium youngsters are "digital natives," growing up engaged with information technology. They use smart boards and tablets in class; smart phones and social media outside of school; laptops and PCs at home. They adopt new innovations without breaking stride.

But the younger generation's comfort with online learning is different from the older generation's ability to deliver the goods. Many well-intentioned parents, administrators and policymakers are exhilarated by the possibilities of "virtual schools." They see children who are homebound, socially alienated or living in rural communities exposed to new learning opportunities and better educators and they want to do more.

But when they take up the task they soon realize there are real hurdles to clear to create an online learning program. Even people with experience starting charter schools or running a district school quickly recognize that though the goal of educating children may be the same, the delivery system is much different.

Yet those challenges are being met and online education is growing in the United States. The numbers vary by sources but all show significant expansion. The National Association of State Boards of Education says that nearly 1.5 million students participated in at least one online learning experience in 2010, a 50 percent increase since 2007.[2] Evergreen Education Group, a Colorado-based publisher of an annual guide to online schools in America, says that about 275,000 students attended full-time online schools in 2011-2012 and that 31 states plus the District of Columbia had at least one full-time online school operating statewide.[3]

In January of 2013 Massachusetts became one of the most recent states to expand its commitment to online learning, when Governor Deval Patrick signed a new law that allows the gradual expansion of up to 10 virtual schools statewide by the year 2020.[4] Previously Massachusetts, considered a leader among the states in public education, had a single virtual school but no statewide development plan.

Research into how well virtual schools compare with traditional schools in academic performance is still developing. Likewise the role of virtual schools in the debate over school choice is ongoing. This paper is about the practical considerations of starting an online learning program, given that online learning has established its place on the education spectrum. It attempts to guide those hoping to start a virtual school as they deal with challenges such as defining an online learning program, estimating its costs, finding teachers and creating content. It is based on interviews with researchers, academics and educators, as well as information produced from other studies on the subject.

Since the late 1990s, when the first full-time virtual schools appeared, educators, IT professionals and government officials have been working through the practical issues involving technology, personnel, administration and funding. Around the country adoption of online learning has occurred in varying degrees. States such as Florida and California have been leaders, while elsewhere specific school districts have aggressively embraced the new model.

Their level of success at the outset has been influenced by how well they understand their own mission; their grasp of the costs associated with running a virtual school or blended program; their funding; and a willingness to build a program through modest achievements rather than overly ambitious goals. All believed that technology could help unique students improve their outcomes, while creating a better educational system for all.

Background

"Online learning" is a phrase used to describe a range of programs in which students can access instructional material and interact with teachers via the Internet. It can be fully online, with all instruction taking place through the Internet, or it can be "blended" learning, combining face-to-face and digital teaching.

Full-time virtual schools are typically run by state agencies, school districts or as "cyber-charter" schools that receive a charter from a local district or state board. As with traditional schools they have a principal, guidance personnel, special education teams and parent-teacher organizations. Their curriculum includes a range of courses that permit class discussions and teacher-student interaction. They provide extracurricular activities and other services, all through an Internet-based model. The local authority typically engages an education management organization to assist in the operation of the school.

Full-time virtual schools have been controversial in many states such as Wisconsin,[5] where the teachers union initially opposed them in court and in the legislature. There have also been critical studies released. In July of 2012, the National Education Policy Center (NEPC), part of the University of Colorado, issued a unfavorable report on K12 Inc., the largest for-profit operator of virtual schools. It urged states to "slow or put a moratorium on the growth of full-time virtual schools."[6] But there are also counterbalances. In January of 2013 *Education Next*, an education journal whose sponsors include the Hoover Institution at Stanford University and the Harvard Kennedy School, said it would include a new analysis by the Brookings Institute in its spring 2013 issue stating that NEPC used misleading data while evaluating K12.[7]

What is not in dispute is that full-time virtual schools carry some cost advantages over traditional schools when it comes to facilities, operations, transportation, and food services. In some cases they achieve savings by having more students per teacher than in a physical classroom.

At the same time full-time virtual schools spend more on computers, the development of online curriculum and the creation of learning platforms. They typically spend more on marketing and recruitment of students than traditional schools, which often have students assigned to them.

With blended learning a student learns "at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home."[8]

The "blend" can occur in a variety of ways. Students might alternate at school between face-to-face courses with teachers and online courses. In other cases the single course might combine face time with online lessons. The amount of courses a student takes online and in the classroom may not be equally balanced.

In Arizona the Carpe Diem schools,[9] public charter schools serving grades 6-12, offer an on-campus "hybrid" academic program consisting of on-site teacher-facilitators, whom they also refer to as "coaches," and computer-assisted instruction utilizing a computer-based learning and management system. Students attend Carpe Diem for four days each week. There they work for half of each day at cubicles containing computers that track their progress and help to close learning gaps. Other instruction occurs in small groups led by teachers.[10]

Florida Virtual School

The pacesetter for virtual schools and online learning programs has been the state of Florida, home of the Florida Virtual School (FLVS),[11] the nation's first and largest online public school. In January of 2013 FLVS had more than 6,600 full-time students enrolled K-12 and about 200,000 students taking at least one online course. Another 3,000 students from around the world attend the FLVS Global School. Students from 49 states and 69 countries take part in the 120 courses FLVS offers.

In 1996 the Florida Legislature awarded $200,000 in "Break-the-Mold" grants to two districts to work together to create a virtual school. Florida officials saw online learning as a way to relieve the state's overcrowded public schools, as well as serve students in rural areas whose schools did not offer as many courses as were available in more populated areas.[12]

After six years the school was officially named the Florida Virtual School and its funding shifted. Rather than be a line-item in the state budget, it was reimbursed per full-time equivalent student upon successful completion of the course. This "performance-based" funding emphasized a student's mastery of a subject rather than completion of a course within a certain time period.

The change also meant that taxpayer dollars that districts previously received for each public school student they enrolled followed those students out of the district for the portion of their courses provided by FLVS. That differs from another common funding model known as school choice funding in which a school district makes a choice to accept students from out of district. The district is paid a specific amount by the state and that dollar amount is taken out of the state-aid allocation the state sends annually to the district where the student lives. This is the formula included in the new virtual schools legislation passed in Massachusetts.

Online learning has since spread to every state, in many places becoming a requirement to graduate. Students in Alabama, Florida, and Michigan must participate in at least one online learning experience in order to receive a diploma.

In Putnam County, Tennessee, for example, the school district adopted an online learning graduation requirement. But officials there realized that not all high school students had high-speed Internet access at home or even computers. So school officials gave students the option of completing an online course independently before they entered 9th grade; doing it at school in a computer lab with the support of an in-house coordinator; or taking the course in a computer lab that includes both an in-class teacher and an online instructor. Many students fulfilled the requirement with online Advanced Placement courses or online credit-recovery classes.[13]

"The reality is, when a student leaves us, whether they're going to a four-year college,

a technical college, or going into the world of work, they're going to have to do an online course," says Kathleen Airhart, the director of Putnam County schools. "This helps prepare the students."[14]

Why Create an Online Program or Virtual School?

The temptation for many educators is to create an online learning program or full-time virtual school simply because the technology exists to make it possible. Perhaps a district sees a virtual school as a revenue source. Maybe a donation of iPads or an upgrade of a school's Internet connection spurs a desire for a blended program.

The question that needs to be asked before plunging into digital learning is the same to be asked before starting a bricks-and-mortar charter school or introducing a new category of courses in a district school: what is the goal? Is there a problem that needs to be solved? Is there a population of students underserved? Is there a glaring deficiency in the curriculum offered to students of a district? Could lower costs be achieved?

"One of the things people do is say they want to have an online school, but when you ask them why, they aren't really sure," says Julie Young, president and chief executive officer of Florida Virtual School. "We tell people the first thing is to begin with the end in mind and figure out why you want it."[15]

"If you're thinking about creating a charter school there are reasons you think a charter school is necessary," adds John Watson, founder of the Evergreen Education Group in Durango, Colorado. "The very starting point is really similar. It's not focused on delivery but on what you're trying to accomplish."[16]

Founders should decide if they need to create a full-time virtual school or would select courses suffice. Who is the target audience? It's an important question because the size of the potential student population influences the scope of the program and the design of the technology. In Florida the mission was to make sure that every child had access to high quality education regardless of their zip code.

"We started out focusing on high level courses and making sure we could provide an AP program to every student in the state regardless of where they lived," says Young.[17]

Before starting a full-time virtual school it is important to conduct a market study to understand if enough students could be drawn to the school to make it financially viable. If the school is run by a district, will there be enough students from within that area to make it work? If not, will the school be permitted to draw from outside its home district or outside of the state? In the new Massachusetts legislation, for example, at least five percent of the students must come from within the district where the virtual school is formed.

The amount of students who are home schooled, have special needs, are involved in performance arts or are unable to attend a traditional school for other reasons, makes up a small percentage of the pool of students in a district. Sometimes it is necessary to fan out to a wide audience to find the population that needs the school. When the Massachusetts Virtual Academy at Greenfield opened in 2010, the student body came from 115 school districts.[18]

In Michigan the Cheboygan Area Schools (CAS) started a virtual school in January of 2013, because they spotted a market opening for grades 6-12. The goal of school officials

was to offer more opportunities to a greater scope of students in Cheboygan County and surrounding areas. But they also viewed the school as a revenue source.

Mark Dombroski, superintendent of the CAS, said "We think this is a really good opportunity for us. If we didn't do this, someone else would. I'm guessing there are 80 to100 homeschooled students right here that could take advantage of this. If we got 100 more students, that's $200,000 more for the district."[19]

Start with Reachable Goals

Young recommends building momentum for growth in a virtual school by being very focused on needs or populations. Early successes will demonstrate the demand for the school to skeptics. Florida Virtual School was fortunate to have "a lot of latitude" to grow and adjust during its first four years, she says. That allowed school officials to research and understand what worked with students and what did not.

"There's no reason to boil the ocean right from the start," she says. "Initially focus on a particular audience and a particular need that will give you a big win. If there's a challenge you can solve, do that and then look how you can grow your program methodically."[20]

Watson of Evergreen Education Group believes founders should not only understand their goals, but what the school's core competencies will be at the outset.

"Those two things together send you down paths that will begin to constrain your decisions in a positive way," he says. "When you start with no parameters it becomes very difficult and you start to listen to a lot of different providers with a lot of different ideas. Then what tends to sound the best might be the last thing you've heard or maybe the one that had the best pitch, which may not be the best fit for what you're trying to do."[21]

Public funds directed towards a new virtual school are dollars taken away from someplace else. For that reason they have been controversial among public school officials and policy makers. It's important to find decision makers and leaders within the community who will campaign for the project and navigate the political waters and the barriers to entry.

"You've identified the problems you'd like to solve, you've identified where you want to focus and created a rational as to why you should exist," says Young. "Then you need to sell the idea to people who will help you navigate to success."

That individual could be found in the state legislature, or among community or school leaders. Watson of Evergreen Education Group recommends the person be someone who has a direct line to the local superintendent of schools and who is comfortable enough with technology to understand the key technological issues that will be discussed.

How Much Will This Cost?

Digital learning is attractive not only because of the access it can provide to students, but because of its potential for cost savings. Virtual schools operate without classroom overhead, cafeterias and school buses. Blended schools can add courses without hiring new teachers. Yet both methods require an investment in technology. All of that raises the question of how much it actually costs to create a new virtual school or blended program.

A study released in April of 2012 by the Parthenon Group, a Boston-based consulting firm, looked at the costs of online learning. It

included interviews with more than 50 online learning vendors and online education experts to determine the average per-pupil costs for online education. It placed a range of $5,100 to $7,700 for full-time virtual schools and $7,600 to $10,200 for blended programs.[22] Those figures compare to the average per pupil cost of approximately $10,000 for traditional public schools, including elementary, middle and high school.

Parthenon found that the traditional school model spends more than half of that per pupil figure on labor. Most of the remainder went to school operations. In contrast the average estimate for labor costs in the virtual model where all instruction takes place online was $2,600 per student, with a potential variation of about 15 percent in either direction.[23] The Parthenon report said that range included virtual schools that maintain a ratio of one teacher to twenty-five students, similar to traditional districts. It included virtual schools that pay its teachers the same pay rates as teachers in brick-and-mortar schools.

But it also included schools that had lower labor costs by increasing student-teacher ratios or reducing teacher salaries by shifting to a part-time or paraprofessional workforce.

Not surprisingly, Parthenon found that the blended-learning model typically had smaller labor savings than full-time virtual schools. It estimated about $5,500 in labor costs per student, again with a 10 percent to 15 percent fluctuation range. It noted that blended schools typically have labor needs such as lunch duty and detention that virtual schools do not have. They're also unlikely to experience any cost savings in terms of reduced administrative expenses.[24]

In making its online vs. traditional school comparison, Parthenon said that virtual schools incur professional development and IT costs. For most teachers and support staff the virtual model is a new teaching environment, requiring them to learn new skills to be effective. That makes training a critical component for online schools. The study mentioned that virtual-school and blended-school models often require additional IT support.

Content acquisition is more of a cost driver with online schools than it is with traditional schools. Parthenon put the average content cost for virtual schools at about $800 per full-time equivalent student, including courseware, a content management system and materials for the students.

Content cost per student is less for blended schools, about $400. Electronic or online content costs at blended schools are often lower than at virtual schools because students spend less time engaged with online courseware.[25]

Bell South Study

Another way to look at online costs comes from a 2006 study prepared for the Bell South Foundation. It found that a new state-led supplemental program designed to serve about 500 student full-time equivalents or provide 3,000 hours of instruction per year, "would require about $1.6 million to adequately fund start-up activities before providing instruction. Nearly 80 percent of costs are in management and course development."[26]

Post start-up costs, it said, vary and are most affected by whether students take online courses at home or at school. They're also affected by the characteristics of the students served including the number of special needs students and the level of responsibility the school has for serving such students.

For a full-time program, the Bell South study said the costs range from about $7,200 to about $8,300 per full-time equivalent. Among cost variables it noted that full-time programs are typically responsible for special needs students and for adhering to state and federal accountability requirements. Local virtual schools are also more likely than state virtual schools to provide computers and Internet connectivity for their students, which can result in higher costs per pupil.

Generally, the Bell South study cited five broad categories of costs for online programs:[27]

- Management – including administrative personnel, marketing, legal, insurance, office supplies, facilities, public relations, office furniture and equipment.
- Instruction – including instructional personnel, professional development, assessment and test preparation, contracted services, software licenses.
- Course Development – including costs associated with developing or purchasing new courses and maintaining or redoing existing courses.
- Technology Set Up - including computers for office personnel, computers and connectivity for students, networking hardware and software.
- Technology Personnel – including all non-management personnel dedicated to technology, software licenses for all non-instructional staff, and contracted services.

The report also noted numerous cost variables, some of which are:[28]

- Program governance – Whether the program is housed within the state department of education or a district office affects cost.
- Teacher salaries – Labor makes up a large percentage of overall program costs.
- Student-teacher ratio – Instruction costs are a larger percentage of total costs. The more teachers employed per student the larger the budget.
- Student population – What percentage of students require special services? A school serving a higher percentage of special education, such as English as a second language, or at-risk students is going to cost more per-pupil than one that serves fewer students that require such services.
- Degree of at-home vs. on-site computing – Additional staff members are needed to support a student taking a course at a physical school rather than at home or from another location raising the program cost.
- Course completion rate – A per-student funding model based upon the number of course completions must take into account the cost of support and instruction to students who do not complete their courses.

Costs at One Blended Learning Program

In January of 2013 the Manchester, (NH) School District introduced blended courses as part of an effort to address crowded high school classrooms. Students have enrolled in 55 courses through the Virtual Learning Academy Charter School, based in Exeter, NH.[29]

The new online program also includes the creation of remote classrooms equipped with interactive video screens at the district's three high schools. Students at any of those schools

can enroll in courses taught by a teacher at one of the other schools.[30]

The costs for those "blended learning labs" were estimated by district officials to be $30,000 for hardware and $43,500 per semester for three lab facilitators, as well as $3,700 per lab for equipment.[31]

Manchester is paying for its blended learning program partly through private donations. Manchester Mayor Ted Gatsas raised about $37,500 from the local business community, while other companies committed to contributing hardware to the project.[32]

How Do You Fund Online Learning?

Donations and grants are two ways that districts fund their startups, but for full-time virtual schools the ability and the willingness of the state to fund online learning sets a baseline for the budget. The Parthenon study found a wide range of funding levels for online learning among the states, from below $4,000 per student to more than $9,000 per student.[33]

There are two primary ways states are funding virtual schools: a direct appropriation or through a funding formula. The appropriation model is most common. An amount of money is approved each year in the state budget for the virtual school's operation. Historically the flow of assistance to public schools from state government has been influenced by the amount of resources available to distribute. The ups and downs of the economy impacts tax revenues, as does the political climate of the time. Consequently the school's budget is based more on what is approved than on the actual cost of running the school.

Another drawback is that appropriation funding can restrict the growth of a virtual school. According to the International Association of K-12 Online Learning (iNACOL), state virtual schools can experience significant growth when not restrained by funding issues. During the 2008-2009 school year, the seven largest state virtual schools experienced an increase in enrollments from 25 percent to more than 50 percent. When that occurs it is difficult for virtual schools to accommodate all the new students if the fixed appropriation acts as a ceiling.[34]

The appropriation model is how the Florida Virtual School began, however. For its first six years it received a set dollar amount from the state with which school officials ran the program. It then switched to a per-pupil funding formula. Today, school officials believe it is the best way to begin.

"When we talk to other states we suggest to them if they can have two to three years of line item funding, where they can get their program developed and known and people see it's a quality program, then people will later be willing to part with the dollars in a system in which schools and districts will lose money," says Young of FLVS.[35]

The funding formula model for virtual schools based on per pupil counts is similar to how traditional public schools are funded. What is different is that many education reformers and virtual school backers support an approach based on performance, meaning successful course completion, rather than the more commonly used method based on average daily attendance or enrollment.

Again, Florida Virtual School was a pioneer in this transition. Its performance-based reimbursement formula was not only a way to focus on achievement over seat-time, it is also a way to avoid abuses that can occur when reimbursing virtual schools. Some

states set funding on student enrollment as of a certain date. However, when students drop out after that date, the money has stayed with the school and not gone back to the district.[36]

"It's clear that the state contribution ought to follow students," says Michael Horn, education executive director and co-founder of the Innosight Institute, a San Mateo, CA think tank. "There's a question as to how much a district's own contribution would follow students as well. Those are funding formulas that states need to think through. What is an equitable way to serve all students?"[37]

Horn also says that there are hazards when states aren't careful with their funding approach.

"In Virginia, by not having thought through the funding formula, they incentivized the full-time virtual schools to set up in districts where they got the highest reimbursement rate per pupil so that they could make the most money out of it," he says. "That made plenty of sense for the students in those districts. But maybe for students coming from pretty well off places it made less sense."

"So thinking through," he adds, "what would the funding formula look like if a school is technically authorized in one part of the state to have students coming from all over in which dollars follow?"[38]

Harvard Professor Paul Peterson, author of the book *Saving Schools: From Horace Mann to Virtual Learning*, points to Utah, where the state allowed any district to offer classes online. The district where the student takes a course receives state aid.

"Suppose you have an entrepreneurial school district that wants to generate more revenue," he says. "They can offer a very good course and pick up a student constituency statewide for that course and generate revenue for themselves. The biggest issue in Utah is that some of the larger districts are doing that and some of the smaller rural districts are losing some state aid to those larger districts because students prefer those courses online."[39]

A third funding manner for state-led programs is allowing school districts to charge course fees for enrollment. Many state-led programs charge fees that range from $50 per semester course to several hundred dollars per semester course.[40] The fees are paid by the sending district or the student. Course fees are rarely enough to cover operating expenses and generally are supplements to a state appropriation.

What Resources Are Needed to Create an Online Learning Program?

When creating a virtual school or blended learning program, the most critical piece of technology is a learning management system (LMS), "the set of tools that houses course content and provides the framework for communication between students, teachers, and parents."[41]

Through the LMS teachers, students and administrators are able to recreate the bricks-and-mortar education experience online. It allows teachers to post announcements, organize course content and give online quizzes and exams. Students can participate in threaded discussion boards and forums, as well as work on group projects. Specific accounts can be set up for administrators and parents, as well as teachers and students.

When selecting an LMS, school founders or program administrators can select an open source product, which is low cost and open to customization. Alternatively they can license LMS software from a commercial provider,

who will be responsible for the installation and insuring the product runs properly.

Another administrative tool that should be integrated with the LMS is a student information system (SIS). The SIS houses all the basic information about students including their schedule, their academic performance and demographic details. It is also used for registering students for creating reports such as progress reports and report cards.

Prior to starting a virtual school or blended program educators need to determine the content they'll need and whether to develop it themselves or purchase it from a vendor. The type of content is connected to the reason why the online learning program is being created in the first place. If it is to supplement a small district's curriculum with courses it doesn't offer, then specific subjects would be identified. If it is to create a place for students who are unable to attend a physical school, then the content could be more general.

The advantage to administrators in creating their own course content and the software to deliver it, is that it guarantees it will be exactly as they want for their online students. It also saves paying a licensing fee to a vendor.

But there are drawbacks as well. There is the expense to pay developers to create the software and a time factor while waiting for it to be created. Then there is the responsibility of updating it to meet changing state and district standards, insuring that links are still valid and keeping someone on staff responsible for its maintenance.

"People significantly underestimate the expense and the amount of effort it takes to keep the courses you build at a quality level," says Young. "If you buy, a huge advantage is that it's already been done. If it doesn't work, you haven't invested a great deal into it. You change providers and try something new."

Picking a Provider

The responsibilities and technical demands that come with selecting an open-source LMS and creating customized content are reasons why many online advocates urge new entries to the field to stick to what they know and outsource what is beyond their expertise.

As an early adopter of online learning, Florida Virtual School blazed its own trail. It hired teachers, created its own content and implemented its own learning management system. But the online learning industry has grown since 1997 and new program administrators no longer need to find their way alone. In particular, numerous companies have emerged to be providers of content, technology and instruction for virtual schools and/or blended programs.

These vendors include K12 Inc., based in Herdon, Va., which enrolls more public school students than any other private education management firm; Connections Academy in Baltimore, the second-largest online provider and Compass Learning, located in Austin, Texas. They are for-profit companies that partner with states and districts to offer digital instruction. Their services include providing a learning management system, course content and reporting material to meet state or district requirements.

Selecting a provider can be confusing. Does the company partner for full-time virtual schools and blended programs, or just one? Does the content meet the goals the program has set? Are there instructors that work for the vendor? Does the provider assist with operations?

Evergreen Education Group suggests using some basic approaches as a first screen of companies:[42]

- Some providers focus on blended or online learning. Others are more aligned to classroom-based educational technology. How does the vendor's product or service apply when students and teachers are not in the same location and at least some instruction is done at a distance?
- Determine the online or blended learning program plan and then issue a request for proposals based on the key parameters of the program. Based on program goals, can the provider supply teachers that meet state requirements? If the program is using local teachers will the content and delivery environment allow those teachers to modify the content as they teach with it?
- Will the online program have a learning management system (LMS) that content must drop into or will it need an LMS. Clarity on program requirements helps avoid a large number of proposals that won't fit your needs, and helps providers by limiting the number of proposals they write that will not be successful.
- Require an online demonstration from several providers. Good providers will be anxious to show their capabilities. Allocate at least 90 minutes for each provider's demonstration. Be sure it covers what you want to see, not only what the provider wants to show.
- Ask for a log-in to a few courses to experience them in two modes: as a teacher and as a student. Have the review team spend time in the courses and compare notes about what did and did not work well.

Online Teachers

School age youths today are practically naturals when it comes to digital technology. They have used it since an early age and easily take to new concepts and devices. But online learning isn't about searching on Facebook or using the latest iPhone app. Technology is the delivery system and education is still the point. Just as a student's success in a traditional classroom is influenced by the teacher, so too is an online teacher critical for students in online learning programs.

In online instruction, the teacher still uses the instructional skills and expertise in the course topic, as well as relationship skills, that he or she would use in a classroom. But since technology is used to communicate with the students, teachers either enter the job with technology skills or they quickly learn them.

Like other steps involved in creating a full-time virtual school or blended learning program, assembling a teaching staff involves a series of decisions. When it comes to recruitment, will the teachers already be employed by the district or will they be new hires? Will they be full-time, part-time or a mix?

Public school teachers are typically in a union which has a collective bargaining agreement with the school district. That agreement is framed around the routines of traditional schools, such as the hours when students are in school. Digital learning means students are not always in the building and their schedule might not be conventional.

At the Florida Virtual School, whose motto is "Any Time, Any Place, Any Path, Any Pace™," the teachers are not in a union. The restrictions included in the usual contract presented barriers to the administration's

needs to have teachers accessible to students after hours.

"We built the school based on students' needs, not adults," says Young. "We wanted teachers to be available on the weekends and in the evening when kids are by themselves and at home. That's difficult if you bring a program into an existing district with an existing teacher contract."[43]

Most states require online teachers to be certified like other teachers. But what other requirements should they meet to be considered for an online teaching position? One model to use when developing those criteria is the iNACOL *National Standards for Quality Online Teaching*.[44] The list can help determine a minimum set of skills needed to teach online and levels of ability that teachers can work to attain.

A sample of the iNACOL standards includes the following:

"Standard A: The online teacher knows the primary concepts and structures of effective online instruction and is able to create learning experiences to enable student success.

"Standard B: The online teacher understands and is able to use a range of technologies, both existing and emerging, that effectively support student learning and engagement in the online environment."[45]

Professional Development

For teachers to become expert at teaching online courses the state or district needs to incorporate professional development within its business plan. In some states there is a requirement that teachers upgrade their skills. Wisconsin requires online instructors to have 30 hours of professional development in online teaching.[46]

One of the few studies on professional development of online teachers was conducted by researchers at Boise State University in 2007. It determined that most state-led programs have developed extensive professional development for their own teachers, but the amount of time spent in professional development varies greatly by program, from none to 270 hours per year.[47]

The study was based on a national survey of online K-12 teachers, administrators and professional development trainers and specifically targeted those working with fully online programs and courses. It produced several findings about trends occurring in the preparation of teachers to teach online. Among them:

- More than 90 percent of teachers reported that training had been provided or made available to them, a fairly consistent percentage regardless of the model or program.
- The highest teacher-reported period when professional development occurred was during the first year, though about 40 percent reported receiving professional development each year after the first year.
- Training sessions are delivered in a variety of formats, with online training being the most popular. Other formats included online/face-to-face, and solely face-to-face.
- The majority of training was provided by the school or program, regardless of the model. Organizations were the next highest provider, then universities. A small percentage of teachers and administrators reported the district provided training.

- Actual instruction included an emphasis on "building community" and interaction; use of a train-the-trainer model; tiered training to address needs of advanced teachers, and attendance at professional conferences and participating in social networks.

A 2009 report on professional development of online teachers by the Southern Regional Education Board concluded that there is no single answer to the best way of providing quality professional development. But it added that "Using multiple strategies, including real-time as well as 'anytime' online training and traditional workshops, ensures that each online teacher has a rich, multi-layered understanding of online teaching."[48]

The SREB report suggested using strategies such as:

- viewing models of effective online teaching, communications and strategies
- discussing how to handle difficult situations with students, parents and site-based staff
- using scenarios and case studies to differentiate instruction
- hands-on training and experimentation with the Learning Management System and other technology tools used to deliver and support instruction

Conclusion

Online learning is often called virtual but its challenges are concrete. To start a full-time virtual school or blended learning program requires a clear sense of mission, the right people to lead the effort and the resources to afford it.

Policymakers looking to improve the process should consider devising a consistent funding formula that reflects the actual costs of educating students in a virtual environment. Virtual schools and blended programs have the same goal as traditional schools – educating children. But they are clearly two different models that are being funded in the same manner in most cases.

The Center for Public Education noted in a study on virtual schools that in some states, virtual charter schools receive the per-pupil funding amount the student would have received if he or she had remained in the local school district. In other states, the virtual charter school receives the per-pupil funding amount based on the per-pupil funding of the district where the virtual charter school is headquartered. In both cases there is the possibility of funding more than the cost of providing the education. In some states virtual schools have opened in the school districts that receive the highest per-pupil funding amounts in the state even if their students previously attended school districts with much lower funding levels.[49]

Another funding consideration for many states would be to develop a start-up grant program to provide planning money to help early-stage virtual schools or blended learning programs. Manchester, NH was successful in raising a portion of funds needed to get a blended learning program off the ground from local businesses. But many smaller towns or rural communities lack a broad business base to provide that money source. A dedicated state start-up fund could make the difference for those smaller districts. Online learning shows how public education is changing with the time and the technology. Policymakers need to keep pace to maximize its potential.

School founders and administrators will also find it useful to devise an avenue for stakeholder feedback at the outset. To make sure that the program is meeting

its goals, evaluation should be part of the initial planning. Is the target audience being served? Is the program what the stakeholders expected? Given how new online learning still is as an approach in education, the more discussion around its pros and cons and application of new ideas, the more effective it will be.

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