

**Madeira City Schools Planning Commission**

**Blended Learning**

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### **Explanation/Rationale of Study**

Nationally, two thirds of the nation's 14,000 schools offered some type of blended learning option in 2012. The purpose of this study is to determine how Madeira City Schools, especially our high school, can formally implement this type of instruction.

### **Definition of Blended Learning**

Blended Learning refers to any time a student learns, at least in part, at a brick and mortar facility and through online delivery with student control over time, place, path or pace.

### **Models of Blended Learning**

There are several different models of Blended Learning that have already been implemented around the country. The following are descriptions of the most commonly used forms of Blended Learning.

#### **Rotation Model**

The rotation model is the most common type of blended learning. It allows students to rotate between online and face-to-face instruction within one course. The online instruction is one to one and self-paced by the student. The face-to-face portion of the rotation model can include teacher directed instruction as a whole or small group, group projects and/or individual tutoring. A common form of blended learning is the flipped classroom. Another is lab rotation, where students go back and forth between traditional classrooms and computer labs during a course.

#### **Flipped Classroom**

The flipped classroom is an example of blended learning in which students watch videos to learn new content outside of the classroom, usually at home. The following day in class, students can process and apply their learning through practice problems, discussions, or participation in inquiry based-learning. The flipped classroom allows the teacher to intervene by giving more personalized instruction and direction to students. This model is currently one of the most common forms of blended learning being incorporated into schools.

### **Flex Model**

The flex model has students attending a brick and mortar school every day where it is then broken down to each class utilizing online and face-to-face instruction with teachers. Students will receive the majority of their instruction through online delivery and will then interact with a teacher for support through individual or small group sessions. This differs from the rotation model as it encompasses every course rather than a couple courses.

### **A la carte or Self Blend Model**

The a la carte or self-blend model allows students to take traditional classes at a brick and mortar facility, but also gives them the opportunity to take courses online either on or off campus. Many times this model gives students the chance to supplement their school's traditional courses.

### **Enriched Virtual Model**

The enriched virtual model allows students to split their time for their courses between school and home. Students do not actually attend school on a daily basis, which differentiates this model from the flex model.

### **Online Lab Model**

The online lab model delivers instruction through an online platform in a brick and mortar facility. The entire course is delivered through this model and has an online teacher. It also uses paraprofessionals to supervise but they do not have the ability to offer help with the content. Students who participate in the online lab model will typically be enrolled in traditional classes at the brick and mortar location as well.

### **Online Driver Model**

The online driver model delivers instruction and curriculum through an online platform and a teacher. Students enrolled in this model are also required and/or have the option of face-to-face meetings with teachers.

### **Face-to-Face Driver Model**

The face-to-face driver model still involves curriculum and instruction to be given through a teacher in a brick and mortar facility. This model also allows teachers to provide supplemental, enrichment, or remediation material through online work, whether

that is in the back of a classroom or through a computer lab.

## **Blended Learning in Higher Education**

Blended Learning in Higher Education is a reality on nearly every college and university campus. Traditionally on campus classes took place on a regular weekly schedule with class meetings of 3-6 instructional hours per week. On a semester system the standard is 3 instructional hours per week.

Distance education developed because colleges and universities wanted to reach students who could not easily attend on campus classes. The computer system used to deliver distance education is a CMS /LMS(Content Management System or Learning Management System) and it is generally asynchronous (give and take participation where the student is not required to be online at any designated time). In higher education the market leader is vendor supported and costly (Blackboard). However many universities are using less expensive open source supported system. These are less expensive but require more local technology support and a development staff.

As the convenience of synchronous online classes grew on campus students requested to enroll in online classes and universities began to use the CMS/LMS system with all their classes, online and on campus. Distance students also requested more direct connection with the instructor and other students for face-to-face discussions and group projects. Universities started using meeting software for synchronous class meetings and project presentations for online classes and the blended class became a reality. Distance students could participate in on campus classes and distance and campus students could participate in joint projects. And most importantly, this blended environment follows the design of many emerging career opportunities. Today many LMS systems include a group face-to-face option or the university uses a linked vendor supplied system such as Adobe Connect.

Software expected for blended learning –

**A CMS/LMS for content presentation** – documents, text based discussions, multimedia content including sound and video. This system is generally linked to the official student records system for registration and academic grades and degree progress audits.

**A synchronous software tool** for meetings where participants are in different locations – multiple participants, desktop presentations for all participants, session recordings, instructor controls, access control, session recording.

**Multimedia content creation software and presentation software** suitable for distance and classroom environments,

Once technology provided an environment where the class content did not require a classroom, for campus classes the questions being examined were (1) what is the class schedule, (2) what is the best use of instructor time, (3) what can students accomplish online, (4) how does group process operate, (5) what facilities and technology are needed for group process and presentation construction and delivery (6) what venues become

part of a blended learning class and (7) what are expected student behaviors and learning patterns.

- (1) Actual class meeting hours may be reduced with many traditional classroom hours being spent online. The face-to-face classroom sessions become mentored discussion and project planning that requires the students to come prepared with content covered by online time.
- (2) The instructor is the class author and during the class devotes most of her time to discussion and mentoring both in the classroom and online. The class content needs to be complete on the first day of class.
- (3) Students can cover online whatever can be recorded, written or discussed in writing.
- (4) The group process can take place through synchronous online discussions, synchronous online class meetings, in the traditional classroom and within group sessions in a Learning Commons or experience space off campus.
- (5) Access to presentation construction and editing tools are not easily provided within a traditional classroom. A Learning Commons provides advanced technology equipment, software and workspace and are generally located in university libraries and technology labs. Students are expected to have personal access to a computer and campuses are being covered by ubiquitous wireless networks. The devices of choice are quickly becoming a full functioning tablet computer and smartphone.
- (6) Blended learning happens wherever students come together, with or without the instructor present. Colleges provide libraries, learning commons, computer labs, small group spaces and practicum or service learning locations. What ties all these together is network/Internet access to the class content and thereby the primary instructor on a 24/7 basis. Classes also move forward on a weekly schedule with great flexibility for time use left with the students within that week.
- (7) Blended learning expects a prepared student who exercises self-discipline to maintain communications and class participation. The blended classes expect experience with computers, networks, presentation software and group process learning. When new software is introduced students are presented with tutorials in addition to the class content requirements. They are also expected to request help as needed and to actively participate in all aspects of the blended class.

## **Blended Learning Models Implemented in K-12 Schools**

Madeira is in the beginning stages of implementing blended learning. We currently use Its Learning as our Learning Management System. There are a few teachers at the middle school level who are utilizing Its Learning to facilitate their teaching. Blended learning has amazing potential but our key question will be what is our purpose for implementing

blended learning? Answering this key question helps drive what model we look to, what products, what instructors or what courses. Our desire is to prepare the students who graduate from Madeira for the post secondary world and provide them as many opportunities to learn as possible while they are here.

### **Benefits of Blended Learning for Teachers:**

- Allows more face time with individual students to work rather than lecturing in the classroom
- Can provide instruction in various different ways to reach the various learning styles of students
- Videos allow not only students but their parents to view and keep up with what is going on in classroom
- Students can access course materials anytime, any place
- Matches a variety of learning styles: offers visual and auditory (video) instruction
- Can differentiate instruction that is delivered to students
- “Paperless” environment
- Management of grading
- Parents can see what instruction is being delivered to their child

### **Teacher Challenges**

- Requires a good deal of time upfront to create the videos and keep them at a time length to deliver the instruction while holding students attention; time investment on the front end
- Being comfortable with the amount of flexibility and student choice along with working with students who are further ahead or behind
- Getting students and parents to buy in on the new method
- Understanding the tools (Its Learning, for example) and the resources that are available
- Need to be clear that blended learning enhances our teaching, does not replace teachers
- Access to computers and network challenges

### **Student Benefits**

- Having access to the videos anytime to watch, pause, rewind, or even view multiple times in order to achieve understanding and confidence of curriculum
- Gives flexibility and customization of education
- Prepares for post secondary course work
- More course opportunities, potentially

### **Student Challenges**

- Following through and having good time management skills,

- responsibility and accountability
- Access to technology
- Having different learning expectations and adjusting from what is currently normal to them

### **Northwest High School Blended Learning:**

Northwest offers blended learning using a 50-seat lecture hall. Students have a computer with them. The course is taught by a teacher and an assistant is present. They deliver the content using Blackboard and are able to work with large and small groups. The use this model for English I, II and III honors, World Studies Honors, US Studies Honors, African American History, Senior Government, AP Psychology, Algebra II Honors, Pre Calculus Honors, Physical Science, Animal Care, Ecology, and Health.

### **North College Hill Virtual High School:**

Three years ago North College Hill began their Virtual High School. This is more “online education” vs. blended but does illustrate some possibilities. They implemented the Virtual High School to offer courses to students but to also allow students to have the experience of taking classes online. Almost all of the work with these classes is done online; some classes will have a “hands on” component. This is mostly science labs. Three North College Hill teachers teach some of the classes. This allows them to have slots for their students (50-75 slots per class taught) to take classes from all of the offerings for free. North College Hill made a concerted effort to recruit their top students into VHS. Students can take a wide variety of classes such as Pre-Calc, Chemistry, Latin, French, AP Econ, AP Bio, Engineering, Business and Personal Law, Video Game Programming, World Religions—the list is extensive. Overall VHS allows them to offer classes and retain students they could not do otherwise.

### **Mentor Schools (7<sup>th</sup> and 8<sup>th</sup> grade Math Classroom)**

A middle school math teacher has incorporated blended learning in his classroom where he utilizes a learning management system (LMS) called Schoology, Chromebooks for technology use in class, along with stations throughout the classroom.

As implementation of the blended learning took place, the teacher had given students the choice to either work with him in a traditional teaching approach or through watching a video and working through problems on a worksheet at their own pace. Few students initially chose the new blended learning format, but within a short amount of time more students began to go that route. Students voiced that they enjoyed the videos because they were able to pause or rewind the videos to view again until they understood a concept unlike in a traditional classroom. Because of this situation, the teacher then decided to look into Schoology to transform his classroom into a blended learning classroom.

Schoology is a free LMS that is the teacher’s home base for his curriculum and course.



Through Schoology, a teacher can upload and store videos for students viewing, online assessments can be created and given, class information such as agendas can be viewed by students, as well as an environment where students can interact with the teacher and each other.

Once pre-assessments have been given in class or through Schoology, grouping of students is done from results of the assessments. Different stations are made typically including teacher intervention and guidance, Khan Academy through Chromebooks, small independent activities, and small group activities/enrichment/remediation.

The greatest benefit to the blended learning in this teacher's classroom is that he feels the ability to multiply himself as an instructor to work more in a small group setting or one on one with those students who need more help. He also stated that students can no longer 'just get by' because he is able to have constant tabs on what students are doing, what students are struggling which allows him to immediately address issues by pulling students into small groups or going one on one with a student.

## **Springfield City Schools**

Springfield City Schools incorporates blended learning by allowing students to personalize their learning through NavigateSUCCESS. Students have the opportunity to take advantage of the various different approaches, which include classroom, online and real-world learning opportunities. The following are different approaches students can individualize their education through:

### **Credit Flex**

- Students can earn high school credit from outside of the traditional classroom. These opportunities include proficiency test, credit flex courses, and online courses.

### **College Credit**

- International Baccalaureate (IB), Advanced Placement (AP), and Post Secondary Educational Options (PSEO) courses are offered to students. These programs allow students to earn an IB Diploma or earn college credit from scoring well on IB or AP tests. PSEO allows students to earn credit from an institution of higher education while being enrolled in high school.

### **Alternative Education**

- Through Keifer Alternative Academy students who may be at risk can earn credits for graduation or to return to a traditional high school.

### **Career Development**

- Through business partners and other affiliate programs, students can prepare for careers through internships, world studies and special projects.

### **The Learning Café**

- Funded by a grant, the Learning Café allows students to participate in free community programs in which they can earn academic credit.

### **On-Course**

- A K-12 online learning program that allows students to take all online classes or blend with a combination of online and traditional brick and mortar classes.

### **Madeira High School - American Government 2014-2015 School Year**

Planned for the 2014-2015 School Year, American Government will be the first blended learning course offered at Madeira High School. While still in the development stage, it has been planned to incorporate a form of online learning along with face-to-face instruction. Being a senior level course, the goal is to prepare students for what they will encounter upon entering college courses.

Students will be given more autonomy where students can work online through It's Learning (LMS) to participate in discussion boards, access documents as well as complete assignments and assessments. This class, most likely, will not meet every day giving students opportunities to work on and complete assignments such as research papers and Problem Based Learning activities outside of the classroom.

### **Technology and Blended Learning**

There are many technology decisions to consider when implementing a blended learning philosophy. To determine the correct technology footprint the Board should determine the method of curriculum development, class offerings, and number of total and concurrent students enrolled are the primary factors to consider. Some but not all of the technology domains to consider are internet speed, network bandwidth, backup / disaster recovery procedures, data storage, security, hardware, virtual desktops and software.

#### **Internet Speed:**

First a basic definition, Internet Speed refers to the rate of data transfer from an internal

network (school routers) and the external host. Internet speed is less critical if curriculum is developed in-house or lessons are downloaded to internal servers. However, sufficient internet speed is required for any remote access from students. There are two primary considerations for internet speed download rate of data and upload rate of data.

### **Download Rate:**

Should the board follow the prevalent model of leveraging third party curriculum, download speed will be paramount. The number of students accessing online lesson plans while connected to the School network may require an increase in download bandwidth. The most difficult scenario to plan for is concurrent users. Concurrency can lead to downloads failing, web pages not refreshing, and students turning off computers. Much like I-71, preparations must be made for ‘rush hour’ allowing for short duration but high utilization spikes on internet connections. The increased bandwidth is required in evenings as well if, for licensing or security measures, the School requires students to connect through a VPN to the third party curriculum provider. Certainly the more students enrolled impacts the bandwidth capabilities, but the most important consideration is the predicted number of concurrent connections to an internet provided third party.

<http://www.educationsuperhighway.org/>

### **Upload Rate:**

Internet upload data rate is less important should the board follow the more prevalent method of leveraging a third party curriculum provider. However, once again the type of classes and number of students may have an impact. There are class formats that require the upload of video, which is bandwidth intensive, especially during high utilization time frames. Typically one would see an upload rate that is a 10<sup>th</sup> to 20<sup>th</sup> of the download rate.

### **Net Neutrality:**

A possible complication to any web based enterprise is a January 14<sup>th</sup> Federal Court’s decision not to enforce Net Neutrality. Net neutrality prevented Internet Service Providers from charging different rates for different web domains bandwidth. The judgment allows for different rates to be charged to maintain certain quality of service. As recently as February 5<sup>th</sup>, Verizon has been publicly reprimanded for reducing the speed of the competing Netflix website. The judgment will be most likely be appealed. The impact may be minimal and is only noted to be aware of the pending legal case.

### **Network Bandwidth:**

Different than data transfer speeds external to the organization, network bandwidth relates to the ability and rate of transfer to devices connected on an internally governed set of IP addresses. Most organizations have a combination of high speed Ethernet cabling and wireless access to support their networks. Should the number of devices connected increase dramatically; there can be ‘traffic jams’ on the network if there is not enough capacity. The ability to forecast the number of concurrent users and the average size of data transfer will allow for proper network planning. High definition video and

audio data transfers can utilize a significant amount of network capacity. There are hundreds of vendors and tools to monitor and determine optimal network configuration and capacity. The School can implement a blend of higher bandwidth cables, increased routers and switches (traffic cops), compression, and prioritization to optimize the end user experience. As such, the roll out of blended learning on any large scale should include network bandwidth analysis.

### **BackUp / Disaster Recovery Procedures:**

Guaranteeing the ability to recover from catastrophic system shut down with minimal interruption of service and loss of data is another key consideration in the implementation of blended learning. IBM suggests these key questions be considered<sup>1</sup>:

- What data is vital to my business?
- How long can the data be unavailable?
- How current does the data need to be?
- What is the cost of a disaster to my company?
- What is the cost of my disaster recovery plan?
- Is performance after a disaster a consideration?
- What type of disaster is possible, or even likely, and how long will it affect my system?

Sound backup / disaster recovery procedures are exponentially more important as an increased number of students' success relies on system performance, data availability, and infrastructure integrity. The best practices regarding backup procedures and disaster recovery plan tests are readily available. Ensuring the Schools maintain the high quality practices to minimize outages and recover corrupt data should also be incorporated into the blended learning implementation plan.

### **Data Storage:**

A common acronym for the ability to store data electronically is DASD. DASD stands for direct access storage device and is the prevalent term for enterprise level electronic storage. Increased data storage will be needed to support a larger volume of videos, audio clips, and documents. Many file types such as documents and spreadsheets, easily compress and take up minimal storage. Other file types are already compressed and are still fairly large, examples are video, audio, and picture files. The class format and delivery may require a major increase in the amount of video files requiring a commensurate increase in the amount of DASD. There are many storage options available with an increasing number of entities leveraging external storage providers and with internet connections. Commonly referred to as 'the Cloud', leveraging an external storage provider would impact internet capability decisions.

A larger amount of data storage will be required if curriculum is developed 'in-house'. As in universities, many students can be allocated a finite amount of storage capacity. The benefit to the student is an enterprise supported and backed up service to safe guard their homework, projects, and research. Third party, web based curriculum would

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<sup>1</sup> <http://publib.boulder.ibm.com/infocenter/cicsts/v3r1/index.jsp?topic=%2Fcom.ibm.cics.ts31.doc%2Fdfht2%2Fdfht2ll.htm>

leverage less data storage as there is no requirement to save video lessons in house. As a final point of consideration, any data storage needs could be provided by an external vendor, similar to the popular dropbox<sup>2</sup> service allowing for remote file access.

### **Internet and Network Security:**

A topic that is more technical than the others previously addressed is network and internet security. The methods to maintain appropriate segregation of access and safeguarding school data are varied and complex. Most critical take away for the Board is to request proper due diligence regarding security. Information security experts will implement measures to prevent inappropriate external access, restrict access to malicious websites, safeguard student / employee private information, and limit access to sensitive documents.

### **Hardware:**

Madeira City Schools currently maintains an impressive array of student available computers and tablets. The schools will need to consider the hardware footprint when evaluating a higher reliance of computer based learning via the blended model. Should the schools only use Apple? Android? Windows? Are laptops / tablets mandatory purchases for students as with some other schools? Vendor provided curriculum may require a particular platform and many tablets are platform dependent. The Schools have a long track record of effective hardware maintenance and deployment. With the vast experience of the Schools, hardware selection may be one of the less dynamic concerns to address when rolling out a blended learning model.

### **Software and Virtual Desktop:**

A blended learning model pushes our students to further embrace technology and applications. Many curriculum vendors prefer particular platforms for web browser and video editor. Enabling students to be successful at their homework and projects by providing appropriate software is a key consideration in blended learning. The model of blended learning employed is less influential on the software selection. The bottom line is there will be a need for more student work to be submitted electronically. As such, access to text editors (Word), spreadsheet software (Excel), and presentation software (PowerPoint) will become mandatory. There are many methods to facilitate a common set of applications and tools. The school may offer a model similar to universities where software may be purchased at a significant discount.<sup>3</sup> In addition, many schools either offer web based versions of these tools such as Google Docs and Office 365. The web based versions do not require any specific system requirements, nor do students, parents, or staff need to install and maintain software on student machines. The school could also implement virtual desktops<sup>4</sup> should curriculum become more advanced and require software access that with more restrictive licensing or higher computing requirements. A

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<sup>2</sup> <https://www.dropbox.com/>

<sup>3</sup> <http://www.uc.edu/ucit/ware/software.html>

<sup>4</sup> [http://en.wikipedia.org/wiki/Desktop\\_virtualization](http://en.wikipedia.org/wiki/Desktop_virtualization)

remote virtual desktop allows a student to log on via a website or virtual private network (vpn) and log on to what appears to be a desktop in a typical computer lab. The applications are all maintained via an administrator governed data center. This service may be provided internally such as at the University of Cincinnati or provided by a third party.

### **Blended Learning and Technology:**

Blended learning's reliance on technology should be considered as the Board embarks on a more thorough analysis of the 'ifs' and 'hows'. The pilot programs over the next school year will hopefully begin to shed light on many of the technology considerations. The implementation must have well thought out processes, organization change management, and underlying technology capabilities to be successful.

### **IT infrastructure**

- Servers for media storage
- For any inhouse / flipped setup: Video and online lecture equipment
- Bandwidth (50 mbps used in AL)
- Wifi
- VPN / Cloud storage for school proxied resources
- Tablets with text editor and spreadsheet applications unless offered via cloud
- Virtual image if could model leveraged for apps and documents

### **Curriculum**

- Third party education vendors
- Training for teachers
- Monitoring tools for students, teachers and parents (blackboard, Desire2Learn, Powerschools)
- Testing, iTunes U, Khan Academy
- Aventa, Florida Virtual Learning School, Rosetta Stone, Dreambox Math, Apex Learning, Edgenuity, K12,inc., Aleks

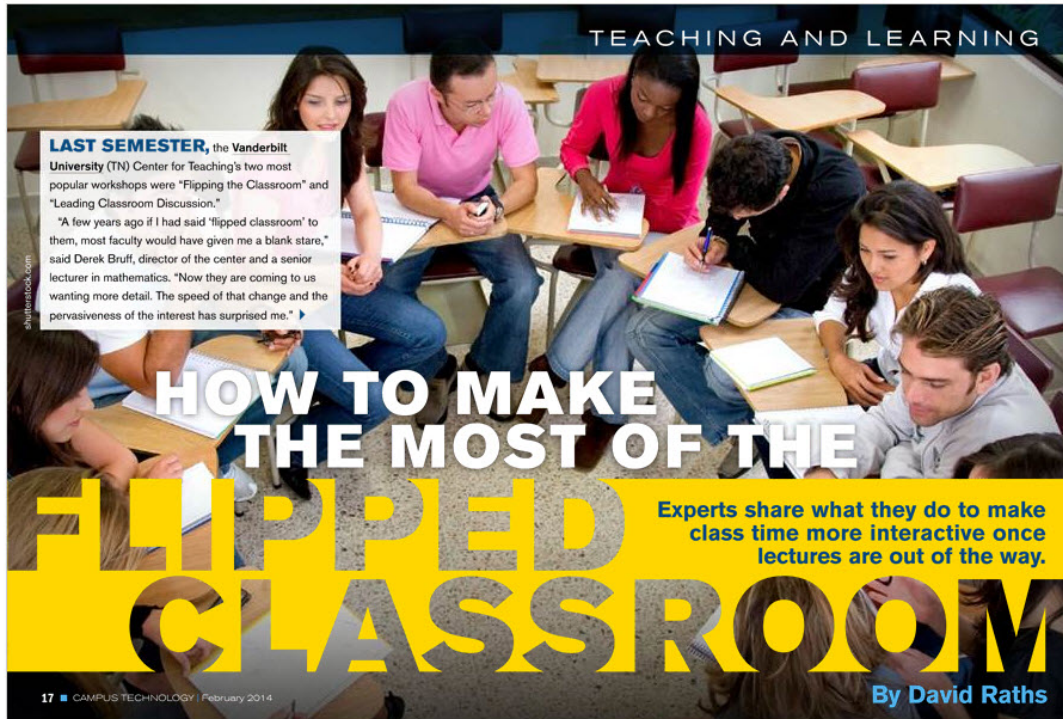
### **Recommendations**

1. Madeira Board of Education to adopt a working definition of blended learning and define WHY the district is pursuing blended learning models.
2. Conduct a technology assessment to confirm both the needs of the district to pursue different blended learning models as well as ensure that appropriate security measures are in place
3. Provide opportunity for professional development for teachers as it relates to blended learning.



# Appendices

## Appendix A – How To Make the Most of the Flipped Classroom



CAMPUS TECHNOLOGY

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ALL PAGES

BROWSE ISSUES

TEACHING AND LEARNING

Indeed, a November 2013 survey from the Center for Digital Education and Sonic Foundry found that half of university faculty members have flipped their classroom or plan to within the next year. Despite that enthusiasm for the model, though, the truth is that many faculty members struggle with making their lecture-free classroom time interactive and engaging.

One problem may be that many higher education faculty members have never taken a teaching methods course, said Jackie Gerstein, who teaches education and educational technology courses at **Boise State University** (ID) and **Western Governors University** (online). "The ones who are using the flipped classroom, in my perspective, are the ones who have experience with more two-way communication with students and interactive activities in the classroom: former K-12 teachers and scientists who are used to labs."

Flipping is not an excuse for twice the amount of lecturing, Bruff noted. He tries to get lecturers to bring traditional out-of-class student activities into the classroom. "Rather than students working on solving problems by themselves," he asked, "how can we optimize that 75 minutes we have together? That synchronicity becomes a strength."

CT asked several professors how they make their classrooms more participatory. Here are their best practices:

### California Lutheran: An Arena of Inquiry

David Marcey, Fletcher Jones Chair of developmental biology at **California Lutheran University**, stressed that he doesn't merely put lectures on video for convenience's sake — the classroom activities are the primary driver of his flip.

"I wanted to turn the classroom into an arena of inquiry," he said. He is continually testing out new classroom activities in his course "Metabolism, Genes and Development," which usually has 20 to 40 students. "It is not easy to do well," he warned.

Marcey calls his flipping model "CLIC" — for Cinematic Lectures & Inverted Classrooms. One approach he has taken involves using clickers to get at higher order cognitive questions. He has students click an answer and look at the results together. Then they talk in small groups and vote to answer again, which generates a conversation, he said. "We get to peer-to-peer learning and start to get at the metacognition, so students start thinking about what they know and don't know. That is overlooked in our lecture-based classes."

Marcey noted that some students take well to synthesizing information from lectures and readings and applying it critically. "Of course, with other students we are disappointed that they didn't seem to grasp the concepts at a deeper level. But this practice in the classroom helps them identify and work on what they don't understand."

Other classroom activities include building plastic models

of DNA molecules, constructing concept maps or researching a topic online during class and making a presentation. "I get a little pushback from some students who prefer the more passive mode," Marcey said, "but many more students enjoy it and the classroom is more vibrant, more engaged. I am committed to continuing it."

### Duke: Flipping Large Classes

When Mohamed Noor, Earl McLean Professor and chair of biology at **Duke University** (NC), created a MOOC on Coursera, he specifically planned to use it to flip his large on-campus course, **Biology 202L: Genetics and Evolution**.

"Once I put the course on Coursera, I felt that I would be cheating my students at Duke if all I did was give the same lecture that anybody can see on the Internet for free," he said. "Of course, there is more help available on campus, such as lab sections and question-and-answer sessions," he added, "but I want to continue to look for ways to make the classroom time more valuable, to maximize student success."

Noor said he already had a few interactive elements in place such as pre-lecture quizzes on what students had already read. Students provide feedback on the videos they have watched, and he spends the first 10 minutes of class clarifying any concepts that were confusing.

Now he is trying to add more participatory activities in his classes. Some of the topics are amenable to group problem-

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solving, and he asks students to work together as he and his 10 teaching assistants walk around the room offering help. After students have worked on a problem, he uses *Poll Everywhere* to

ogy at Duke holds "Flipping Fellowship" meetings every other week for faculty members and it has been useful to see what other faculty members are doing, Noor said, although what is

**"Flipping definitely puts more on the shoulders of the students, and some do better than others at staying up-to-speed with the video lecture materials."** — *Mohamed Noor, Duke University*

get a sense of students' grasp of the concepts.

But for the later elements of the class, there is not an obvious set of problems for students to work on together, so Noor is still trying to decide how to make those sessions more interactive. He also is working on being responsive to students who struggle with the new model. "It definitely puts more on the shoulders of the students," he said, "and some do better than others at staying up-to-speed with the video lecture materials."

The Center for Instructional Technol-

possible in a class of 30 students isn't as easy to do in a class of 400.

#### 'Speed Dating' at George Washington U

For Lorena Barba, associate professor of mechanical and aerospace engineering at [George Washington University](#) (DC), her interest in flipping stems from evidence about the ineffectiveness of the lecture method. "That is really not a question anymore," she said. "Lecturing is one-sided and not effective. Students tend to tune

out. There is not much point in it anymore. The content is everywhere."

Like California Lutheran's Marcey, she said that some people have a misconception that moving the lecture to video is the point of flipping. "The main ingredient is the meaningful activities you develop for class to help students assimilate new knowledge they've been exposed to in that content."

She said that flipping is also a discovery process for the instructor. "There is not a formula," she declared. "I try to think about the projects I used to assign as homework and

the ways that students would struggle with those individually at home, and think of a way that they can work on those problems collaboratively in class, with me there to guide them, ask questions and steer them."

Barba, who recently moved to GWU from [Boston University](#) (MA), described a Computational Fluid Dynamics class at BU that involved creating coding programs to solve mathematical and physics problems. "Traditionally, I would present a theory and methods and students would take notes, then I would assign a project for them to do outside class with programming tools. Now they watch videos of the lecture, then work in class on projects, asking each other questions if they get stuck. It really is magic because it starts building a team environment," Barba said.

In one class, she decided to try a "speed-dating" idea with the students split in half: one group seated and the other standing. The ones standing up would rotate from desk to desk, while the seated person would explain his techniques and solution. After three minutes, they switched. "Then I had them vote for the best solution, and took a consensus," she explained. "The winner put his solution up on a projector, described it and answered questions."

Barba, who has been flipping since 2011, recommended being prepared for unexpected things to happen and being ready to adjust. Some activities you might expect to take very little time will take much more, she noted. Others you

expect to take a whole period may just take a few minutes, so you have to have other activities ready. "You are giving up control, so you have to be emotionally prepared for that. But it is a good thing. It depends on how students respond, and you can't control that 100 percent. Be flexible. Let them guide the learning."

**Flipping is a discovery process for the instructor: "There is not a formula."** — *Lorena Barba, George Washington University*

Although she has heard of other professors meeting with resistance from students, she said her students say they are never bored, they get to talk to each other during class and they get support from her in a personalized way.

#### Flipping Med School at Vanderbilt and Stanford

One of the places flipping could have its biggest impact is in medical school, where traditionally the first two years are lecture-based and heavy on content.

With the biomedical revolution, there are too many facts for students to remember, said Charles Prober, senior associate dean for medical education and a professor of

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pediatrics, microbiology and immunology at the [Stanford University School of Medicine](#) (CA), which has begun experimenting with recorded lectures. "I would rather have them taught fewer facts and focus more on how to do quality searches to access the facts."

At Stanford, first-year medical students in biochemistry

But Prober admitted that the transition from lecture to activities has not been an easy one. Faculty members are used to one model of teaching and they are reluctant to give it up. "The question — what am I going to do in the class if not lecture — is a very serious one for them," he said. "But we are making resources available for those who want to ex-

pects and then assign more homework. You have to narrow down to what is most crucial for them to focus on. So you may have to take some content out."

Reimschisel's students watch four to six videos each week of 10–15 minutes each. In class he gives them 10 multiple-choice questions that they answer individually and submit electronically. Then they break into 13 groups of eight and answer the questions as a group after discussion and consensus. "We have a Smart Board in class with screens at each group station. We can all see and discuss the results," he said. The questions are quite difficult. "I try to make it so they all miss two or three. Otherwise, they would have nothing to discuss. I tell them I am comfortable with their frustration." The team discussion is part of their learning, he added. They talk for 45 minutes in class and then present their team answer, and the class members vote for their favorite answer, which leads to interesting discussions.

Reimschisel said flipping requires getting students to think differently. "We have taught students to be sedate and to absorb information like a sponge. It softens the brain. They are also still used to competing for grades. But we are more interested in having them learn how to learn. This is what they will do as clinicians. You have studied something, now you have to apply it." **CT**

*David Raths is a freelance writer based in Philadelphia. ▶*

**"You can't ask students to watch the video outside class, participate in class projects and then assign more homework. You have to narrow down to what is most crucial for them to focus on."**

— *Tyler Reimschisel, Vanderbilt School of Medicine*

watch mini-videos, and then break up into groups of seven. They are presented with a clinical problem that underscores the biochemistry pathways they have been studying. The faculty member makes this a competition between the tables to come up with an answer, which Prober said makes it more exciting and more engaging. In another example, students in an endocrinology course might watch a video about certain diseases. They then see clinical examples, including labs and X-rays, and in groups of four to five go from station to station studying the cases until they have worked through the end of the cycle. Then they are asked to describe one of the cases, and the faculty member is there to address any misconceptions.

periment and innovate." There are grants available on campus to provide funding assistance. In the latest round, there were 22 applications, half from the School of Medicine.

The [Vanderbilt School of Medicine](#) is revising its curriculum so that the first two years of lecture-based courses are condensed into one year before students move to a clinical setting. Creating shortened and flipped molecular biology, genetics and biochemistry courses required actively taking things out, said Tyler Reimschisel, assistant professor of pediatrics and neurology and vice chair for education in the Department of Pediatrics. "One key to flipping is that less is more," he said. "You can't ask them to watch the video outside class, participate in class proj-

# The Rise of K–12 Blended Learning

## Profiles of emerging models

By Heather Staker

With contributions from Eric Chan, Matthew Clayton, Alex Hernandez,  
Michael B. Horn, and Katherine Mackey

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## Introduction

**S**ome innovations change everything. The rise of personal computers in the 1970s

decimated the mini-computer industry. TurboTax forever changed tax accounting, and MP3s made libraries of compact discs obsolete. Even venerable public institutions like the United States Postal Service, which reported an \$8.5 billion loss in 2010, are not immune. It experienced a 6 billion piece decline in mail volume that fiscal year, thanks mostly, of course, to email.\*

These innovations bear the traits of what Harvard Business School Professor Clayton M. Christensen terms a disruptive innovation. Disruptive innovations fundamentally transform a sector by replacing expensive, complicated, and inaccessible products or services with much less expensive, simpler, and more convenient alternatives.

At first, they may not be as good as the existing product or service. They get their footing by targeting those not being served at all—“nonconsumers”—and operating under the theory that something is better than nothing. Think IKEA furniture. And then the disruptive innovations predictably improve until, little by little, they take over and supplant the traditional way of doing things.

This pattern is sector agnostic. It is as common in heavy industrials as in professional services, consumer packaged goods, and nonprofits. In one of its most recent manifestations, it is little by little changing the way people think about education.

Online learning appears to be a classic disruptive innovation with the potential not just to improve the current model of education delivery, but to transform it. Online learning started by serving students for whom there was no alternative for learning—in the advanced courses that many schools struggled to offer in-house; in small, rural, and urban schools that were unable to offer a broad set of courses with highly qualified teachers; in remedial courses for students who needed to recover credits to graduate; and with home-schooled and homebound students. Nearly all these instances tended to be in distance-learning environments—outside of a traditional school building and in-person teacher.

It started small. In 2000, roughly 45,000 K–12 students took an online course.† But by 2010, over 4 million students were participating in some kind of formal online-learning program. The

\* Doug Mataconis, “USPS Loses Millions, Warns of Bankruptcy,” *Outside the Beltway*, November 13, 2010, available at <http://www.outsidethebeltway.com/usps-loses-8-5-billion-warns-of-bankruptcy/>.

† Clayton M. Christensen, Michael B. Horn, and Curtis W. Johnson, *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*, (New York: McGraw-Hill, 2008), 91.

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preK–12 online population is now growing by a five-year CAGR of 43 percent—and that rate is accelerating.\*

In true disruptive fashion, online learning is expanding beyond its roots in distance learning. Educators and entrepreneurs are increasingly creating blended-learning environments—where rather than doing online learning at a distance, students learn in an adult-supervised school environment for at least part of the time. At the outset, this occurred in areas of nonconsumption, such as credit-recovery labs and dropout-recovery schools.

A small but growing number of schools, however, are starting to introduce blended learning into their core programming for mainstream students. Several forces are accelerating this trend. First, bleak budgets coupled with looming teacher shortages are driving schools to find cost cutting and creative staffing alternatives. Several blended-learning pilots already have

documented

cost savings in personnel, facility, and textbook costs, with equal or improved academic results, and the news is spreading.

Second, the No Child Left Behind Act of 2001 shifted national attention to comparing individual student proficiency in core subjects, measured by statewide summative assessments. New Internet sites, such as GreatSchools.com and SchoolDigger.com, made school-by-school comparison of test scores transparent and increased the pressure on schools to perform. The Common Core State Standards Initiative, which a group of governors and state officers announced on June 1, 2009, launched the effort to provide a clear, consistent understanding of what students are expected to learn across the nation. Against this more data-aware, competitive backdrop, school leaders do not have as much cover if they choose to ignore the possibility that online learning can unlock performance gains for certain students.

Other factors have contributed to the migration of online learning into core programming for mainstream students. Virtual content providers, such as K12, Inc. and Connections Academy, aware that they will one day saturate the home-school market, are beginning to turn to brick-and-mortar schools for new-market expansion. Home schooling and full-time virtual schooling cannot completely substitute for mainstream schooling because they require significant parental involvement. Given the socio-economic condition and family structures of most K–12 students, 10 percent is likely the maximum number of students who could contemplate a home-schooled experience. Online-content providers must grow into schools to expand domestically.

\* Sam S. Adkins, “The US PreK–12 Market for Self-paced eLearning Products and Services: 2010–2015 Forecast and Analysis,” Ambient Insight, January 2011, [http://www.ambientinsight.com/Resources/Documents/AmbientInsight\\_2006\\_US\\_eLearning\\_Market\\_Snapshot.pdf](http://www.ambientinsight.com/Resources/Documents/AmbientInsight_2006_US_eLearning_Market_Snapshot.pdf).

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Furthermore, technology companies, including providers of learning management systems, online assessments, digital gradebooks, and education data systems are proliferating. This market bubble is pressuring them to heat up their competitive marketing efforts. The resulting messaging has increased public awareness of online learning as a possible alternative.

Finally, the growth of online learning in higher education has taken off. Roughly 10 percent of students in 2003 took at least one online course. By the fall of 2009, that number had grown by 20 points.\* Half of all postsecondary students will take at least one class online by 2014.† This dramatic change is influencing the way that K–12 programs are thinking about how to prepare kids for success in college.

Will the rise of online learning into brick-and-mortar schools be different from the appearance of previous education technologies? Calculators, overhead projectors, electronic whiteboards, and online textbooks all enhanced the classroom as add-ons, but they sustained rather than transformed the conventional structure. Even the aggressive deployment of computers in schools has not transformed classrooms. Schools spent over \$60 billion equipping students with computers in the past two decades, but the basic classroom design has not changed.‡

In contrast, as countless people have noted, online learning has the potential to be a disruptive force that will transform the factory-like, monolithic structure that has dominated America’s schools into a new model that is student-centric, highly personalized for each learner, and more productive.

This paper profiles 40 organizations that have blended or have plans to blend online learning with brick-and-mortar classrooms. These represent a range of operators, including state virtual schools, charter management organizations, individual charter schools, independent schools, districts, and private entities. The organizations profiled in this paper are not a “top 40” list. Thousands of other schools are currently participating in blended learning and may have superior programs. Furthermore, this report does not provide a comprehensive market analysis, but rather a survey that offers a more intimate look at a small sample, with the intention to identify



emerging models.

\* I. Elaine Allen and Jeff Seaman, “Class Differences: Online Education in the United States,” The Sloan Consortium, November 2010, [http://sloanconsortium.org/publications/survey/pdf/class\\_differences.pdf](http://sloanconsortium.org/publications/survey/pdf/class_differences.pdf).

† Clayton M. Christensen, Michael B. Horn, Louis Caldera, Louis Soares, “Disrupting College: How Disruptive Innovation Can Deliver Quality and Affordability to Postsecondary Education,” Center for American Progress and Innosight Institute, February 2011, [http://www.innosightinstitute.org/innosight/wp-content/uploads/2011/02/future\\_of\\_higher\\_ed-2.3.pdf](http://www.innosightinstitute.org/innosight/wp-content/uploads/2011/02/future_of_higher_ed-2.3.pdf).

‡ Disrupting Class, Chapter 3.

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Innosight Institute and Charter School Growth Fund partnered to produce this research. Innosight Institute’s objective is to study and describe the emergence of online learning in all its forms, in an effort to channel the disruptive trend toward greater quality. Charter School Growth Fund’s interest is to inform its investment strategy as it advances its mission of providing philanthropic venture capital to the nation’s highest performing charter school operators.

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## Definition of Blended Learning

In a field with significant confusion and multiple definitions around what K–12 blended learning—

sometimes called hybrid learning—is, our research suggests a simple, umbrella definition:

Blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace.

This definition includes two essential clauses to distinguish blended learning from other varieties of learning. First, the student must learn in a “supervised brick-and-mortar location away from home” at least some of the time. A school building is the most traditional location. Other facilities, such as a storefront converted into a computer lab, could also qualify as a brick-and-

mortar setting for learning. Furthermore, an adult must be physically present to supervise the learning. A barista at Starbucks does not count.

Second, to qualify as blended learning, the student must experience online delivery with some control over the time, place, path, and/or pace. The student control element is crucial to the definition because it distinguishes online learning from other forms of tech-rich learning, such as when the teacher uses a laptop and projector to stream online media or textbooks to a classroom of students, or uses an electronic white board to make direct instruction livelier.

The above definition of blended learning is from a student’s perspective. For example, in the self-blend model discussed in the next section, because a student is taking some courses online remotely and some courses in the traditional brick-and-mortar format, that student is experiencing blended learning.

The definition is also not normative. Just as a hybrid car can be either efficient or a clunker but still be a hybrid car, blended learning can be both good and bad. Some blended-learning programs produce stellar results; others do not. Some save money; others are more expensive. Definitions that preclude certain programs that clearly meet the eyeball test of being a blended-learning

program erroneously narrow the term.

The definition of blended learning is illustrated in a two-dimensional matrix (see Figure 1). Most studies to date have situated blended-learning models across a linear spectrum, with “mostly face-to-face” on one end and “mostly online” on the other. The matrix below captures the geographic spectrum of blended learning as well by mapping the programs onto a plane, rather than a line.



On the X-axis is the geographic location of a typical student in the blended program, which ranges from 100 percent supervised brick-and-mortar to 100 percent remote—either at home, or  
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some other place. On the Y-axis is the percent of time that a typical student in the program learns online, which ranges from 100 percent online learning to 100 percent offline.

Figure 1. Blended-learning matrix

Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Content Delivery  
Geographic Location  
Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Content Delivery  
Geographic Location

Everything shaded gray represents blended learning (see Figure 2). The red perimeter and points on Figure 2 relate to programs that are not blended learning. The blue point and perimeter also relate to programs that are not blended learning, unless students enrolled in those programs “selfblend”

by simultaneously enrolling in a traditional brick-and-mortar school.

Figure 2. Examples of points on the matrix

Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Content Delivery  
Geographic Location  
Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Content Delivery  
Geographic Location

No Traditional brick-and-mortar school

No Home school without online delivery

Maybe Purely virtual school (also called cyber school and e-school). It only figures into blended learning if a student uses it to self-blend with a traditional campus.

Yes Theoretical pure-play for blended learning (100% online and 100% supervised brick-and-mortar)

Yes Student learns through a mix of online/offline and supervised brick-and-mortar/remote

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## Blended -Learning Models

The programs profiled in this study were highly varied in the way that students experienced their learning across several dimensions, including teacher roles, scheduling, physical space, and delivery methods. The models fell into six distinct clusters, however, with each sharing design elements that distinguished them from the others. As innovators develop new versions of blended learning, the contours of these clusters will continue to evolve. For now, blended learning is

gravitating toward six models:\*

#### Model 1: Face-to-Face Driver

The programs that fit in the face-to-face-driver category all retain face-to-face teachers to deliver most of their curricula. The physical teacher deploys online learning on a case-by-case basis to supplement or remediate, often in the back of the classroom or in a technology lab.

#### Model 2: Rotation

The common feature in the rotation model is that, within a given course, students rotate on a fixed schedule between learning online in a one-to-one, self-paced environment and sitting in a classroom with a traditional face-to-face teacher. It is the model most in between the traditional face-to-face classroom and online learning because it involves a split between the two and, in some cases, between remote and onsite. The face-to-face teacher usually oversees the online work.

#### Model 3: Flex

Programs with a flex model feature an online platform that delivers most of the curricula. Teachers provide on-site support on a flexible and adaptive as-needed basis through in-person tutoring sessions and small group sessions. Many dropout-recovery and credit-recovery blended programs fit into this model.

\* This is a first cut at creating a more precise typology of blended-learning models than has existed before. It is still imperfect, as readers will note. We invite other researchers to conduct further research to improve upon these typologies.

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#### Model 4: Online Lab

The online-lab model characterizes programs that rely on an online platform to deliver the entire course but in a brick-and-mortar lab environment. Usually these programs provide online teachers. Paraprofessionals supervise, but offer little content expertise. Often students that participate in an online-lab program also take traditional courses and have typical block schedules.

#### Model 5: Self-Blend

The nearly ubiquitous version of blended learning among American high school students is the self-blend model, which encompasses any time students choose to take one or more courses online to supplement their traditional school's catalog. The online learning is always remote, which distinguishes it from the online-lab model, but the traditional learning is in a brick-and-mortar school. All supplemental online schools that offer a la carte courses to individual students facilitate self-blending.

#### Model 6: Online Driver

The online-driver model involves an online platform and teacher that deliver all curricula. Students work remotely for the most part. Face-to-face check-ins are sometimes optional and other times required. Some of these programs offer brick-and-mortar components as well, such as extracurricular activities.

For ease of identification, this paper uses the following symbols for each model (see Figure 3).

Figure 3. Symbols for blended-learning models

Face-to-Face

Driver

Rotation

Flex

Online Lab

Online Driver

Self-Blend

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## Mapping of Programs

The 40 organizations profiled in this report offer a total of 48 blended-learning programs (see Figure 4). A complete list of programs, categorized by model, is in Appendix A.

Figure 4. Programs relative to the blended-learning matrix

Supervised brick-and-mortar Remote  
 Offline Online  
 Face-to-Face Driver  
 Rotation  
 Flex  
 Online Lab  
 Self-Blend\*  
 Online Driver

### BLEND-LEARNING MODELS

\* Other programs in this paper that facilitate self-blending include the following: ACCESS Distance Learning, Capital Area Online Learning Association, EPGY Online High School, Jesuit Virtual Learning Academy, Kentucky Department of Education: KVHS, and Metropolitan Nashville Virtual Learning.

ACCESS Distance Learning  
 Acton Academy  
 AdvancePath Academics, Inc.  
 Connections Academy  
 Alliance College-Ready Public Schools: pilot study  
 Alliance College-Ready  
 Public Schools: summer program  
 Big Picture Learning  
 Brownsville Academy High School  
 Capital Area Online Learning Association  
 Carpe Diem Collegiate High School  
 and Middle School  
 Chicago International Charter School  
 Chicago Public Schools: Additional  
 Learning Opportunities Initiative  
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 Cornerstone Health High School  
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 EdisonLearning: blended products  
 EdisonLearning: dropout-solutions centers  
 EPGY Online  
 High School  
 Michigan Virtual School  
 Florida Virtual School: classic  
 Fairmont Preparatory Academy  
 Florida Virtual School:  
 Virtual Learning Labs  
 Florida Virtual School: ELearning Centers  
 Florida Virtual  
 School: iPrep  
 Academy  
 Flex Public Schools  
 Grand Rapids Public Schools  
 Hawaii Technology Academy  
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 Kentucky Dept. of Education: KVHS  
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 School for Integrated Academies and  
 School of One Technologies, Inc. (SIATech)  
 Six Rivers Charter High School: 6th period  
 Six Rivers Charter High School: learning center  
 USC Hybrid High School  
 VOISE Academy High School  
 White Hat Management  
 Wichita Public Schools

## Forty Profiles

The following profiles provide brief case studies of 40 organizations that are beginning to blend online learning with supervised brick-and-mortar settings. The profiles do not evaluate the programs, nor do they represent an endorsement. Instead, they are purely descriptive to attempt to provide a clearer picture of the emerging field. All numbers reflect data from the 2010–11 school year unless otherwise indicated.

Innosight Institute has created an online database to continue compiling public profiles of organizations that are delivering K–12 blended learning. Please visit [www.innosightinstitute.org](http://www.innosightinstitute.org) to add or update an organization’s profile.

Blended grades 8–12

Enrollment 41,161 (2009–10 school year)

Blended subjects Comprehensive

Content FLVS, Aventa Learning, self-developed

SIS Varies by school

Independent LMS Desire2Learn, Moodle

Independent gradebook Desire2Learn

Independent assessment tool Desire2Learn

Link between LMS and SIS ACCESS exports data to schools

Other tools WebEx

Notable results

Between 2002 and 2008, Alabama’s high school graduation rate climbed from 62.1 to 69.0%, a gain that was 4.3 percentage points above the national average for that time period.

Operator Alabama State Department of Education

Operator type State department of education

Headquarters Montgomery, Ala.

Focus General

Grades served PreK–12

% FRL 52% (2008–09 school year)

% Black or Hispanic 39% (2008–09 school year)

Public revenue/pupil

\$615 per course enrollment (ACCESS;

2009–10 school year)

## ACCESS Distance Learning

Supervised

brick-and-mortar

Remote

Offline

Online

Online Lab

and Self-Blend

Students supplement their traditional school’s course offerings by taking one or more online or videoconferencing courses from ACCESS, either on campus in a “21st Century Classroom” or away from campus on their own.

## INSTITUTE **NNOSIGHT**

This profile is adapted from the case study, titled “Providing ACCESS to Alabama: Connecting rural classrooms through online and distance learning,” by Heather Staker and Andrew Trotter, Innosight Institute, February 2011, available at <http://www.innosightinstitute.org/media-room/publications/education-publications/providing-access-to-alabama>.

### History and context

In 2004, Alabama Gov. Bob Riley convened a task force of representatives from public and private institutions across the state to create the blueprints for the Alabama Connecting Classrooms, Educators, & Students Statewide (ACCESS) Distance Learning Program, with the mission to equalize education opportunities across the state. At the time, nearly 32 percent of Alabama public school students were enrolled in rural schools. The year prior, the state administered only 99 Advanced Placement (AP) exams per 1,000 juniors and seniors, which ranked Alabama as 14<sup>th</sup> out of the 16 southern states in availability of AP courses to high school students. The task force agreed to a basic plan to bring a wide variety of AP, foreign language, dual-credit, core, and elective courses to Alabama’s high school students—and several courses eventually to middle school students as well—through the development of a statewide videoconferencing and online learning program. The task force assigned the Alabama State Department of Education (ALSDE) to launch and operate the initiative. Among other administrative responsibilities, ALSDE was in charge of securing statewide licenses for software and managing content acquisition and development.

In its initial budget, the task force made provision for upgrading hardware, particularly desktop workstations, to allow students to access online courses. It planned to award every high school with up to \$85,000 to add a “21<sup>st</sup> Century Classroom” that included videoconference equipment, at least 25 tablet PCs, wireless connectivity, interactive white boards, projectors, and scanners. Pursuant to this plan, the program office secured licenses with Elluminate, which it later replaced with WebEx, for Internet conferencing.

The task force also worked with the Alabama Supercomputer Authority to upgrade and extend the Alabama Research and Education Network (AREN), which brought Internet infrastructure to the state’s government, schools, and libraries. ACCESS’s ambition was for all schools and district offices to enjoy 10 megabits per second (Mbps) of connectivity by building out the AREN architecture.

In early 2006 the program office issued a proposal request to find partners to operate three support centers. The support centers would run the technical help desk; hire, train, and evaluate teachers; and advocate and plan for the future growth of ACCESS. Madison City Schools, Troy University, and The University of Alabama, College of Continuing Studies won the bids and became the three regional centers.

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## INSTITUTE **NNOSIGHT**

### Blended model

ACCESS facilitates blended learning by delivering Web-based instruction (WBI), or online learning, to high school and middle school students across the state. In essence, students take the majority of their classes through their traditional brick-and-mortar schools and classrooms and one or more online classes through ACCESS, either remotely or on campus in a “21<sup>st</sup> Century Classroom.”

In many cases ACCESS uses interactive videoconferencing to provide synchronous communication experiences between the teacher and up to three classrooms of remote students. (ACCESS also delivers purely videoconference-based courses, although those do not fall within

the scope of this study because they do not involve online learning.)

For the WBI courses, students access coursework online. The software delivers content in various ways, including via text, graphics, audio, video, drills, an online teacher, games, assessments, and physical materials or labs. Students submit work to online teachers via a virtual dropbox, and the teacher responds later with feedback and guidance.

Under program rules, all ACCESS teachers have to be Alabama certified and meet federal standards for “highly qualified.” Because the online delivery method in Alabama is mostly asynchronous, online teachers can teach in traditional classrooms during the day and then manage an online course from their homes at night. Indeed, most members of the ACCESS teaching staff have regular teaching jobs during the day. ACCESS officials said that at first they had to recruit teachers to sign on, but that over time a wait list formed. ACCESS pays its online teachers \$150 per student per half-credit.

ACCESS’s support centers had recruited and trained a total of 659 ACCESS teachers by the end of 2010. Professional development followed the Southern Regional Education Board’s “Guidelines for Professional Development of Online Teachers.” ACCESS also offered professional

development for superintendents, technology coordinators, counselors, and principals.

ACCESS purchased perpetual licenses for 32 courses from Florida Virtual School and 13 from Aventa Learning. It also created 20 of its own courses, as well as five noncredit remediation modules to prepare students for the Alabama High School Graduation Exam.

ALSDE’s ACCESS office also awarded 360 grants, ranging from \$50,000 to \$85,000, to equip each Alabama public high school with a “21<sup>st</sup> Century Classroom.” As mentioned earlier, the team licensed Elluminate, which it later replaced with WebEx, for Internet conferencing.

The Alabama Supercomputer Authority worked with ACCESS to extend the high-speed AREN data network to the K–12 system. By the end of 2010 it had delivered broadband connectivity, at a minimum of 20 Mbps, to all 371 high schools and 133 central district offices

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## INSTITUTE **INSIGHT**

and had begun to upgrade to 50 Mbps. It also organized a consortium of school districts to apply jointly for E-Rate funding to streamline the application process.

The Alabama legislature funded ACCESS as a line item in the state budget. This funding model meant that ACCESS did not compete with districts for per-pupil funds, which greatly enhanced its appearance to districts as an opportunity, rather than a threat. From the start of the program to the fall of 2010, the lump-sum funding had been adequate to accommodate students’ demand for ACCESS courses without necessitating a wait list. Total funding from 2008 to 2011 hovered around \$20 million per year.

### Results

By the end of 2010, ACCESS was the third-largest state virtual school in the country, with 29,415 enrollments and 11,746 non-credit enrollments in 2010. ACCESS’s enrollment growth rate declined in 2010 relative to that of other state virtual schools, largely because of ACCESS’s focus on deploying technology infrastructure in 2010 rather than on increasing enrollments. Alabama’s K–12 education system claimed several successes during the span of ACCESS’s existence. The number of AP test takers in Alabama public schools almost doubled from 2004 to 2010; the number of African American AP test takers more than quadrupled; and the number of qualifying exam scores more than doubled. Between 2002 and 2008, Alabama’s high school graduation rate climbed from 62.1 to 69.0 percent, a gain that was 4.3 percentage points above the national average for that time period. Although other factors may have contributed to these improvements, ACCESS was the driving force in bringing advanced coursework and alternative education options to Alabama.

On the horizon

Alabama made the Advanced Academic Endorsement Diploma the default diploma for the class of 2013. This diploma required the completion of at least 20 hours of an online course or experience. The state also removed the seat-time requirement to allow for credit recovery and credit advancement based on demonstrating competency rather than on completing a certain number of hours of coursework. This paved the way for more innovative scheduling options for schools. ACCESS piloted two credit-recovery courses in the spring of 2010. ACCESS intends to focus on bringing digital resources into traditional classrooms in the years ahead. It especially wants to find ways to help face-to-face teachers use the learning management system and ACCESS's other resources as sustaining technologies in their face-to-face classrooms.

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## INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 1–5

Enrollment 16

Blended subjects Spanish, math, reading, entrepreneurship

Content Rosetta Stone, DreamBox Learning, Learning Today, Acton Toolkit

SIS None

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS None

Other tools SurveyMonkey

Notable results

On average, students gained 2.5 grade levels in math and reading in a 10-month period.

Operator type Independent school

Headquarters Austin, Texas

Focus General

Grades served 1–5

% FRL N/A

% Black or Hispanic None

Public revenue/pupil

None. Full-time enrollment tuition is \$9,350.

## Acton Academy

Flex

The face-to-face teacher never lectures. Students choose from a menu of online and other options for learning.

Many students use online programs for certain subjects, with a face-to-face teacher providing as-needed help.

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## INSTITUTE NNOSIGHT

### History and context

Jeff and Laura Sandefer wanted more for their children than “to be talked at all day long for eight hours a day” in a traditional classroom with a single teacher delivering monolithic instruction.

As the founder of the nationally acclaimed Acton School of Business and a graduate-level teacher for over 21 years, Jeff Sandefer had extensive experience in both the education sector and in



launching startups. Laura Sandefer had earned a Master of Education at Vanderbilt University. The Sandefers' desire to ensure that their children would experience top-quality educations inspired them to found a private school that would use the best of face-to-face instruction, project-based learning, and online-learning tools. They named it the Acton Academy, after Lord John Emerich Edward Dahlberg Acton (1834–1902), a Victorian political philosopher. The Acton Academy's mission is "to inspire each child and parent who enters [its] doors to find a calling that will change the world." The theme underscoring its curriculum is heroes and callings. The school promises that students will embark on a hero's journey to discover the unique contributions that they can make to live a life of meaning and purpose. The Sandefers believe this narrative motivates the children to learn and find the courage to push past setbacks. The school's curriculum also focuses on developing character, fostering an appreciation for liberty, and stoking students' curiosity.

The Acton Academy opened in 2009 with 11 to 12 students, which meant that for group project time, students divided into two groups of six. It now has 16 students, which divide into four groups of four.

According to the Austin Business Journal, the Acton Academy is one of about 25 independent schools in central Texas. Tuitions at these schools range from \$2,800 a year per student to \$17,750

a year.\* The Acton Academy charges \$850 a month, or \$9,350 a year.

#### Blended model

Upon scaling fully, the school will have one master teacher who serves 36 students with the help of two assistants. These assistants could potentially be high school students who work for free in exchange for high school credit. In the Acton model, rather than lecturing to such a large group, the master teacher relies on Socratic discussions and small-group experiences. She divides the students into groups with a mix of grade levels and abilities. In the groups, the students

\* Sandra Zaragoza, "First MBAs, now first graders for Acton founder," Austin Business Journal, May 31, 2009, available at <http://www.bizjournals.com/austin/stories/2009/06/01/story6.html>.

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discuss and learn together while the teacher supervises, but does not lead. "Students can lead themselves," Jeff Sandefer said. "They can self-organize pretty quickly."

The Acton Academy follows a year-round schedule with a short summer break and more frequent weeklong breaks throughout the year to allow families to travel together. The typical daily schedule is as follows:

8 a.m. to 8:30 a.m. Arrival

8:30 a.m. to 9 a.m. Morning Group

9 a.m. to 11 a.m. Individual Work

11 a.m. to 11:30 a.m. Free outdoor play (3x per week)

11:30 a.m. to noon World History (3x per week)

11 a.m. to noon P.E. (2x per week)

Noon to 1 p.m. Lunch and personal time

1 p.m. to 2 p.m. Art (2x per week) or Writing Workshop (3x per week)

2 p.m. to 3 p.m. Group Work/Lessons

3 p.m. to 3:15 p.m. Closing Group

During the individual work portion of the day, students spend in-depth time concentrating on core subjects. Each student progresses along her own path, which the teacher monitors on a weekly chart. Students have the option of using online programs to learn material or to use other approaches, such as Montessori-style manipulatives, worksheets, physical textbooks, and so forth. The face-to-face teachers provide individual support as needed for the students as they progress at their own pace and along their own path.



Many students opt for an online platform to deliver some or all of their core instruction. Rosetta Stone, DreamBox Math, and Learning Today for reading are the most popular programs. In addition, all students learn about entrepreneurship and business finance using a series of six online simulations that Jeff Sandefer created originally for the Acton School of Business. These interactive games, called Acton Sims, are available at [www.actontoolkit.org](http://www.actontoolkit.org).

The Acton Academy uses project-based experiences to expand upon and give context to the foundational lessons. Among the school's most distinctive programs is its hosting of the Children's

Business Fair ([www.childrensbusinessfair.org](http://www.childrensbusinessfair.org)), an annual event in Austin in which children ages 5 to 13 sell goods and services of their own making to the public. In 2010 the event featured 81 booths; over 700 shoppers attended.

Students use various software programs to support their team projects. In a module about robots, electricity, and computer programming, for example, students used LEGO Mindstorms, Lightbot, Lego the Turtle, Scratch, and Alice.

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Students are accountable for their learning in four ways. First, they must pass the shortcycle assessments that accompany their chosen programs to progress to the next level. For example, a student using DreamBox to learn math must pass the unit tests that DreamBox's LMS delivers before moving on. Second, Acton Academy provides parents with a list of gradespecific standards and then sends home portfolios of the students' work. Parents are responsible for checking student progress against these standards and monitoring results. Third, students must understand key skills to be successful in group projects. They are accountable to their peers, and this team-based approach motivates students to master their fundamentals. Finally, students take the SAT10 standardized test once a year to ensure comprehensive progress.

### Results

On average, the Acton Academy's first group of students gained about 2.5 grade levels in the first ten months. Because they were already about one grade level above their age cohort when they entered, most are 3.5 grade levels above their age-group now.

Another feature of the Acton Academy is that students complete a survey every week on SurveyMonkey, and teacher bonuses are tied to their satisfaction. Teachers do not assess students in the traditional sense and are forbidden from telling parents how the children are performing. Instead, as discussed, students create portfolios of their work, and parents review their child's progress by comparing the portfolios to the grade-level standards.

### On the horizon

Next year the Acton Academy will expand to include middle-school students. The Sandefers plan to build out the program to accommodate 36 elementary, 36 middle, and 36 high school students over the next several years. The middle school (serving grades 6–9) will open in the fall of 2012.

The Sandefers are developing a series of kits that include materials, curricula, and documents to facilitate the replication of other schools like theirs outside of Austin. They view the Acton Academy as a lab where they can experiment with curriculum and design until they arrive at the right model for other entrepreneurs to follow. The Sandefers need to recoup \$100,000 to break even on their investment in the school, but they expect that future schools that use their kits will have start-up costs around \$30,000. The Sandefers intend for the economics of the Acton Academy to offer an attractive value proposition for other entrepreneurs.

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## INSTITUTE NNOSIGHT

Blended grades 9–12

Enrollment 4,000 to 4,500 in 23 academies  
Blended subjects Comprehensive  
Content Apex Learning for core, American Education A+ for non-core and electives  
SIS District's SIS  
Independent LMS EDmin  
Independent gradebook EDmin  
Independent assessment tool NWEA MAP  
Link between LMS and SIS Export and upload  
Other tools None  
Notable results  
1,350 graduates since inception; on track to graduate 1,250 students in the 2010–11 school year. About 50% of graduates have gone on to post-secondary schooling.

Operator type Nonprofit or for-profit service provider  
Headquarters Williamsburg, Va.  
Focus Dropout prevention/recovery  
Grades served 9–12  
% FRL 75%  
% Black or Hispanic 84%  
Public revenue/pupil ~\$7,500

## AdvancePath Academics, Inc.

Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Flex

Academy sessions are 4 hours long, 5 days per week, and provide a combination of online and small-group, faceto-face instruction.

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INSTITUTE **NNO SIGHT**

### History and context

John Murray worked for PLATO Learning, a provider of education technology solutions including online courses and assessments, for 18 years and served as the company's CEO from 2000 to 2004. For years he sold Plato to districts as a remediation and recovery program for at-risk

students. Murray also spent 10 years on the Board of the National Dropout Prevention Network (NDPN). He was troubled, however, that the nation's dropout rate had scarcely improved after 30 years of efforts by these and other organizations to reduce the number of students who leave school before graduating.

Murray developed a new model that would allow him to deliver dropout-recovery programming directly to students, rather than leaving the program for districts to execute themselves. A believer in public education, Murray wanted to work within the system and find a sustainable, scalable solution, so he developed a school-within-a-school model and created AdvancePath Academics.

### Blended model

AdvancePath Academics is a for-profit service provider that partners with districts to educate and graduate their dropout and at-risk high school population. To sell the vision to districts, Murray begins by showing them their data and pointing to the growing number of non-traditional children for whom he contends the block schedule is not an ideal fit. Murray believes that serving these students is outside the core competency and teaching culture of most traditional districts. He asks districts to give AdvancePath Academics about 3,000 square feet within one of their school facilities to set up an AdvancePath Academy. Each AdvancePath Academy divides into four zones: (1) a parent and visitor reception area; (2) a technology computer lab with a 1-to-1

computer-to-student ratio; (3) an offline reading and writing zone; and (4) an area for smallgroup instruction with teachers. The intention is for this professional-feeling environment to foster a climate of respect and studiousness among the students, as well as a culture of team teaching and learning. The underlying philosophy at AdvancePath Academics is that all students are respected as individuals and supported in their endeavors.

Students attend the AdvancePath Academy five days per week and choose to attend the morning, afternoon, or evening session. Each session lasts four hours. The staff often open the AdvancePath Academy on Saturdays for make-up days and throughout the summer. When students first enroll, the AdvancePath Academy tests them and creates an individualized learning plan (ILP) for each student. The ILPs paint a map for the students of how much work they need to do to graduate. Students learn to think in terms of “My GIG” (My Goal is Graduation). AdvancePath Academics offer students flexibility to choose what they accomplish each day.

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## INSTITUTE NNOSIGHT

Each AdvancePath Academy is staffed with five to seven adults. One adult works as a full-time registrar, one as a community liaison to recruit and retain youth, one as an aide, and the rest as face-to-face teachers. Most courses do not include online teachers. AdvancePath Academics uses Apex Learning for its core curriculum and American Education A+ for non-core curriculum and electives. It uses EDmin for the learning management system, but it has customized EDmin extensively to create the data systems it needs to inform lesson planning.

The company evaluates each district’s total public revenue, staff costs, and current expenditures on district alternative programs, and then calculates a per-student daily rate. AdvancePath Academics only charges for days that students attend; if a student does not show up, the district does not pay. The average daily rate across the country is approximately \$40 per student. Students can graduate from an AdvancePath Academy with a state-recognized high school diploma from their district, as opposed to a GED.

### Results

Most students enter an AdvancePath Academy one-and-a-half to two years behind academically. Murray has found that students do not need face-to-face reading intervention as much as he had anticipated; rather, the online work mixed with independent reading helps most students catch up within a year. As of the spring of 2010, AdvancePath Academics has graduated 1,350 students and is on track to graduate another 1,250 in the 2010–11 school year. About 50 percent of graduates have gone on to post-secondary schooling. A precise success metric is difficult to gauge because of the transient population, but Murray says that the company is successful with nine out of 10 students, many of whom have failed consistently over many years—and that its students often achieve a 200 to 300 percent gain versus their pre-enrollment index, an internal measure of a student’s level, in 10 months.

### On the horizon

To date, California has 12 AdvancePath Academies, Maryland has two, Michigan five, Alaska three, and Washington, DC has one. AdvancePath Academics expects to open several new AdvancePath Academies in 2011 in its current states as well as in two to three new states. The company says it can launch an AdvancePath Academy from the ground up in two to three weeks, although six weeks is preferred. “We have built a very automated process,” Murray said. Murray expects that to expand capacity in the future, his business will offer a virtual high school for the same population of students. He notes that this would especially help the roughly 6 percent of students who get expelled from the AdvancePath Academies each year. Virtual

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students will attend a brick-and-mortar school for a limited time to meet their specific needs and do the rest remotely to free up space for other students.

Murray also sees an opportunity for an AdvancePath Academy-in-a-box solution to bring the AdvancePath system to small and rural districts that cannot afford the traditional service. Finally, Murray is optimistic about the opportunity for special education students. Currently, each AdvancePath Academy allows for 20 to 25 percent of its students to be special education students at no extra charge unless the number of those students exceeds the 20 to 25 percent threshold. Murray points out that this often presents a huge cost savings for districts.

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INSTITUTE **NNOSIGHT**

## Alliance College-Ready Public Schools

Pilot study, summer program

Blended grades

Pilot study: 9

Summer program: 9–12

Enrollment Unavailable

Blended subjects Core subjects

Content Revolution Prep (Math), Achieve 3000 (English), NROC, other open source

SIS Excelsior Pinnacle, PowerSchool

Independent LMS To be determined (evaluating)

Independent gradebook Excelsior Pinnacle, PowerSchool

Independent assessment tool None

Link between LMS and SIS To be determined (evaluating data management systems)

Other tools None

Notable results

Summer program reduced labor costs from 15 teachers to 4 certificated staff at savings of \$42,000.

Operator type CMO

Headquarters Los Angeles

Focus Urban

Grades served 9–12

% FRL 95.3%

% Black or Hispanic 99.1%

Public revenue/pupil \$7,500

Supervised

brick-and-mortar

Remote

Offline

Online

Summer

program

Pilot

study

Rotation

Pilot study: Divided class periods into 1/3 face-to-face, 1/3 online, and 1/3 peer groups.

Online Lab

Summer program: 100% online, but mostly in brick-and-mortar facility with adult supervision.

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INSTITUTE **NNOSIGHT**

History and context

Alliance College-Ready Public Schools (Alliance) began seven years ago, with the mission to prove that children even in the most economically disadvantaged communities could become

eligible for college. Alliance currently manages 12 high schools and six middle schools in the Los Angeles Unified School District. Its model has always relied on providing access to technology for disadvantaged children, so the decision to experiment with blended learning aligned well with the organization's philosophy.

Alliance has piloted two separate forays into blended learning. In the summer of 2010, out of budget necessity, Alliance was forced to convert the summer program at one of its schools to purely online delivery at the school's computer labs. Separately, in the fall of 2010 Alliance began

to pilot a new blended program for ninth graders in two of its high schools: Alliance College-Ready Academy High School #11 and Heritage College-Ready Academy High School.

#### Blended model

For the summer program, the participating high school employed a principal, assistant principal, counselor, and only one certificated teacher. Most students attended the physical campus to take the courses, although they had the option to take the courses at home if they had connectivity. The courses were mostly online textbooks, with little provision for student interaction other than reading the texts and completing assessments. Students used this opportunity for credit recovery or to get ahead.

Alliance's more central project to experiment with blended learning began in the fall of 2010 with the launch of a pilot study at two of its high schools. The blended-learning model at these schools involved extending most class periods to 120 minutes. Within each class period, the students learned online for 50 to 75 percent of the time, with the exception of English and physical education, where online learning constituted 30 to 50 percent of the time. Teachers divided their classes into three student groups that cycled through a learning circle, including: (1) individualized online instruction using adaptive content; (2) focused teacher-led instruction based on data from online-content systems to set the level for each group; and (3) learning stations with structured, collaborative, standards-based activities (see Figure 5).

The "best-of-both-worlds" theory behind this blended model combined individualized online instruction with focused, teacher-led, small-group instruction. The intent was to free up resources and reallocate them to need-specific services, as well as to improve college readiness by engaging students with technology, mixed with group participation and reflection.

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#### INSTITUTE NNOSIGHT

Figure 5. Alliance's three-part learning circle

Class sizes remained unchanged during the pilot, although theoretically the online component could eventually free up teacher resources enough to accommodate larger class sizes. The pilot focused on training teachers and assessing results to ensure that the model worked before making further changes to class design or structure. One of the explicit long-term objectives of the program, however, was to leverage instructional technologies effectively and efficiently to increase the number of students that Alliance could serve and to reallocate labor cost savings to programs which would increase student achievement.

Other goals included providing differentiated instruction customized to student needs, an evolving pedagogy that moved teachers beyond the lecturer role, more engaging learning sessions for students, and a rethinking of how to integrate technology into the classroom to make learning more effective and efficient.

In the pilot-study model, the reconfigured role of teachers allowed them to update each student's personalized learning plan regularly, instead of only at the beginning of the year. Online instruction allowed students to self-pace, instead of being tethered to the clock. The goal was to make the curriculum more engaging and intrinsically motivating than in a traditional lecturestyle classroom.

Alliance planned to collect, analyze, and use data to inform individualized learning plans throughout the year. Assessments measured student proficiency at the end of each six-to-eight

week instruction period. The pilot schools uploaded assessment results into DataDirector, and then teachers accessed these results to provide customized interventions. The student data management systems—PowerSchool for some of Alliance’s schools and Global Scholar’s Excelsior

Pinnacle for the others—tracked ongoing performance to monitor classroom success. These systems also served as the parent communication portals. They were also used to manage each

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### INSTITUTE NNOSIGHT

student’s personal learning plans. Alliance did not yet have an integrated platform that linked student data, teacher data, attendance data, standards, and the like. It is working with Education Elements to create such a platform.

#### Results

The pilot testing was too premature to produce results, but the model did promise various cost savings. Initially, the main savings came from replacing textbooks with free eBooks. Alliance was

spending \$50,000 on average per grade level on textbooks, but the new model eliminated these costs. The blended model could eventually free up teacher resources to allow for larger class sizes and a rethinking of facility costs. The purpose of the pilot study, however, was to test the efficacy of

blended learning and analyze student engagement and staff readiness, rather than to realize savings.

The summer school program dramatically reduced labor costs, thereby producing tremendous cost savings relative to the prior year. In the past, Alliance had paid for roughly 15 full-time teachers for four weeks at their regular compensation rate for one month at a cost of \$75,000 for labor. The virtual summer school only needed a principal, assistant principal, counselor, and one teacher at a total cost of \$33,000—less than half the cost of prior years. It also saved expenses on hard-copy supplemental summer session instructional material, which usually were around \$60 per student.

#### On the horizon

Alliance plans to implement a newly designed whole school model, called BLAST, in the fall of 2011 for grades 9 to 12. Building upon the results of the 2010–11 pilot study, BLAST will be the first of many schools that Alliance plans to open in the future with a schoolwide blended-learning backbone. In contrast to the schools in the pilot study, BLAST will use higher student-to-teacher ratios to help reduce costs.

Alliance has joined four other CMOs to form the nonprofit, College Ready Promise, which received a \$60 million operating grant from the Bill & Melinda Gates Foundation. College Ready Promise will use \$22 million of this grant to build a better data warehouse system that will measure teacher effectiveness by linking student achievement data with teacher and classroom performance. Alliance plans to develop rubrics to measure teacher effectiveness in a blendedlearning

environment as part of this project.

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### INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9–12

Enrollment 9,000

Blended subjects Varies across 60+ schools

Content Varies across 60+ schools

SIS ConnectEDU  
Independent LMS Varies across 60+ schools  
Independent gradebook None  
Independent assessment tool None  
Link between LMS and SIS Varies across 60+ schools  
Other tools None  
Notable results On-time graduation rate of 90% and college acceptance rate of 85% of graduates

Operator type Nonprofit or for-profit service provider  
Headquarters Providence, R.I.  
Focus Urban  
Grades served 9–12  
% FRL 67%  
% Black or Hispanic 59%  
Public revenue/pupil \$6,000 to \$20,000, varies by state

## Big Picture Learning

Face-to-Face  
Driver  
Student, parent, advisor,  
and mentor design a custom  
learning plan for each  
student, including online  
learning if they decide that is  
the best option.  
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INSTITUTE **NNOSIGHT**

### History and context

Dennis Littky and Elliott Washor established Big Picture Learning in 1995 with the mission to change education radically. Their first school, the Metropolitan Regional Career and Technical Center (the “Met”), opened in 1996 in Rhode Island with a class of 50 mostly at-risk African American and Latino students. By 2008, over 60 Big Picture schools were operating in 14 states with strong financial backing from the Bill & Melinda Gates Foundation—and several were operating internationally. Big Picture schools all opened under the same set of distinguishing principles, including promoting learning in the real world, individualizing learning plans for each student, engaging parents and families, preparing for college and professions, and using authentic, portfolio-based assessment to demonstrate genuine competency.

Today, Big Picture describes its learning method as follows:

1. The Advisor works with the 15-member class to find what interests and motivates each student.
2. The Mentor—a lawyer, engineer, merchant, or other professional—guides each student’s internship.
3. The Parent is actively enrolled as a resource to the Big Picture Learning community.
4. The Student interacts along with her fellow students to reinforce each other’s passion for real work in the real world.
5. The result is a self-teaching community of learners where no one feels left out, and each helps motivate the other.\*

\* In system design theory, a product’s architecture describes its components and how those components must fit and work together. The place where the components fit together is called the interface. A system is interdependent at an interface if one part cannot be created interdependently of the other part—if the way one is designed and made depends on the way the other is designed and made. If one part of a highly interdependent architecture is not performing well, then the rest of the parts of the system fail also.

This thinking is relevant to the work being done by Big Picture. The process of educating students is inherently highly interdependent. Schools depend on families and the community to support students for certain elements of the students’ day, including everything from providing them a place to sleep, dental visits, love and nurture, and homework help. When one part of this interdependent system is not functioning, the whole system fails.



Thus, system architecture theory can explain why, for Big Picture’s demographic of at-risk students in challenged communities and sometimes dysfunctional families, Big Picture must backward and forward integrate. Its model depends on an involved advisor, who integrates with parents, families, and the community, including with personal home visits, to strengthen those elements of the value chain. See Clayton M. Christensen and Michael E. Raynor, *The Innovator’s Solution: Creating and Sustaining Successful Growth*, Harvard Business School Press, Boston, MA: 2003, pp. 125–148.

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### Blended model

At Big Picture schools, the advisor, parent, student, and, ideally, mentor sit down together to agree to a customized learning plan for the student, driven by the student’s personal interests and needs. The team decides on a set of curricula that best meets these needs, with an emphasis on helping the student do real work in the real world. Washor explains that sometimes this team may decide to deploy an online-learning modality to satisfy elements of the learning plan. Big Picture does not contract with specific online-learning providers or espouse a particular online approach. Rather, individual Big Picture schools have the option of using online learning on their own if they see that it meets an individual learner’s “just-in-time” education needs.

Students are responsible for creating their own schedules and being resourceful about finding the tools they need to accomplish the elements of their learning plans. In some cases students might use an online simulation technology, such as a virtual reality welding simulator to learn how to weld at a fraction of the cost (and burns) of real-life welding. When students need help with a topic, they might use an online tutorial or connect over email with their mentors. Students own their performance on state assessment tests, and in some cases they turn to an online course to prepare them.

Thus, Big Picture represents a unique, but important example along the spectrum of blended learning

approaches. It neither embraces a specific set of content providers nor standardizes on a single learning management system. The idea of a software-based learning management system runs counter to Big Picture’s emphasis on advisors, parents, mentors, and students managing learning through frequent, live, face-to-face meetings. Online programming is very much a part of the menu for Big Picture students, but its use is highly varied and individualized across Big Picture’s 9,000 students. Collective data describing which students are using what is not available at the time of this writing.

### Results

Big Picture reports that on average, 90 percent of its students graduate on time, 85 percent of graduates are accepted to college, and overall, Big Picture high school students outperform their comparable peers in traditional public schools on state achievement tests. Recent data comparing graduation rates, college acceptance rate, and achievement-test results for students at Big Picture

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schools versus their counterparts in Detroit, Los Angeles, San Diego, Providence, and Oakland, indicate that Big Picture students in these cities often outperform their peers.\*

### On the horizon

Littky and Washor continue to advocate for radical education reform, including how educators think about incorporating technology into the classroom. Washor emphasizes that on the road ahead, Big Picture schools will continue to embrace online learning technology, insofar as it helps students develop authentic, tangible competencies for improved functioning and success in the real world. He states that they will not move in the direction of allowing students to earn their diplomas by jumping through the hoops of a software algorithm, without learning how to function in the real world.

Big Picture Learning aspires to open 170 new schools in the next 10 years, bringing the total



to 230, and another 200 Big Picture Learning schools by the year 2018.

\* “Big Picture Learning,” brochure, available at <http://www.bigpicture.org/wp-content/uploads/2008/11/big-picturebrochure.pdf>.

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Blended grades 9–12

Enrollment 171

Blended subjects Core subjects

Content Teacher-made content

SIS District uses ATS, STARS, AERIES, Acuity

Independent LMS DPNet

Independent gradebook DPNet

Independent assessment tool DPNet

Link between LMS and SIS Manual export/import

Tools None

Notable results Too early

Operator New York City Dept. of Education

Operator type District

Headquarters New York

Focus Urban

Grades served PreK–12

% FRL 81% (Brownsville)

% Black or Hispanic 98% (Brownsville)

Public revenue/pupil \$17,173 (2007–08 school year)

## Brownsville Academy High School

In partnership with Diploma Plus

Supervised

brick-and-mortar

Remote

Offline

Online

Rotation

Classes are “workshop

style.” A face-to-face teacher

rotates students between

direct instruction and the

competency-based LMS.

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### History and context

In 2010, the New York City Department of Education created the Innovation Zone (iZone) to encourage selected schools to break free from the traditional classroom paradigm. The department

released iZone schools from some regulations and provided them with resources and support to experiment with new models. Brownsville Academy High School (Brownsville), located in east Brooklyn, NY, was one such school.

The leadership team at Brownsville decided to use the Diploma Plus program for its model.

Diploma Plus is a national nonprofit that has partnered with 28 alternative high schools across the United States to help students who are at least two years behind get back on track. Its central office is in Boston and it has five regional networks. Its model revolves around four essentials: (1) a performance-based system; (2) a supportive school culture; (3) a future focus; and (4) effective supports.

In keeping with its performance-based philosophy, Diploma Plus emphasizes student progress against a set of core competencies aligned with Common Core State Standards.\* This

competency-based approach relies on extensive short-cycle assessments to understand how students are progressing on a daily and weekly basis against the learning objectives. A few years ago, Diploma Plus's leaders decided to invest in a technical solution to manage that large quantity of assessment data. The leaders hired Matt Mervis as a consultant to build a proprietary learning management system, DPNet. As DPNet progressed, Diploma Plus realized that it could also use it to extend how and when students learned. This new application of DPNet facilitated the transition to blended learning in many Diploma Plus schools.

#### Blended model

Students at Brownsville take classes in 90-minute blocks, with 12 to 17 students per classroom. Brownsville's classrooms run on a "workshop" system, which means that a face-to-face teacher rotates the students through some direct instruction, some DPNet-based curriculum, and some commercial online courseware. Usually class begins with the teacher doing an initiation into the content, then assigning a task, and then dividing the class into the divergent tracks. The teacher's

\* The Common Core State Standards Initiative is a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers. Its purpose is to define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs.

See [www.corestandards.org](http://www.corestandards.org).

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job is complicated because she has to manage both the face-to-face and online modalities simultaneously each class period.

Brownsville Academy teachers are creating much of their own content to allow them to customize their methodologies. Many teachers feel that the bulk of online content has too much of an emphasis on reading text and then taking multiple-choice assessments, an approach that contradicts Diploma Plus's philosophy of students demonstrating authentic mastery of material. DPNet plays a central role in Brownsville's delivery system. Brownsville teachers use DPNet to connect with other teachers via the online teacher's lounge. The learning management system also includes an assessment engine, which measures student proficiency in short cycles and reports results in real time to teachers and students. It also provides a student area with calendars, schedules, and communication tools.

#### Results

New York City's iZone launched in 2010, so there are no end-of-year academic results from Brownsville's new blended program as of yet. Diploma Plus's national office plans to use Brownsville's results, as well as the results of other schools in the network, for initial research and evaluation about incorporating online learning across its program. In terms of financial results, the program is not designed as a cost saver, although school leaders believe the blended model will allow them to extend access to content and increase learning time, while holding costs constant. They do not expect significant changes in labor costs.

#### On the horizon

Mervis says he expects that DPNet will continue to facilitate experimentation with anytime, anyplace learning across the Diploma Plus network. He says that in terms of tool development, Diploma Plus is interested in a tool that allows students to give feedback about online tasks and lessons, like a Pandora thumb's up.\* He also says that Diploma Plus is working to make sure students have hardware and high-speed broadband access during non-school hours to deliver on the full potential of anywhere, anytime learning.

\* Pandora is an Internet radio service that allows listeners to create up to 100 personalized radio stations. Listeners can give "thumbs up" or "thumbs down" feedback for each song that the program suggests, and the program adapts to this feedback over time.

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In 2011-12 Diploma Plus will launch a first-of-its-kind mobile application targeting backon-

track youth, according to Mervis. Called DP Mobile, it will provide students with a suite of tools to help them achieve success at school, work, and in their communities.

On the policy side, Mervis looks forward to a more complete transition to Common Core State Standards to reduce the current tension between individual state standards and the Common Core.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 6–12

Enrollment 1,224

Blended subjects Comprehensive

Content Edison Learning, Apex Learning, Aventa Learning

SIS PowerSchool, others

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS Syncs with SIS

Other tools SMARTHINKING

Notable results

Cost savings by spreading the costs for courses across more schools and by reducing the number of paper textbooks.

Operator Capital Area Intermediate Unit

Operator type State intermediate unit

Headquarters Enola, Pa.

Focus General

Grades served K–12

% FRL Unavailable

% Black or Hispanic Unavailable

Public revenue/pupil

\$7,4935 to \$10,695; special education is

\$15,052 to \$23,632

## Capital Area Online Learning Association

Online Lab

and Self-Blend

Students can supplement

class schedules in their

traditional middle and high

schools by taking one or

more online courses through

CAOLA, either at school or

at home.

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INSTITUTE **NNOSIGHT**

History and context

The Capital Area Intermediate Unit (CAIU) is a regional office in Pennsylvania that serves 24 school districts, two vocational technical schools, and 50 independent schools in Cumberland, Dauphin, Perry, and northern York counties. One of the office's goals is to increase learning options for every student. As such, officials at CAIU identified online learning as a potential medium through which to expand course catalogs and fill teaching gaps for its member schools.

The Intermediate Unit set up the Capital Area Online Learning Association (CAOLA) in 2009 to pursue this idea.

After sending out a proposal request, CAOLA screened several possible partners and decided to contract with EdisonLearning (Provost Systems at the time) to provide the online curriculum. CAOLA favored EdisonLearning because it felt that the online-content provider offered a variety of high quality, rigorous solutions, ranging from full-time online to supplemental. They liked that its customizable, modular content could align to district scope and sequence and that districts could custom create courses according to their particular learning objectives. It also contracted with Apex Learning to provide Advanced Placement courses, which EdisonLearning did not offer at that time.

CAOLA launched in June 2009, with an online summer school program for 14 students. By the fall of 2009, 149 students enrolled in 175 courses, and by the fall of 2010, 1,224 students were taking 3,332 courses. Five percent of these students enrolled full time, and the rest used the course offerings as a supplement. Twenty Pennsylvania school districts participated in the CAOLA program, some of which were outside of the CAIU region. At this time, CAOLA expanded its program to grades 6–8. Because EdisonLearning had not yet developed coursework for middle school, CAOLA contracted with Aventa Learning for these grades.

#### Blended model

In CAOLA’s model, EdisonLearning, Aventa Learning, and Apex Learning provide content and teachers for their respective courses and grades, although districts can unbundle and use their own teachers if they prefer. Districts can also modify content if they choose. Students take CAOLA courses at a workstation in the back of a traditional classroom or in their school’s computer lab, in keeping in the online-lab model of blended learning. They can also self-blend by taking courses on their own off campus. Instruction is mostly asynchronous; students and online teachers communicate through email and forum postings. For synchronous tutoring help, CAOLA students use [www.smarthinking.com](http://www.smarthinking.com) or chat with their online teachers during virtual office hours.

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CAOLA has tried to create a “single sign-on” for its high school students, despite its use of both EdisonLearning and Apex Learning. Middle school students sign on directly to Aventa Learning. All three vendors provide their own LMS, including gradebook, assessments, e-textbooks, e-planners, reporting, and communication tools.

Districts pay CAOLA a membership fee to participate, based on enrollment numbers. This fee covers CAOLA’s costs for managing the online program. Districts also pay a per-enrollment fee directly to the content providers. In addition, districts must support their students taking CAOLA courses by providing a face-to-face mentor for each student.

#### Results

In many cases, districts save money by participating in CAOLA, because they can avoid hiring a traditional teacher when class sizes are too small to constitute a full load. For example, a district recently paid \$28,211 in course and membership fees to provide 36 different courses for a mere 40 students—a significant cost savings compared to providing such course diversity in a traditional model. They also save by reducing textbook costs.

Performance results do not yet suggest a pattern because the program is still in its infancy. Based on anecdotal evidence to this point, CAOLA’s staff believes that students perform much better in their online courses when districts diligently support them with face-to-face mentors.

#### On the horizon

CAOLA hopes to move to a single content provider in the future, as soon as one arises that can meet all its needs. Alternatively, multiple suppliers could work if their systems were able to integrate seamlessly for the user and student information systems.

CAOLA also plans to partner with other intermediate units in the state. Holly Brzycki, the supervisor of online learning, explains that districts are losing too much money each year to cyber

schools, and thus feel increasing pressure to offer their own programs.

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Blended grades 6–12

Enrollment 273

Blended subjects Comprehensive

Content e2020

SIS PowerSchool

Independent LMS e2020

Independent gradebook PowerSchool

Independent assessment tool Acuity

Link between LMS and SIS Manual

Other tools None

Notable results

Businessweek recognized CDCHS as one of the top high schools in America in its 2009 report, and U.S. News & World Report did the same in its 2010 report.

Operator Carpe Diem

Operator type CMO

Headquarters Yuma, Ariz.

Focus Urban

Grades served 6–12

% FRL 61% (CDCHS)

% Black or Hispanic 44.8% (CDCHS)

Public revenue/pupil \$6,639 (CDCHS)

## Carpe Diem Collegiate High School and Middle School (CDCHS)

Supervised

brick-and-mortar

Remote

Offline

Online

Rotation

55-minute periods,

rotating from online for

concept introduction and

instruction to face-to-face

for reinforcement and

application. 2 to 3 rotations

per day. 4 days of school per

week, 8 a.m. to 4 p.m.

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INSTITUTE **NNOSIGHT**

### History and context

Carpe Diem Collegiate High School and Middle School (CDCHS) began in 2000 as a traditional high school that served nearly 300 students in face-to-face classrooms. In 2003 its executive director, Rick Ogston, began developing the blended model now in use. In 2005, the owners of the church facility that CDCHS was renting decided to sell the property. Without a building, Ogston and his team felt they had no option but to quickly transform their model. Within a few months, school leaders put in place the new blended model and moved to a temporary location in a University of Phoenix building. In 2006, they relocated to a new building, which was custom designed for their blended approach.

### Blended model

The new building has 300 individual cubicles and computers housed in a central learning center, which is similar in layout to a call center. Students attend class four days a week, although the days are longer (8 a.m. to 4 p.m.). Students attend 145 school days per year and receive a total

of 1,007 hours of instruction. Typically there is little or no outside homework. Students rotate throughout the day between online activities in the learning center and face-to-face classroom instruction, where a “coach,” or teacher, re-teaches, enhances, or applies the material introduced online. Each rotation lasts 55 minutes. Students complete the online/face-to-face cycle two to three times a day. Physical education is actual, not virtual.

CDCHS only hires six full-time certified teachers: one each for math, language arts, science, physical education, social studies, and electives. These teachers serve as the coaches during the face-to-face classroom time. They teach all of the students in the school; for example, the math teacher alone provides all face-to-face math instruction that the 273 students receive throughout the week. Furthermore, the same teacher teaches all grade levels, so that teacher is able to provide continuity as students progress through the system. The charter district consortium provides special education services, which means that CDCHS splits this cost with another school.

CDCHS pays its teachers at or above district salaries and offers a better benefit plan than that of other schools in the area. The plan includes state retirement.

During online instruction periods, “assistant coaches” offer direction and help. Assistant coaches are highly qualified paraprofessionals in accordance with state standards, but are not necessarily certified teachers. The school has two administrators, one serving as principal and the other as guidance counselor and office administrator. The guidance counselor helps place students in the right courses for their ability—so that students can advance at their own pace—and arranges for community internships.

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CDCHS uses e2020 for content, which it prefers because of its multi-modal pedagogical approach; students must type, listen, watch video instruction, read text, explore links, and take short-cycle assessments. The school doubles up on assessment by contracting with Acuity to conduct extra-curricular assessments, which enables the school not to rely on e2020 or state assessments alone to assess the effectiveness of e2020 content. e2020 also manages the student gradebook and sends out automatic weekly results emails to parents.

PowerSchool provides the student information system, including gradebook, report cards, and the attendance records that are sent to the state.

### Results

In 2010, CDCHS ranked first in its county in student performance in math and reading and ranked among the top 10 percent of Arizona charter schools. A similar tale played out in 2009 when, based on its scores on the Arizona Instrument to Measure Standards (AIMS) test, CDCHS ranked first in the county in student performance for almost all grade levels and subjects. In almost all instances, at least 90 percent of the students at CDCHS passed the test in all grade levels and subjects tested. In many instances, 100 percent of the students passed.

Savings on labor costs are substantial because of a model that allows for only six certified teacher FTEs (plus various support staff) for 273 students. In addition, CDCHS’s new building, opened in 2006, contains only five traditional classrooms, which is fewer than half as many as a traditional school requires for a similar enrollment level. The building cost \$2.7 million to build. In comparison, a building currently in the planning stages in the same neighborhood, the traditional Desert View Academy, will cost roughly \$12 million and accommodate only 200 more students than CDCHS, which means that it will cost more than twice the capital expenditure per pupil as the CDCHS building.

Businessweek recognized CDCHS as one of the top high schools in America in its 2009 report, and U.S. News & World Report gave CDCHS the same recognition in its 2010 report.

### On the horizon

On the learning tools side, Ogston anticipates that someday CDCHS will have access to an integrated system that seamlessly manages assessment data from Acuity, curricula from e2020,

and student data from PowerSchool. The Arizona Charter School Association, of which he is a member, is currently working on this project.

On the policy side, he notes that federal stimulus funding often has replaced—not added to—education allocations from the states, and these federal monies usually carry more restrictive, *The Rise of K–12 Blended Learning* | 41

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time intensive, and unwieldy auditing and compliance mandates, thus leaving schools with less money than before the stimulus funds were offered. He also says that because funding is unpredictable and unstable, school administrators are unnecessarily crippled in their budgeting and planning abilities.

Ogston recently obtained approval from the State Board for Charter Schools to scale the CDCHS model. He is beginning with a new school that will offer two days per week of face-to-face

instruction with the rest offered remotely online. He plans to base this school in Yuma and market it to students who are unmotivated by the traditional paradigm.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 6–12

Enrollment To be determined

Blended subjects Core subjects

Content Online games and tools, adapted from the Quest to Learn curriculum

SIS None

Independent LMS None

Independent gradebook None

Independent assessment tool NWEA MAP

Link between LMS and SIS None

Other tools None

Notable results Too early

Operator model CMO

Headquarters Chicago

Focus Urban

Grades served K–12

% FRL 86%

% Black or Hispanic 96%

Public revenue/pupil Unavailable

## Chicago International Charter School

Face-to-Face

Driver

The CMO plans to open schools based on Quest to Learn’s immersive game model.

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### History and context

Chicago International Charter Schools (Chicago International) is one of the largest charter school networks in Illinois, with 15 campuses serving nearly 9,000 students. The mission of Chicago International is to provide, through innovation and choice, an attractive and rigorous



college-preparatory education that meets the needs of today's students.

Chicago International takes a portfolio approach to managing schools. The board contracts with four education management organizations (EMOs). It divides responsibilities among the central administration, EMO staff, and campus educators. The central administrative office is responsible for the strategic management of the network and its partners, as well as facilities maintenance and improvement; legal compliance with local, state, and federal mandates; out-of-school activities; and fundraising objectives. The EMOs are in charge of hiring a dynamic and highly-qualified school staff, providing professional development, designing and adopting curricula, and managing faculty and staff to meet performance goals.

#### Blended model

Chicago International created a new EMO that will replicate the Quest to Learn (Q2L) model in Chicago (see the "Quest to Learn" profile). With the support of the MacArthur Foundation, Chicago International has applied to open three schools for grades 6–12 (one to open in September 2011, two to open in 2012) that use the design principles of games to create highly immersive project-based learning experiences. The idea behind Q2L is to engage students from a diversity of backgrounds through game-like learning, which draws on the intrinsic qualities of games and their design to engage students in a deep exploration of academic subject matter. Within the context of games, players participate in virtual worlds, use strategic thinking to make choices, solve complex problems, seek content knowledge, receive constant feedback, and consider the point of view of others.

The new entity will be a division of Civitas Schools, one of Chicago International's four EMO providers originally incubated within its portfolio. Though it is still in the initial planning phase, Chicago International does not expect to do a pure replication of the Q2L model. It intends to maintain its core curriculum, but enhance it with the Q2L project-based instructional approach. Additionally, Chicago International plans to implement its cultural and behavioral models, school calendar, and assessment program.

Like Q2L, the new set of schools will make use of digital resources according to the face-to-face-driver model of blended learning. Teachers will assign online materials and games to model or extend the thinking around the main learning points in the unit of study.

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INSTITUTE **INNOVATION**

#### Results

The program is still too early to provide results.

#### On the horizon

If the model proves effective, Chicago International may extend the same design to its existing network of 6<sup>th</sup>- through 12<sup>th</sup>-grade classrooms.

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INSTITUTE **INNOVATION**

Blended grades 1–8

Enrollment 6,000 (in first 15-school pilot)

Blended subjects Math and reading

Content

Headsprout, HMH's Destination Reading and Earobics REACH, MIND

Research Institute's ST Math

SIS None

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS Aggregate data from each program manually

Other tools None

Notable results Too early

Operator type District  
Headquarters Chicago  
Focus Urban  
Grades served PreK–12  
% FRL 86% of students are from low-income families (2008–09 school year)  
% Black or Hispanic 86% (2009–10 school year)  
Public revenue/pupil \$11,536 (2007–08 school year)

## Chicago Public Schools

### Additional Learning Opportunities Initiative

Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Rotation

After their traditional school day, students rotate into a mandatory 90-minute afterschool program, where they have a short snack and break, 30 to 35 minutes of online math, 30 to 35 minutes of online reading, and then a few minutes of clean up and dismissal.

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INSTITUTE **NNOSIGHT**

#### History and context

Ron Huberman, former CEO of Chicago Public Schools (CPS), was concerned with the significant disparity in student learning time between CPS students and their peers in other large urban school districts. He decided in May 2010 that he wanted Chicago students to enjoy the advantages of high quality blended learning by September of that year. He believed blended learning presented an instructionally beneficial and fiscally responsible way to expand learning time for CPS students. With help from The Chicago Public Education Fund, CPS identified 15 elementary schools to test pilot the new initiative. In August 2010, Mayor Richard Daley announced the new initiative—called Additional Learning Opportunities (ALO)—which used blended learning to provide students with another 90 minutes of learning time as an afterschool program each school day.

At the press conference for the launch, Daley said, “For many years I have argued that we must extend Chicago’s school year and school day because we know that the more time a child spends learning, the more he or she retains and the better they do year after year.” Indeed, Chicago students spent less time in the classroom each year than the national average. Daley said that compared to students in Houston, for example, Chicago students spent 30 percent less time in class on an annual basis. The challenge, however, was to provide additional learning time without having to revisit the collective bargaining agreement in place with the teachers’ union. Daley and Huberman hoped to find an answer in blended learning combined with partnerships with community organizations.

#### Blended model

The district launched the initiative in two waves—with five schools beginning the initiative in November 2010 and 10 additional schools beginning the initiative in January 2011. Across the 15 schools, 6,000 elementary school students participated in a mandatory 90-minute pilot ALO program. The district partnered with six community organizations, such as the YMCA, to provide adult facilitators for these 90 minutes. The community organizations were responsible for recruiting, staffing, training, and managing these facilitators. Often the community workers were activities leaders at the centers. Others were teachers, retired teachers, student teachers,

parents, or other members of the community.

To participate, facilitators had to complete 10 hours of training prior to the launch of the program and 20 hours of additional training over the course of the year; be at least 21 years old; hold at least an associate's degree or be enrolled in college; and pass a standard background check. The organizations provided two facilitators per classroom, or approximately one adult per

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15 students. Facilitators were paid roughly \$15 per hour, although the amount varied depending on experience.

To minimize transition time, students usually stayed in their homeroom classrooms for the program. Special education students who needed to work in a self-contained environment worked separately with a special education teacher and/or aide, who the district provided. At the start of each 90-minute block, the facilitators wheeled a computer cart, stocked with laptop computers and snacks, into each classroom. Although program scheduling varied somewhat by school, at most schools, students used the restroom and ate their snacks for the first few minutes while the facilitators set up the computers. Students then engaged in an online math program for 30 to 35 minutes and an online reading program for another 30 to 35 minutes. The last few minutes were for clean-up and dismissal.

After requesting proposals from software vendors, the district selected MIND Research Institute's ST Math as the online math provider. For reading, they contracted with Headsprout for grades 1–2 and Destination Reading and Earobics REACH for grades 3–8. District personnel recently requested another round of proposals to provide schools with additional software choices. During program hours, various personnel supported its operation, including the school's principal or assistant principal, a security guard, an office assistant, and an education coordinator. The latter was a member of the school's teacher staff and was responsible for helping to resolve classroom management issues, coach facilitators, and pull reports on a regular basis to monitor student and classroom progress. The district paid all of these personnel as district employees. Meanwhile, the community organizations employed a program coordinator for each school to run the operational aspects of the program and manage the facilitators. They also employed program supervisors, who provided support to three or four schools.

The district office retained several school outreach managers, who each served as liaisons to a set of schools, supported implementation by sharing best practices, assisted with technical questions, and escalated problems when necessary.

### Results

At the time of publication, the program was too infant to produce demonstrable student achievement

results. District officials identified a few early observations about the implementation, however. They said that training facilitators about classroom management was critical before facilitators ever set foot in the classroom. The four to five hours of classroom management training that the program originally envisioned was not enough. Also, they found that backup plans for offline activities were important to provide a substitute activity when the network went down. Finally, they said that carefully selecting software vendors was essential. Much of

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the online content on the market seemed geared toward classrooms with experienced teachers who could guide the students through the system. For Chicago, the software needed to be more engaging and completely hands off.

### On the horizon

The district did not yet have expansion plans. Faced with a roughly \$700 million deficit, CPS faced the challenge of carefully prioritizing programs going forward.

## INSTITUTE FOR NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9–12  
Enrollment To be determined  
Blended subjects Comprehensive  
Content Open education resources, such as HippoCampus  
SIS PowerSchool  
Independent LMS Edmodo  
Independent gradebook PowerTeacher  
Independent assessment tool Pearson  
Link between LMS and SIS In development  
Other tools None  
Notable results Too early

Operator type CMO  
Headquarters New York City  
Focus Urban  
Grades served 9–12  
% FRL To be determined  
% Black or Hispanic To be determined  
Public revenue/pupil Varies by state

## City Prep Academies

Rotation  
Students will rotate among  
online, face-to-face, and  
project-based learning for  
each course, according to the  
approach that works best for  
each individual student for  
each concept.  
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## INSTITUTE FOR NNOSIGHT

### History and context

The vision of City Prep Academies (City Prep) is to redesign the American high school by creating a network of schools that offer “dynamic and personalized learning combining the best of online, on-site, and real-world learning.” Founded by Tom Vander Ark, who was a past executive of the Gates Foundation and is currently the partner in an education-focused private-equity fund, City Prep will focus on bringing academic excellence and innovation to underserved American urban student populations. City Prep’s main focus is on creating and managing new schools, but it will also offer turn-around solutions to existing operators.

### Blended model

City Prep aspires to integrate the best of technology tools, online collaboration experiences, and face-to-face teaching throughout the context of a day. The model’s architects believe that the secret to maximizing blended learning is this integration of the best parts of all available options. School personnel will identify each student’s strengths and challenges at the start, and then prescribe the right mix of learning pathways to maximize the student’s potential. Academies will be open from 7 a.m. to 6 p.m., five days per week, and most students will be on-site the whole time. This gives urban students a safe, supervised environment and fosters the completion of homework. The school will customize each student’s schedule to whatever

maximizes outcomes for that student. For example, some upper-division students will be online 80 percent of the time, whereas incoming 9<sup>th</sup> graders might work online 50 percent of the time. Some online coursework will have a face-to-face teacher, whereas others will provide an online teacher. The model calls for the deployment of core coursework, advanced coursework, project-based learning, and internships to help each student be ready for college. For the project-based learning, students will participate twice a week in four-hour blocks of team experiences. For example, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> graders will do a community service project that includes studying an area of their surrounding neighborhood, researching the neighborhood online, mapping it, interviewing local shopkeepers, and presenting findings. The same grade levels will also participate in internships with companies and organizations in and around the neighborhood. Students will use the Edmodo platform to collaborate with each other and with their teachers. Integrated units of study on Edmodo will include multiple learning strategies and multiple assessments. Some assignments will require the collaboration of a team of students. City Prep will make extensive use of open education resources (OER) including HippoCampus and OER Commons.

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## INSTITUTE NNOSIGHT

City Prep plans to break even by the end of the second year. It plans to account for the upfront investment as a capital expense and amortize it. The daily operating budget will come from per-pupil attendance funds. Differentiated and distributed staffing will support a long day and year and drop sufficient margin to partially self-fund network expansion.

### Results

Although City Prep is still in the planning stages, the school’s founders believe that their model provides a potential antidote against some of the underachievement that has plagued inner-city schools. For example, inner-city boys tend to feel peer pressure to aspire for mediocrity or even failure, which encourages them to “dumb themselves down.” With online learning, however, the online teachers can acknowledge and celebrate a student’s achievements in their online communications, sheltered from the observation of peers.

Furthermore, City Prep’s team believes that the self-pacing that online learning facilitates makes teaching some subjects, such as mathematics, much more efficient. Students who are far ahead or behind can work at precisely the right level in an online lab environment. The school’s goal is for all students to complete at least Algebra II, to earn college credit through advanced placement or dual enrollment, and to gain admission to at least one college.

### On the horizon

City Prep plans to open its doors in September 2011. Its first partnership is with Brooklyn City Prep Charter School in New York City. City Prep also anticipates opening two schools in New Jersey in 2011.

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## INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9–10

Enrollment 43

Blended subjects All core subjects and Spanish

Content Connections Academy

SIS Connections Academy

Independent LMS None

Independent gradebook None  
Independent assessment tool None  
Link between LMS and SIS Connections Academy provides data link to SIS  
Other tools  
Adobe Connect Professional, mobile phones (to connect online teacher with onsite coach)  
Notable results Strong results in language arts, social studies and science. Struggling with math.

Operator type Nonprofit or for-profit service provider  
Headquarters Baltimore  
Focus General  
Grades served K–12  
% FRL ~90% (Vision Academy)  
% Black or Hispanic 100% (Vision Academy)  
Public revenue/pupil \$7,000 to \$8,000 (Vision Academy)

## Connections Academy

### Vision Academy

Flex  
Connections Academy  
delivers online curriculum  
and teachers, but face-to-face  
coaches and/or teachers offer  
targeted interventions.  
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## INSTITUTE NNOSIGHT

### History and context

Connections Academy has a rich history of providing K–12 “public school at home” programs by developing full-time online charter schools within states and districts. Like many other onlinelearning companies, it has begun to field more requests to implement its program in brick-and-mortar schools, rather than just for individual students working in a distributed setting outside of traditional schools.

In 2009, the Pro-Vision charter school in Houston faced a predicament. Founded by a former professional football player, Pro-Vision originally was organized to serve middle school boys. But

when 20 of its graduating 8<sup>th</sup> graders did not want to attend a traditional high school, Pro-Vision did not have the resources to expand to serve high school students. School leaders decided to partner with Connections Academy to solve the problem.

Pro-Vision’s need created an opportunity for Connections Academy to take the leap into brick-and-mortar blending as a starting point for expanding a whole-school blended solution.

The Vision Academy, a combination of the two institutions, opened its doors as a school within a school for Pro-Vision 9<sup>th</sup> graders in the fall of 2009 and was co-located in the Pro-Vision facility.

### Blended model

The Vision Academy students spend their day in a specially outfitted learning lab for all academic

subjects. Connections Academy provides the learning management system and online teachers, who deliver all course content. These teachers are located throughout the country but are all Texas credentialed. Connections Academy also provides print textbooks and novels as well as hands-on science and related materials. High school students typically spend about 50 percent of their time at a computer when engaged in a Connections Academy course.

Two face-to-face paraprofessional coaches assist and encourage the students as they monitor the classroom. The Connections Academy learning management system allows the online teachers to direct the activities of the face-to-face coaches. Students spend significant time communicating



synchronously with their online teacher in the “LiveLesson” Web conferencing room, as well as through email and on the phone through Voice-over-Internet Protocol (VoIP).

Students join with the rest of the Pro-Vision school for lunch and other activities, such as gardening, art, and sports. But for their academics, they change back into their white shirts and ties and return to the learning lab. Connections Academy offers several Internet-based extracurricular clubs as well, such as chess, robotics, and a Connections Academy newspaper.

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## INSTITUTE NNOSIGHT

### Results

The Vision Academy students produced respectable results for language arts, science, and social studies for the 2009–10 school year. Connections Academy, however, found that its online teachers and curriculum were not enough to ensure the young men mastered some of the math concepts. Despite the program’s emphasis on extensive synchronous work, students often turned to their face-to-face coaches for help. But since the coaches were not trained math teachers, their ability to tutor was limited. For the 2010–11 school year, Connections Academy therefore decided to swap a credentialed math teacher in place of one of the on-site coaches.

Initial feedback also suggested that the students were restless from sitting and needed more moving around. For the 2010–11 school year, Connections Academy focused on better pacing for the day with more small-group and class collaboration. The model retained the idea of starting with each student’s specific needs, however, and then building appropriate collaborations from there, which is the opposite of the traditional model.

Although Vision Academy has been implemented as a pilot, the standard cost of this blended model per student is about \$5,000 per year for the full curriculum, plus another \$3,000 per student for the physical elements; for example, facility, on-site activities, etc. This \$7,000 to \$8,000 price tag could be a cost savings for some urban school districts, but does not save money in others. The price is sensitive to whether on-site coaches need to be subject experts.

### On the horizon

Vision Academy expanded to serve 10<sup>th</sup> graders for the 2010–11 school year. This brought its total student enrollment to approximately 43 students and up to three on-site coaches.

Connections Academy has focused on evolving the data interface between the online teachers, learning management system, and face-to-face teachers or coaches. Traditionally the system has been geared toward interfacing between an online teacher and a parent or family member for students in a distributed environment. Connections Academy sees an opportunity to revise that approach so that the online teacher works collaboratively with the face-to-face coaches of a colocated

group of students instead. Connections Academy has also found that mobile phones are helpful in improving online/on-site, teacher/coach collaboration.

Mickey Revenaugh, executive vice president at Connections Academy, said that the science behind how online teachers, on-site coaches, and parents best work together to deliver education is still nascent. Connections Academy—and the online-learning world in general—are working to specify each adult’s role. She believes that as on-site coaches better understand how to master their role, blended learning will improve.

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## INSTITUTE NNOSIGHT

During the 2010–11 school year, Connections Academy began providing a similar wholeschool solution for about 60 upper-grade high school students in Prince George’s County, Md. It is applying and improving upon its Vision Academy model and expects that through these early iterations, its blending strategy will continue to improve.

Apart from its whole-school blended turnaround solution, Connections Academy continues to offer curriculum course by course for students to self-blend. Mississippi has outsourced its



entire state virtual school program—approximately 3,000 course enrollments—to Connections Academy. Connections Academy is also providing roughly 2,500 course enrollments to Missouri.  
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## INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9–12  
Enrollment 500  
Blended subjects Comprehensive  
Content Michigan Virtual School, others to be determined  
SIS PowerSchool  
Independent LMS None  
Independent gradebook None  
Independent assessment tool To be determined  
Link between LMS and SIS To be developed  
Other tools None  
Notable results Too early

## Cornerstone Health High School

Operator Cornerstone Charter Schools  
Operator model CMO  
Headquarters Detroit  
Focus Urban  
Grades served K–12  
% FRL Unavailable  
% Black or Hispanic Unavailable  
Public revenue/pupil \$7,500 to \$8,000 plus special education funds

Flex  
“Relationship and relevance faculty” provide face-to-face counseling and application.  
“Rigor faculty” are virtual teachers who deliver the online curriculum.  
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## INSTITUTE NNOSIGHT

### History and context

A small group of business, civic, and religious leaders in the greater Detroit area opened Cornerstone Schools as an independent school in 1991 with the mission to bring urban renewal and opportunity to youth in Detroit. Over the ensuing two decades, Cornerstone Schools set up three schools and had several successes, including earning recognition from the Heritage Foundation and the National Commission of Time and Learning and receiving a personal visit from George W. Bush, who was governor of Texas at the time. By 2010, Cornerstone Schools had a high school graduation rate of 97 percent, and 93 percent of graduates went on to posthigh school study. Cornerstone Primary was ranked the top elementary school in Detroit by Excellent Schools Detroit for 2010.

A few years ago, Detroit’s mayor urged Cornerstone Schools to expand and serve more students in the city. Cornerstone Schools’ board of directors realized, however, that the school could not scale well without a change in business model. As an independent school, Cornerstone Schools required parents to contribute \$3,900 in tuition each year to help cover the roughly \$10,000 per-student costs. Donations and fundraisers covered the remaining \$6,100 per student. But the annual payment of \$3,900 was too expensive for 90 percent of families in the area. The board of

directors believed they needed public revenue to scale the model and serve more students. To that end, Cornerstone Schools converted two of its independent K–8 schools to charter schools, under a separate entity called Cornerstone Charter Schools. “We plan to begin the next part of our journey with a charter focus,” said Clark Durant, founding chairman of the board for Cornerstone Schools. Durant and others recruited Robert Sommers to help design Cornerstone Charter Schools.

The board plans to open the first Cornerstone Charter Schools high school in the fall of 2011. The new school, named Cornerstone Health High School, will be fully operational in four years with a total of 500 students. It will have a healthcare focus, although it will not be a career-technical school. Instead, students will approach traditional academic standards through an applied, industry-specific lens to bring relevance and a career mindset to the learning. Students will also be required to complete a “life-success”-oriented curriculum that goes beyond academics. The program will include content related to community service, cultural competency, character, free-enterprise economics, creativity, financial literacy, health and wellness, and more.

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## INSTITUTE NNOSIGHT

### Blended model

Cornerstone Health High School’s designs represent a departure from traditional thinking about the role of teachers, grade levels, assessments, and college preparation. The staffing design disaggregates the teacher role into four parts:

1. Relationship Managers develop deep, mentoring relationships with students during their four years in school and the early years of college.
2. Relevance Managers are connected to the health industry and can help their students engage in increasingly complex, relevant, and applied projects and internships.
3. Rigor Managers are virtual faculty for the online coursework.
4. Discipline Managers handle behavior problems and ensure building safety.

Students will not have a set schedule. They will meet together in pods of 50 students, representing a variety of ages and abilities. Rather than having grade levels, Cornerstone Health High School will categorize students by their academic and social maturity. They advance as they achieve new levels of academic and social maturity, without regard to the calendar year.

### Beginning

students will have more structured assignments and hands-on assistance to help them advance to an intermediate and then advanced level. With each advancement, they gain increased flexibility and control. They can ultimately progress to the “professional” level, where they enroll in college courses, have maximum flexibility, engage in internships, and even earn an industry credential. Each student will have a personal computer station. An online platform will deliver most of the foundational content. Students will progress as they demonstrate competence. They will only receive a grade at the end-of-course assessment. Formative assessments will not factor into their grades, but will instead help the students gauge when they are ready to pass the summative assessment. Students can only earn two grades: an “A” or a “Not Yet.”

The school plans to use Michigan Virtual School curriculum for many of the online teachers and courses. Sommers is still selecting online providers to deliver courses in character, health and wellness, financial skills, and other whole-person topics. He is also talking to the National Academy Foundation about virtualizing some of its material to create modules and assessment relevant to the health industry.

Sommers’ past experience with online learning has convinced him that the format has the potential to shorten the timeline for students to get through a course. He notes, however, that students generally have difficulty learning 5 to 7 percent of the material online. Rigor managers, therefore, will be responsible for delivering the roughly 95 percent of the course that students generally can master on their own, while on-site relationship and relevance managers provide

face-to-face support to target the problematic 5 percent of the subject.

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### Results

Although still in the planning stage, Cornerstone Health High School has set goals for its financial

performance. The school intends to be self-sustaining on state funding alone, which amounts to an average of \$7,500 to \$8,000 per pupil (excluding the higher funding for special education students). Sommers plans to capture personnel efficiencies by using one relationship manager per 50 students and by a high student-to-teacher ratio for rigor managers. He hopes relevance managers will be community volunteers who work pro bono. Ideally, relevance managers will find

internships and projects for their students that allow them to meet off-campus in community and business centers to reduce school facility costs.

On the horizon

Although Cornerstone Health High School has a health theme, Cornerstone Charter Schools may eventually open charter schools that have separate themes for each 50-student pod, or even individual themes. Sommers plans to start small and see what works. “The need in Detroit is so great,” he said.

Sommers noted three areas where he is working to develop the technology he needs for the new school. First, he said that he has not found off-the-shelf student relationship management software to manage the interface between relationship, relevance, and rigor managers, deal with a program that does not use grade levels, and customize to the other specifics of his design. Second, he is looking for software to manage all the formative and summative assessments across courses so that no student falls through the cracks. Third, he needs to virtualize team-based projects and makes project-based learning repeatable, which will drive cost efficiencies.

In terms of policy needs, Sommers said that the need is for policy that is child centered and not system centered. “Any policy about procedure needs to be changed to policy about performance and meeting student needs,” he said.

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## INSTITUTE NNOSIGHT

Blended grades 8–12

Enrollment 1,500

Blended subjects Comprehensive, except some electives

Content Self-developed, NROC, Ideal-NM

SIS SchoolMAX

Independent LMS Blackboard

Independent gradebook Blackboard

Independent assessment tool Blackboard

Link between LMS and SIS Direct upload from Blackboard to SchoolMAX

Other tools None

Notable results

The least expensive high school the district has ever built. 20% improvement in retention. 35% increase in teacher-parent contacts.

Operator Albuquerque Public Schools

Operator type District

Headquarters Albuquerque, N.M.

Focus Dropout recovery/prevention

Grades served PreK–12

% FRL 56%

% Black or Hispanic 61%

Public revenue/pupil \$6,789

## eCADEMY

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

### Online Driver

First course meeting is face-to-face. Students complete the remainder of coursework online as long as they maintain at least a “C” grade.

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## INSTITUTE NNOSIGHT

### History and context

Albuquerque Public Schools, a 93,000-student school district, set up the Albuquerque Evening School nearly 90 years ago to provide dropout- and credit-recovery services, primarily to war veterans. The Evening School used a high school building during the traditional school’s off hours, but in recent years it began to outgrow this space. District officials considered shuttering the Evening School as spending cuts strained the district’s budget.

Instead, the district decided in 2009 to use the Evening School to pilot a new blended learning model. The new mission was to provide alternative education opportunities through a variety of electronic delivery methods that promote independence and excellence in learning. The model promised to save money and thus operate within the confines of the district’s tighter budget. The model also promised to be a strong fit with the majority of the school’s clientele. Students at the Evening School frequently had trouble staying in school because of their day jobs. The administration hoped that by moving to a blended model, students could use their newfound time flexibility to work while also completing diploma requirements. Surrounding schools supported the idea because they generally found this group of students challenging to serve and were glad for an alternative.

In the spring of 2010, the alternative school opened its doors under the name of eCADEMY and offered its first 11 courses to students across the district’s other high schools. The district also began constructing a new building to house eCADEMY. Dr. Tom Ryan, who led the effort to set up eCADEMY, began working with the administration and the teachers union to define a new charter for the school, including how to adapt existing teacher contracts for the new model.

### Blended model

Currently, eCADEMY’s computer labs are open to students from 3:10 p.m. to 9 p.m. Until the new eCADEMY facility was completed in April 2011, eCADEMY students shared a facility with a traditional school.

At the start of the spring, fall, and winter semesters, students meet face-to-face with eCADEMY faculty. Students who maintain a C grade or better do not have to show up on the physical campus again during the course, although some choose to use the computer labs on campus. Teachers are available to meet with students during physical office hours if students want further face-to-face interaction.

New Mexico’s seat-time requirement stipulates that students must log on to a virtual classroom for as many days as they would be required to appear in a traditional classroom. Thus, students generally must log on to the virtual classroom five days per week. A designated mentor—either a teacher or parent—receives alerts if a student fails to log on enough.

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## INSTITUTE NNOSIGHT

The school offers all subjects online, except for several face-to-face electives, such as jewelry making. eCADEMY’s faculty departments create courses themselves, although they use or

incorporate content from the state's virtual high school, Ideal New Mexico (Ideal-NM), and the National Repository of Online Courses (NROC), a free open-source repository of online course content.

Blackboard provides the learning management system, which includes short-cycle assessments to help teachers customize pacing for each student. Courses generally include end-of-the-week assessments. Some also require a pre-test at the beginning of the week. All schools in the Albuquerque district upload student information and the active directory into Blackboard. Teachers at eCADEMY earn \$190 per semester per student per class. The school arrived at this rate by dividing an average full-time teacher salary by the average total number of students that teachers would have if they were teaching a full load at a traditional school. Officials negotiated with the teachers union to agree to this new pay formula. Class size remains at roughly 30 students per class, and most teachers offer two to three classes. eCADEMY opens the opportunity for teachers to work all year, which substantially improves their earning potential.

### Results

eCADEMY has realized significant cost savings with its labor expense because of its unique teacher

pay formula. In a traditional setting, a teacher earns roughly \$5,000 per class. At eCADEMY, by paying teachers a set \$190 per semester per student per class, the school can offer classes for only a few students, at a rate of only \$190 per student, rather than the \$5,000 minimum charge. This offers the school flexibility to offer courses for smaller numbers of students per class.

The program stands out for its facility cost savings. Ryan said that a typical comprehensive high school for 2,000 to 2,500 full-time students in the area is about 450,000 square feet at a cost of \$160 to \$200 per foot. The new eCADEMY building, in contrast, is less than 100,000 square feet at a cost of less than \$130 per square foot. "eCADEMY will be the least expensive high school we have ever built," Ryan said. The district is able to capture these savings because the building does not include a gym, shares campus space with another school building, has a small cafeteria that doubles as the multi-purpose meeting area, has very few specialized rooms, and has a small parking lot.

eCADEMY is less than 25 percent of the size of a typical comprehensive school in the area, but it will be able to accommodate the same number of students. This efficiency is the result of the school's long hours, which are from 8 a.m. to 10 p.m., which allows the district to spread occupancy over more hours. The smaller facility leads to the reduction of attendant operating costs, including custodial, security, utilities, and cafeteria expenses.

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### INSTITUTE **INSIGHT**

eCADEMY also has found savings through the elimination of textbooks and of paper reproduction and storage expenses, as well as through the reduction of aides and support staff. During the spring 2010 pilot testing period, eCADEMY had a 70 percent retention rate.

This compares to the 50 percent retention rate before the school moved to a hybrid model. That summer, eCADEMY enrolled over 500 students and reported a 90 percent pass rate among these students. Most students attending eCADEMY took courses for credit recovery while still enrolled in their home high schools. This makes it difficult to ascribe a graduation rate result specifically to the work of eCADEMY.

Teachers at eCADEMY keep logs on when they contact parents. Dave Wells, the principal of eCADEMY, reports that there has been a 35 percent increase in parental contacts with the blended program and that his work has shifted from disciplining students in the old face-to-face environment to working with parents toward the success of their children.

### On the horizon

eCADEMY has been challenged to keep up with the growing demand for the program. New Mexico passed a graduation requirement for the class of 2013 that mandated that each student

complete an online, Advanced Placement, or dual-credit course. Ryan said that this requirement could push eCADEMY's enrollment up to 6,000 students in the next two years. One constraint on growth is that eCADEMY requires its teachers to obtain district certification in online teaching, and this makes rapid expansion difficult.

Ryan and district leaders are considering entering into public-private partnerships to enhance eCADEMY's programs. For example, Ryan is thinking about partnering with Sprint to provide free 3G connectivity for students, in exchange for allowing Sprint to use school facilities for cell towers. He also plans to work with the Albuquerque Hispano Chamber of Commerce and other community members to allow students to access eCADEMY courses on their physical premises. In the future, the eCADEMY staff would like to evolve its system to move away from semesterbased

courses in favor of rolling enrollments. They also anticipate that the system's use of grade levels will become more fluid. As for tools, Ryan notes that an iPad-type device could become a helpful tool for giving eCADEMY students mobile connectivity, although such devices do not yet allow administrators to push out programming to a user network.

In addition, Ryan hopes to develop more of a cloud environment instead of storing student information in a data center. He plans to increase help-desk support for eCADEMY to make assistance for students available 24 hours, not just during office hours. Finally, Ryan would like to

see an integrated system that collects assessment data, identifies where students need help relative to specific state standards, and generates customized interventions for each student.

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INSTITUTE **NNOSIGHT**

Blended grades 9–12

Enrollment 451,400 students across all product, service offerings

Blended subjects Comprehensive

Content EdisonLearning

SIS EdisonLearning

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS EdisonLearning

Other tools None

Notable results

Dropout-solutions centers: 8 centers opened in 2010–11 school year

Blended products: Various cost savings and/or performance gains across many

EdisonLearning partner organizations

Operator type Nonprofit or for-profit service provider

Headquarters New York City

Focus General

Grades served PreK–12

% FRL 80%

% Black or Hispanic 77%

Public revenue/pupil Varies by state

**EdisonLearning**

Dropout-solutions centers, blended products

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INSTITUTE **NNOSIGHT**

Supervised

brick-and-mortar

Remote

Offline

Online Blended

products

Dropout-solutions  
centers

### History and context

EdisonLearning Inc., formerly Edison Schools Inc., is a for-profit education solutions provider that offers a comprehensive solution for public schools in the United States, United Kingdom, and Middle East. Founded in 1992 by American entrepreneur Chris Whittle, EdisonLearning partners with state governments, districts, and schools to deliver education solutions. These range from providing full-school start up and turnaround to closing a specific achievement gap to helping a good school find incremental improvements.

EdisonLearning bases all of its engagements on the principal of solidifying “Four Cornerstones” of school excellence:

1. Top talent
2. Culture of engagement and aspiration
3. Demanding content and customized instruction
4. Achievement-driven management

During the 2009–10 school year, EdisonLearning served almost a half a million students across all its product and service offerings in 25 states and internationally.

### Blended model

Like Florida Virtual School and operators that offer full-time virtual schools, EdisonLearning offers a number of products and services for online learning. These include eCourses, which are

### Flex

Dropout-solutions centers:

Students attend a brick-and-mortar center to complete a combination of online delivery through EdisonLearning’s eCourses™ and direct instruction from face-to-face personnel.

### Online Lab

Blended products:

EdisonLearning uses online courses on a case-by-case basis to resolve specific gaps in the brick-and-mortar schools under its management.

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## INSTITUTE **ENOSIGHT**

modular online courses it has developed for high school students; the eAcademy, a comprehensive,

turnkey solution that allows educational institutions to set up their own online programs, and eSchoolware, a learning management system and online gradebook. Because of EdisonLearning’s various product offerings, schools use EdisonLearning to blend in a variety of ways. For example, EdisonLearning licenses eCourses to intermediate units and districts to use in their full-time online programs and blended-learning environments. The Capital Area Intermediate Unit in Pennsylvania, featured earlier in this report, contracts with EdisonLearning to deliver the platform and content for its online program (see the “Capital Area Online Learning Association” profile). This profile focuses on two of EdisonLearning’s main blended models: its eight dropout/recovery centers in Ohio for students who have left the public school system without graduating, and its use of blended products to facilitate turnarounds at its brick-and-mortar schools under management.

Dropout-solutions centers



In the fall of 2010, EdisonLearning opened eight dropout-solutions centers in Ohio—four in Columbus and four in Cleveland. EdisonLearning worked with the Ohio State Department of Education, local school districts, and communities to set up the centers, which are conveniently located to optimize ease of student access (for example, located on a public transportation route). Each center has a dedicated classroom for small group or individual direct instruction and tutoring and a technology lab for delivering online courses. Solution centers offer a flexible schedule that provides students the option to attend one of several sessions during the day. Each center has a professional staff, which generally consists of a director, administrative personnel, certified teachers, paraprofessionals, and guidance coaches.

The on-site teachers grade the open-response portion of assessments, which constitute 25 percent of each course's total assessment content. The learning management system provides automated grading of the remaining 75 percent of material. Blended products

EdisonLearning is increasingly moving in the direction of incorporating online learning into the more than 40 brick-and-mortar schools that it manages. The executive team believes this is a natural progression for them. Given that they started with brick-and-mortar schools and then became involved with online learning, blending the two makes strategic sense.

EdisonLearning has started offering its menu of eCourses, eAcademy solutions, and eSchoolware tools to the physical schools under its management. To date, these schools have used these courses mostly according to the online-lab model of blended learning. For example, *The Rise of K–12 Blended Learning* | 67

## INSTITUTE **NNOSIGHT**

San Jose–Edison Academy, a high performing K–8 school in Southern California, needed to better serve students needing geometry instruction. Another school in Phoenixville, Penn., lost its Spanish teacher in the middle of the semester. In both of these cases, EdisonLearning was able to deploy its online-learning resources to offer online labs almost overnight.

The company continues to explore different models for implementing a blended solution in its schools.

### Results

Academic achievement results for the dropout-solutions centers are unavailable because of the program's infancy. The program has opened eight centers since its inception in the fall of 2010. As for its various blended products, EdisonLearning has seen positive results from the application of its online products and services in blended and fully online programs. For example, a rural district in Pennsylvania that is part of the Capital Area Online Learning Association transitioned its summer credit-recovery program to a fully online program using EdisonLearning's

online products and experienced a 12.5 percent increase in the number of students who were able to recover credit. The district realized a savings of nearly \$5,000.

Similarly, EdisonLearning's Provost Academy South Carolina charter school partner has experienced positive results through the use of the eAcademy program. It has achieved a 74 percent course completion rate and a 92 percent passing rate by serving a population in which 60 percent of students come from families living below the poverty line. In addition, student scores on the SAT at Provost Academy South Carolina are significantly outpacing students nationally and across the state, according to EdisonLearning officials.

### On the horizon

EdisonLearning believes it will have an advantage in the blended-learning space because it has such a broad set of brick-and-mortar schools and online products within its operation, which it can use to test and iterate rapidly. Evo Popoff, senior vice president of achievement solutions, believes that in the future, the company will have a highly developed matrix that lists school system needs on one axis, such as saving money, building student fluency with technology, graduating at-risk youth, and resolving teacher shortages. On the other axis, it will have a

welldeveloped, tested, and predictable set of blended solutions. The company is moving forward to be able to match operator needs with appropriate solutions in each box of the matrix and thereby provide a customized implementation for each scenario.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 7–12

Enrollment 289

Blended subjects Comprehensive

Content Self-developed

SIS Unavailable

Independent LMS Unavailable

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS None

Other tools Centra Symposium, powered by Saba

Notable results

Enrollment has grown from 30 to 289 in 5 years. Many participants accepted to top universities.

Operator Stanford University

Operator type Independent school

Headquarters Stanford, Calif.

Focus Gifted and talented

Grades served 7–12 (EPGY OHS)

% FRL N/A

% Black or Hispanic Unavailable

Public revenue/pupil

None. Full-time enrollment tuition is

\$14,000 (EPGY-OHS).

## EPGY Online High School

Online Driver  
and Self-Blend

An online platform delivers

all content remotely, but

students have the option to

attend a residential summer

program at Stanford.

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## INSTITUTE NNOSIGHT

### History and context

The Education Program for Gifted Youth Online High School (EPGY OHS) at Stanford University is an independent school for gifted students in grades 7–12. The school was founded in 2006 as a three-year high school, and it has since expanded to include grades 7–9. EPGY OHS focuses on providing rigorous academics for accelerated students to prepare them for college and their careers. The program includes three enrollment options: full-time, part-time, and singlecourse,

to accommodate the varied needs and interests of its students. In 2010–11, EPGY OHS enrolled 289 students, of which roughly one-third were full-time, one-quarter were part-time, and the remainder were below part-time.

Blended model

EPGY OHS delivers most of its course content online through various modalities. Much of the teacher-student interaction is synchronous in online, video-based, college-style seminars. These courses are arranged in a flexible, college-style schedule. For its science courses, the school mails physical lab kits and scientific equipment to students, and the students are responsible for mailing them back. The courses also include asynchronous, self-directed learning, which requires students to be disciplined about working independently and developing strong time management skills.

Beyond the online classrooms, students work closely over the Internet with instructors, counselors, and each other to achieve their academic and personal goals. The school supports a range of student clubs and organizations to help students connect with like-minded peers, both online and through face-to-face events. These include a student government, student newspaper, 3D modeling club, classic films club, exhibition space for digital creations, an engineering team that won an award at the Junior Engineering Technical Society (JETS) annual national competition, and many others. Jan Keating, EPGY OHS Head of School, said that students usually report feeling more socially connected at the OHS than when they were enrolled at a traditional school alone because the OHS allows them to engage with their intellectual and academic peers.

The school hires doctorate holders from top universities to develop and teach its online courses. Students also have access to a broad range of academic and college counselors, who work

individually with each student to help them chart their path.

EPGY OHS falls within the parameters of blended learning, as defined in this report, because it offers an optional brick-and-mortar element to complement the remote delivery. Each year, the school invites incoming and returning students to participate in a residential summer program at

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Stanford University for two weeks in August, where they can choose from a selection of science labs, academic workshops, enrichment classes, and other activities.

Tuition for the full-time program (four or more courses) is \$14,000 for the 2010–11 school year. Part-time tuition (up to three courses) is \$8,600, single-course tuition is \$2,950, and the summer session is \$3,200.

### Results

Many graduates of the EPGY OHS are accepted and matriculate to top tier universities of their choice, including: Stanford, Yale, CalTech, Johns Hopkins, Cornell, the University of Chicago, Reed, Williams, Oxford, and MIT. “Their education at EPGY OHS, both in its intellectual cultivation and its fostering of independence, equips them to succeed academically at the most rigorous and competitive post-secondary institutions,” Keating said. “All indications are that OHS graduates continue to perform at the highest academic levels after entering university.”

### On the horizon

EPGY will continue to expand its enrollment to keep pace with the growing interest among middle and high school students in advanced online learning.

Representatives from EPGY were among a small group of experts assembled by a member of the U.S. House Committee on Education and Labor from whom recommendations regarding online education were to be considered as part of the reauthorizing of the Elementary and Secondary Education (ESEA) Act. Two suggestions of note were that first, the U.S. Department of Education should foster due diligence to differentiate between high- and low-quality online programs and second, the U.S. Department of Education should work to remove barriers to online learning in all their manifestations.

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## INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9–12  
Enrollment 156  
Blended subjects 16 courses  
Content Self-developed, UC College Prep, Aventa Learning  
SIS Blackboard  
Independent LMS Blackboard  
Independent gradebook Blackboard  
Independent assessment tool Blackboard  
Link between LMS and SIS Blackboard  
Other tools Blackboard  
Notable results Cost per student 1/3 lower; 80% teacher satisfaction levels.

Operator type Independent school  
Headquarters Anaheim, Calif.  
Focus General  
Grades served K–12  
% FRL N/A  
% Black or Hispanic 5%  
Public revenue/pupil None

## Fairmont Preparatory Academy

Rotation  
Students attend face-to-face  
2 days per week for a total of  
6 hours per week, and then  
do the rest online remotely.  
The face-to-face teacher also  
serves as the online teacher.  
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### History and context

Fairmont Preparatory Academy (Fairmont) is the largest and oldest non-sectarian independent school in Orange County, Calif. In 2009 it began an e-learning strategy it called “build out from the core.” The first prong of this strategy was to bring the best technologies to the school’s traditional classrooms and develop teacher skills related to technology. Pursuant to this goal, Fairmont began equipping its classrooms with interactive whiteboards paired with an extensive library of flipcharts. It also invested in a Blackboard learning management system, available beginning in the fall of 2010, to facilitate parent-teacher-student communication.

The second prong of Fairmont’s strategy was to offer new online courses to Fairmont students and then extend the reach of the courses beyond Fairmont’s constituents. Fairmont kicked off this strategy in the summer of 2010 with a blended summer school program.

### Blended model

Fairmont offered 18 blended courses during its summer 2010 program, including the following: Biology Honors and College Prep, Chemistry Honors and College Prep, English I/II/III, Precalculus, Algebra I, Algebra II/Trigonometry, Geometry, Health, U.S. History, World History, U.S. Government, and Economics. These courses served 156 students, grades 9–12. It made these courses available to students throughout Orange County for their summer needs because of budget cuts elsewhere. In total, 69 percent of enrollees were Fairmont Prep students and 31

percent were from other schools.

Enrolled students attended class face-to-face two days per week for a total of six hours per week. During this time, teachers presented key lectures, assigned small group and individual work, conducted labs, and presented reviews. For the rest of the week, students worked online remotely by logging in to the Blackboard learning management system to access their coursework. The same teacher interacted with the students for both the face-to-face and online components of the class. They exchanged emails and held synchronous discussions with their students when not on-site. Teachers kept their students learning at the same pace so that they were in synch when they met face-to-face as a group.

Teachers created their own content by modifying University of California (UC) College Prep and Aventa Learning courses.

### Results

Fairmont realized a 33 percent cost-per-student reduction over the summer, as it was able to spread its cost per course over a larger number of participants.

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As for academic performance, remediation students—meaning students who were retaking a course because of a failing grade—made moderate improvements in the blended environment compared to comparable remediation students in a traditional environment in prior years.

Eighty-three percent of remediation students earned a higher grade in the blended course than they had in the traditional classroom. This compared to 80 percent in 2009 and 78 percent in 2008 for remediation students retaking courses in traditional classrooms.

Students taking blended courses for credit advancement fared comparably, on average, to students in traditional classrooms taking the same courses in prior years. Eighty-eight percent of these students earned passing grades in the blended course compared to traditional classroom (same) courses in 2009 at 93 percent and 2008 at 88 percent.

Teachers who participated in this rotation-model pilot study recommended the following best practices as a result of their experience:

- Schedule time in the computer lab once a week to make sure students are not struggling with their computer skills.
- For math, present a face-to-face overview of the major topics and have students practice problems in class and then follow-up with reading and other assignments online.
- Devote the first half-hour of class to questions from the online material.
- Structure wet lab science courses with two days of in-class activity and a third day of inclass labs.
- Post announcements each morning with the daily assignment to keep everyone at the same pace.
- Keep course navigation wide open to encourage exploration of the learning content.
- Determine attendance by meaningful interactions between student and teacher (such as synchronous communications, daily email questions and answers, discussion boards, and chat sessions). Set regular virtual office hours for students to contact the teacher with questions or homework issues.
- Tee-up virtual collaboration by assigning group projects in class.
- Give clear instructions and expectations for the use of the learning management system.
- Give the final exam through the learning management system.

Most of the teachers who participated—12 out of 15—agreed with the statement “I like it,” when asked about their experience teaching a blended course. The three teachers who expressed dissatisfaction cited concerns such as not rigorous enough content or too many English-language

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learners. During the pilot, teachers enjoyed the scheduling flexibility that came with being able to teach off-campus three of the five days per week.

Student satisfaction with the pilot was relatively high. When asked, “Would you take a hybrid course again?” 74 percent said “yes,” 14 percent said “maybe—depends on course schedule,” and 14 percent said “no.”

On the horizon

Fairmont has begun selling its blended courses outside of its school under the brand Thesys International. For the 2010–11 school year, it offered 36 courses, targeted mainly at independent schools and charters, and it launched additional pilot blended programs.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 6–12, starting with 9–12

Enrollment Target is 500 per school

Blended subjects Comprehensive

Content K12, Inc.

SIS K12, Inc.

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS K12, Inc.

Other tools None

Notable results Too early

## Flex Public Schools

San Francisco Flex Academy, in partnership with K12, Inc.

Operator type CMO

Headquarters San Francisco

Focus General

Grades served 6–12, starting with 9–12

% FRL ~60%

% Back or Hispanic ~75%

Public revenue/pupil ~\$7,250

Flex

K12, Inc. delivers curriculum

and instruction, but

face-to-face teachers use

a data dashboard to plan

targeted interventions

and supplementations

throughout the day.

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## History and context

Opened in September 2010, San Francisco Flex Academy (SF Flex) is a charter high school currently serving grades 9–12 in the Bay Area. It will eventually serve grades 6–12. According to Mark Kushner, executive director of Flex Public Schools and a vice president at K12, Inc., it is the first in a series of Flex Academy schools that Flex Public Schools plans to launch in California. If K12, Inc. decides to partner with Flex Public Schools and other nonprofits to open Flex Academies across the country, the partnership will represent the first large-scale attempt to blend K12, Inc.’s turnkey online-delivery system, used in K12, Inc. virtual schools with over

70,000 full-time students and 50,000 part-time students worldwide, into a full-time brick-and-mortar setting.

#### Blended model

SF Flex requires students to be present from 8 a.m. to 3 p.m. Monday through Friday at its brick-and-mortar facility in downtown San Francisco. The building was previously the San Francisco Press Club, and includes ballroom spaces that SF Flex has converted into large study rooms with library carrels, flat tables, and small-group collaboration spaces. It also has an Internet cafe and social areas with couches, as well as a science lab and other study areas in the basement. The school issues each student a laptop computer.

Students meet with an academic adviser at the start of each semester to choose core and elective courses from K12, Inc.'s catalog of over 130 online courses. The K12, Inc. online platform is the starting point for delivering all curricula and assessments. Students primarily progress through their courses online, with the learning management system occasionally directing them to engage in offline enrichments, such as working with tangible manipulatives, reading physical books, or participating in a wet lab. A robust K12, Inc. database integrates information about student course progress, assessment results, attendance records, parent communications, and all other student information into one portal, called Total View, that teachers, advisors, administrators, and parents can access. Teacher-graded and computer-graded assessments determine mastery of objectives at the lesson, unit, and subject level.

Despite this online delivery platform, SF Flex regards face-to-face teachers as a critical component of its model for core academic courses. Indeed, a central objective of the Flex model is to re-imagine the traditional teacher role. SF Flex will have at least two face-to-face English teachers, two math, two science, and two history, plus online teachers for electives to serve a student body of 500, once the school reaches full enrollment. The role of these teachers is to monitor student performance by using the integrated Total View dashboard and then call students into a physical classroom for specific tutoring—or for when the teacher wants the students to

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have a certain experience, such as a live debate about the Civil War. The student's schedule changes every week, based on the blend of face-to-face and online that the teacher designates for the week. Physical teachers and students communicate both face-to-face and through email and threaded discussions. Online K12, Inc. teachers deliver most of the elective courses, which allows for the breadth of 130 options at an affordable price.

The model at full size includes eight academic coaches, who assist the teachers as paraprofessionals, supervise students in the large study areas, and are responsible for helping students progress through the system. From 3 to 5 p.m., the school remains open for students to participate in clubs, office hours, and sports teams.

#### Results

It is too early to indicate results because of the school's recent opening.

#### On the horizon

Flex Public Schools has four charters approved in California, and it has additional applications pending. The Flex model, in partnership with K12, Inc. enables operators like Flex Public Schools

to use an integrated provider for each step of the delivery chain, including student recruitment, teacher recruitment, curriculum development, education delivery, professional development, assessment, the learning management system, and the student information system.

In California, the Flex model is a "classroom-based" school model. The students and core teachers are both on-site. Accordingly, Kushner says that California's SB 740 legislation, which



prohibits a charter school from receiving any funding for nonclassroom-based instruction unless the State Board of Education determines its eligibility for funding, is not applicable to Flex schools. Nonetheless, Kushner believes that SB 740 regulations, which he helped write as chair of the California Advisory Commission on Charter Schools nine years ago, are outdated, as they are based on traditional independent study rules and were written before the explosion in online courses and other innovations. Kushner suggests that California revise these regulations to better anticipate a productive set of parameters for online learning and to allow more flexibility in blended schools for the good of students.

In terms of technology, Kushner looks forward to the advent of improved adaptive learning technologies. He said that K12, Inc. is working on providing such technologies across its curriculum. Such a sophisticated technology platform is expensive to develop, however, because it requires multiple learning modalities for each instructional concept paired with complex assessment techniques.

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Furthermore, Kushner hopes that online content will increasingly improve in quality, as there are too many online programs that are simply “credit factories,” and this gives the entire field—virtual and blended schools—a bad name. Kushner believes efforts are needed to educate the public, districts, and states on what distinguishes the best online providers from low-cost and low-quality

providers. “Not all online curriculum and service providers are made the same,” he said.

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Blended grades

Classic: K–12

ELearning Centers and Virtual Learning Labs: 6–12

iPrep Academy: 11–12

Enrollment

Classic: 83,956 (excludes home school; 2009–10 school year)

ELearning Centers: 3,700

Virtual Learning Labs: 7,000

iPrep: 75-80 (2009–10 school year)

Blended subjects Comprehensive

Content FLVS

SIS Varies

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS FLVS reports student results to districts or schools

Other tools Elluminate

Notable results

ELearning Centers and Virtual Learning Labs have helped solve statewide teacher and budget crises quickly and strengthened district curriculum offerings.

Operator type State virtual school

Headquarters Orlando, Fla.

Focus General

Grades served K–12

% FRL Not available

% Black or Hispanic 39% minority enrollment

Public revenue/pupil

On average, \$440.87 per student per

half-semester course for grades 9–12

**Florida Virtual School**

## Classic, ELearning Centers, Virtual Learning Labs, iPrep Academy (Miami-Dade)

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INSTITUTE **NNOSIGHT**

### History and context

In the fall of 1997, the Florida Department of Education awarded two Florida school districts a \$200,000 “Break the Mold” grant to co-develop an online high school. The two districts formed a new team to launch what is now called the Florida Virtual School (FLVS), the nation’s first statewide, Internet-based public school. In 2003, the Florida Legislature voted to include FLVS in the K–12 state funding formula and approved a performance-based program in which the school would only receive the majority of per-pupil funds for those students who successfully completed and passed their courses. Spurred by this, FLVS continued to grow and served over 97,000 students in Florida alone in 2009–10. Currently offering more than 100 online courses, FLVS serves learners around the world and is an established leader in developing and providing K–12 online education solutions.

### Blended model

Because of its size and relatively long history, FLVS has evolved to deliver several models of online

learning, including at least three of the blended-learning models described in this report. The following programs typify the virtual school’s strategies for allowing students to learn online and in brick-and-mortar environments:

Supervised  
brick-and-mortar  
Remote  
Offline  
Online Virtual Learning Labs  
ELearning Centers  
Classic  
iPrep Academy

### Self-Blend

Classic: Roughly 1/3 of FLVS students who take courses remotely are selfblending.

### Online Lab

ELearning Centers and Virtual Learning Labs: FLVS delivers content in a computer lab or other classroom with on-site lab facilitators.

### Flex

iPrep Academy: Students drop into the lounge-like setting when they choose for face-to-face support and instruction.

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### FLVS classic

FLVS began as a virtual school serving students at a distance, and this delivery model continues to be the school’s bread and butter. In 2009–10, a total of 213,926 FLVS students completed courses in its virtual program, and a little over a third of those students simultaneously attended their local, traditional schools. Thus, FLVS’s primary and most popular version of blended learning, thinking in terms of enrollment numbers, is the self-blend model that takes place as part of the “classic” FLVS programming.

## ELearning Centers

FLVS offers several packages to districts inside and outside of Florida that want to outsource portions of their education delivery to the virtual school, including franchise opportunities to in-state districts and FLVS Global School to districts outside of Florida. In recent years, an increasing number of districts have become interested in blending FLVS content and teachers into their brick-and-mortar programs.

About three years ago, Florida districts began asking FLVS to provide its courses in a computer lab

setting. Most commonly, the districts wanted to bring Advanced Placement (AP) courses to rural schools. FLVS created a new ELearning Center (ELC) model that provided the FLVS course content, a certified online teacher, learning management system, gradebook, and other tools, while the school district provided the physical facility and on-site supervisors. Interest in this model has grown every year.

For the 2010–11 school year, nearly 90 ELCs were in place to deliver 360 different labs to over 3,700 students throughout Florida. The on-site facilitators could communicate with FLVS about students' progress; however, the FLVS teachers delivered all content and were responsible for each student's academic success. As a result, FLVS earned the associated FTE funding. The FLVS registration system was not set up to provide the same online teacher for all co-located students, so FLVS had to override the system manually to ensure that all ELC students had the same teacher. This allowed the students to participate in a synchronous conversation with their co-located peers and complete group projects together.

ELCs have been used in a variety of ways, including summer learning recovery. Brevard County Schools offered an intensive five-week program designed for middle school students at risk of not being promoted to high school because they had failed a course. Initial results point to an 83 percent success rate for students who completed the ELC recovery program, and district leaders plan to repeat the initiative in 2011.

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## INSTITUTE NNOSIGHT

### Virtual Learning Labs

When Florida's legislature passed a law to limit classroom size, many districts suddenly needed extra teachers and classrooms to comply, so they turned to FLVS. For example, in the fall of 2010, Miami–Dade County had nearly 8,000 students who needed over 9,000 half-credit courses to stay on track for on-time graduation, with limited teachers or classrooms available to them. FLVS quickly created a new delivery program, called Virtual Learning Labs (VLLs). VLLs house at least

50 students, who meet in any open room they can find at their school—a library, computer lab, and so forth—to complete courses with a certified FLVS virtual teacher. FLVS has set up VLLs in 45 sites.

Each student has access to a computer and completes her coursework independently online with adult supervision but limited face-to-face delivery. Most commonly these are high school students taking everything from core to AP courses. As with other FLVS courses, the average student-to-online-teacher ratio is about 150-to-1, or about 25 students per class. FLVS cultivates a “high-touch” learning environment, where teachers engage students in one-on-one learning, group sessions, and tutoring.

Recently FLVS initiated “VLL Tuesday,” which involves an FLVS teacher meeting face-to-face with his or her VLL students every week. This program allows students in the VLL program to bridge the virtual world with a more traditional face-to-face experience.

### iPrep Academy

Miami–Dade Public Schools opened the iPrep Academy in the district's administration building and initially served 25 students. It soon scaled the program to serve between 75 and 80 students for the 2009–10 school year. The brightly painted space features couches, breakout rooms, and a

healthful food bar. The academy provides laptops for each student to use both at the center as well as at home to extend learning time. Most of the furnishings have been donated. Students drop in to take FLVS online courses and to participate in specific face-to-face small group workshops and tutoring. Except for the face-to-face elements, students are free to visit the center when they choose.

iPrep plans to employ three full-time teachers, two administrators, two clerks, one computer technician, and one cafeteria manager once the school is staffed fully. Students must demonstrate an ability to work independently to gain admission to the school; they must have a 2.5 GPA, passing scores on the state assessment, and a solid attendance record at their traditional school. iPrep serves grades 11–12.

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### Results

FLVS measures success by completion rates, meaning students complete the course with a D or higher. For FLVS Classic, completion rates for the past several years have been in the 83 to 85 percent range. Florida Virtual School is mainly paid when a student completes, which motivates teachers to seek the highest results from their students. This helps skew grade distribution toward As and Bs.

For the ELCs and VLLs, early results indicate that students taking FLVS courses in these computer lab environments have completion rates similar to students who complete courses at home, but experience greater success with the following in place:

1. Selectively chosen and fully trained lab facilitators who understand FLVS course navigation, can provide technical assistance, and will motivate students toward high achievement.
2. Regular face-to-face visits from an online teacher, even if it is not the teacher assigned to the lab.

In addition to helping improve academic performance, FLVS has the ability to offer districts a speedy solution to resolve course offerings gaps, teacher shortages, class-size reduction gaps, and budget challenges. For example, FLVS's partnership with Miami–Dade saved the district from hiring an additional 50 to 75 face-to-face teachers at the start of the school year or face penalties of up to \$3,000 per pupil for not meeting the legislative mandate for class size.

Results for the iPrep Academy are not yet available.

### On the horizon

FLVS anticipates growth not just in its classic offering, but in blended environments such as ELCs, VLLs, and schools like iPrep. It is putting plans into place to bolster student success in all of these formats. For example, it has created a formalized training plan for lab facilitators and a schedule for regular on-site visits. It also anticipates the need for updates to its internal systems. The registration system, for example, currently does not automate the process for assigning all co-located students to the same online teacher. This necessitates manual placement of students. This labor-intensive process is fine for smaller ELCs, but does not easily scale for larger VLLs. FLVS supports the idea of non-traditional learning environments, such as iPrep, and is seeking ways to bring such innovative learning approaches to more locations.

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## INSTITUTE **INNOVATION**

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9-12 when fully operational

Enrollment Unavailable

Blended subjects Core subjects

Content e2020, NovaNet  
SIS Migrating from Total Recall to PowerSchool  
Independent LMS Moodle  
Independent gradebook Gradebook  
Independent assessment tool None  
Link between LMS and SIS None  
Other tools None  
Notable results  
Initial testing results indicated average scores of participating 9<sup>th</sup> graders were higher than those of 9<sup>th</sup> graders in traditional high schools in the district.

Operator type District  
Focus Urban  
Grades served PreK–12  
% FRL 86%  
% Black or Hispanic 76%  
Public revenue/pupil \$13,366 (2007–08 school year)  
Public revenue/pupil Not available

## Grand Rapids Public Schools

### Centers of Innovation

Flex  
Students take four core classes per day online with face-to-face support and two face-to-face electives in traditional classrooms. Low ratio of students to face-to-face teachers (8-to-1) during online delivery.  
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### INSTITUTE NNOSIGHT

#### History and context

District leaders from Grand Rapids Public Schools in Michigan first became interested in blended learning because of a desire to provide students with greater exposure to technology. To advance that objective, Grand Rapids began a blended program in three of its four Centers of Innovation—newer high schools with a college- and career-prep focus. The blended program launched at the 9<sup>th</sup>-grade level for the 2009–10 school year, but district leaders planned to add subsequent grades each year until the program served grades 9–12 by year four.

#### Blended model

The blended program now in place for participating 9<sup>th</sup> graders includes six class periods per day—four core classes and two electives. The core classes are typically 55 to 70 minutes long and are fully online in a computer lab. The sizes of core classes remain the same as those in the district’s traditional high schools and range from 30 to 34 students. During the core class periods, four adults, including a lead instructor, special education instructor, paraprofessional, and tutor, work with the students in the lab. Whereas in the traditional model the average adult-to-student ratio is 1 or 2-to-32, in this blended model it jumps to 1-to-8. The district pays for this increase in personnel through a redirection of funds that include Section 31a funds for at-risk youth as well as Title I funds. The extra staffing provides students with significant face-to-face support on an as-needed basis as they work through their online lessons.

Besides the four online core courses, the students attend two elective courses. These take place in a traditional classroom with one teacher at the front of the class and 30 to 34 students.

Grand Rapids modeled its content strategy for the core classes after that of Michigan’s nearby Kent Intermediate School District, which had engaged in a rigorous selection process and elected to license e2020 content. For some core classes, the Centers of Innovation also use NovaNet,

which is already a fixture of the district's alternative education program. As students work in the computer lab, the e2020 and NovaNet software assess their performance in real time. This allows the four roving adults to catch problems quickly and offer face-to-face intervention.

Grand Rapids uses Total Recall for the student information system, although it began migrating to PowerSchool during the 2010–11 school year. The intention is to integrate PowerSchool and e2020, while still using some customized programming in Total Recall.

Students complete most online core coursework at school, although they can occasionally work on some assignments at home if they have computer access. Students work at an individualized pace and can move forward only when they demonstrate at least 70 percent proficiency. Teachers

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## INSTITUTE NNOSIGHT

use Gradebook to keep track of student grades and assignments. Parents can access these records through Gradebook's parent portal.

### Results

Initial test results at the Centers of Innovation indicate that participating 9<sup>th</sup> graders on average outperformed all other students in traditional high schools in the district. Anecdotal evidence suggests that teachers have been pleased with the blended program. Special education teachers in particular claim that the hybridization is much more effective for their students on a whole.

### On the horizon

Grand Rapids has extended its foray into blended learning for the 2010–11 school year to all comprehensive high schools, where all 9<sup>th</sup>-grade math and social studies courses (plus an introductory science course at one high school) are experimenting with a rotation model of blended learning. Instead of offering four out of six classes online each day, the new model features a rotation between online and face-to-face learning within each course. In this model, the high schools allocate Day 1 for 100 percent traditional teaching, so that teachers can introduce concepts in a lecture style to a classroom of 30 to 34 students. On Day 2, students work online in computer labs with four adults, including a teacher, special education instructor, paraprofessional, and tutor. They use e2020, Moodle, HippoCampus, and other website content to reinforce the materials they learned on Mondays. On Day 3, students work partly online, but also spend time presenting their findings to their peers. This cycle then repeats.

District superintendent Bernard Taylor recently announced that this rotation may change from three days to two to give teachers more time for direct instruction.

Michigan State University and the University of Pittsburgh have agreed to advise and audit the new rotation-model program at the comprehensive high schools.

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## INSTITUTE NNOSIGHT

Blended grades K–12

Enrollment 1,000

Blended subjects Comprehensive

Content K12, Inc.

SIS K12, Inc.

Independent LMS None

Independent gradebook None

Independent assessment tool Scantron

Link between LMS and SIS Manual input

Other tools Elluminate, uBoost

Notable results

During its first year, HTA had the 2<sup>nd</sup> highest state test scores among charter schools in the state, with 80% of students passing the reading portion and 60% passing math.

Operator type Individual charter school

Headquarters Ewa Beach, Hawaii  
Focus General  
Grades served K–12  
% FRL 40%  
% Black or Hispanic 7%  
Public revenue/pupil \$5,363

## Hawaii Technology Academy

In partnership with K12, Inc.

Supervised  
brick-and-mortar  
Remote  
Offline

Online

Rotation

Students on Kauai and Oahu  
must attend school at least  
once a week, plus more as  
required by their teachers.  
Some attend all 5 days.  
Students use K12, Inc.'s  
online program as the basis  
for their remote and on-site  
learning.

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### INSTITUTE FOR NNOSIGHT

#### History and context

Jeff Piontek began his career in education as a science teacher in the South Bronx. He later became a staff developer and then a district director. Eventually he worked for the chancellor of New York City Public Schools as the director of instructional and informational technology. Toward the end of that tenure, he authored *Blogs, Wikis, and Podcasts, Oh My!: Electronic Media*

*in the Classroom*, a book about how to adapt writing skills to modern communication tools. Armed with broad expertise about technology in the classroom, Piontek took a position with K12, Inc. to open a new K12, Inc.-powered charter school in Hawaii that would blend online learning with face-to-face instruction.

Hawaii Technology Academy (HTA) opened for the 2008–09 school year with an office in Kapolei on the island of Oahu. Within the first year, 250 students were enrolled (grades K–10) and a learning center opened in Waipahu. The following year, enrollment doubled to 500 students. During the 2010–11 school year, HTA enrolled 1,000 students and had to turn away 880 more because of an enrollment cap mandated in its charter with the state. The State of Hawaii Charter School Administrative Office has since removed the cap beginning with the 2011–12 school year.

Enrollment in HTA is available to Hawaii residents of the islands of Oahu, Kauai, Maui, Lanai, Molokai, and the Big Island. HTA only has learning centers on the island of Oahu and Kauai, however. Students on the other islands must attend HTA as full-time virtual students, with occasional synchronous videoconferences or face-to-face meetings with their teachers. For the 2010–11 school year, 710 enrollees resided on Oahu. The other 290 lived on neighboring islands.

#### Blended model

HTA's mission is to use research-based technology applications and meaningful teacher, student, and parent involvement to provide an innovative blended model of public charter school education

adapted to the needs of elementary, middle, and high school students who reside in Hawaii. Roughly 20 percent of HTA students attend on a virtual basis, except for a weekly visit to the learning center (for those within geographic proximity), where they rotate to face-to-face



delivery. They must maintain at least a C+ average to remain on this schedule.

On the other end of the spectrum, roughly 20 percent of students attend the brick-and-mortar learning center in Waipahu five days a week. Twelve percent of these students are special education students. These students rotate between online learning and face-to-face instruction while at the centers.

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## INSTITUTE NNOSIGHT

The remaining 60 percent rotate more evenly between on-site learning at one of the two learning centers and online learning at home. The learning centers are open from 8 a.m. to 4 p.m. weekdays. Every Monday morning, the on-site teachers review data reports of student progress and notify their students of when they need to attend the center for additional tutoring or remediation. These students spend an average of three to five hours doing K12, Inc. curriculum per off-site day, and a minimum of one day of instruction on-site. During the face-to-face instruction, teachers provide help and reinforcement with challenging material.

During the remote portion of instruction, students use the K12, Inc. online platform and content. In addition, K12, Inc. ships each family boxes of materials, including textbooks, videos, and other hands-on tools and resources. These materials complement the online elements of the program. The teachers at the learning center provide virtual office hours, often in the evenings, to help students who are working remotely. HTA uses uBoost to award students points for progressing with their work, and school personnel report that this program has been very motivating.

All students with access to the Oahu or Kauai learning center must attend a center at least once a week. Students in grades K–2 must also attend a mandatory writing class every week. In grades 4, 7, and 9, students must take the Hawaii State History course on-site as well as participate in field experiences.

HTA offers digital media, hula and other dance, ukulele, robotics, environmental, and a variety of other optional face-to-face activities and clubs. HTA also provides frequent field trips. HTA students are approved by the Hawaii High School Athletic Association to play for sports teams at their local public school.

HTA employs 30 teachers, which equates to a student-to-teacher ratio of 33-to-1, although many HTA teachers work part-time. State law requires that all HTA on-site staff be state employees, which means that all staff members also belong to a union.

### Results

Piontek said that the HTA model has worked especially well for certain students, including aspiring ballerinas, professional surfers, and performers on TV shows, who have taken advantage of HTA's flexible scheduling.

During its first year, HTA had the second highest test scores among charter schools in the state. Eighty percent of students passed the reading portion and 60 percent passed math. School leaders are exploring ways to improve these results.

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## INSTITUTE NNOSIGHT

### On the horizon

Many Hawaii parents want to codify a seat-time requirement to prevent the state from implementing teacher furlough days to deal with budget shortfalls, as occurred in 2009–10. They want to mandate that students attend class at least 200 days per year. If this petition is successful, HTA will be challenged to continue with its on-site, off-site rotation model. Piontek is advocating for a competency-based policy rather than a new seat-time mandate.

In terms of a technology wish list, Piontek said that the process of exporting K12, Inc. data to Hawaii's student information system is time consuming. Currently, Hawaii does not have a comprehensive data system and HTA administrators have to enter student data individually.

HTA is considering scaling the model to other locations.

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## INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 6–12

Enrollment 4,128 students on ALEKS, 250 on Rosetta Stone

Blended subjects Math, foreign languages

Content ALEKS, Rosetta Stone

SIS PowerSchool

Independent LMS None

Independent gradebook PowerSchool

Independent assessment tool Accelerated Reader

Link between LMS and SIS None

Other tools Elluminate

Notable results

As of 2008, all graduates were accepted to college, and 99% began college in the fall after graduation. 38% of graduates have earned degrees in STEM.

Operator type CMO

Headquarters San Diego

Focus STEM

Grades served K–12

% FRL 34%

% Black or Hispanic 46%

Public revenue/pupil \$6,932

## High Tech High School

Face-to-Face

Driver

Face-to-face teachers

lead most of school's

constructivist-based

curriculum, but use a few

targeted online solutions.

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## INSTITUTE NNOSIGHT

### History and context

The vision for High Tech High began to coalesce from 1996 to 1998 when 40 civic and high-tech leaders met routinely to discuss solutions to the lack of individuals with high-tech training in the San Diego area. In late 1998 they decided to start a charter school and named Larry Rosenstock, then president of Price Charities and a past high school principal, as its founding principal.

Today High Tech High operates 11 charter schools in the San Diego and Chula Vista, Calif. area, including two elementary schools, four middle schools, and five high schools. It grounds its schools in a philosophy of personalization, adult-world connection, common intellectual mission, and teacher-as-designer. The school admits students using a zipcode based lottery, which results in a mix of socioeconomic backgrounds among its students.

High Tech High integrates technical and academic education to prepare students for college in both the high-tech and liberal arts fields. Its constructivist philosophy translates into an emphasis on group reflection, collaboration among learners, and the relationship between teacher and student in the learning process.

High Tech High also runs the High Tech High Graduate School of Education (GSE) to provide professional development and teacher credentialing embedded within its village of

schools. SGE students learn and work alongside the K–12 teachers, administrators, and students.

### Blended model

Because of its constructivist bent, school leaders have been cautious about embracing online learning. The school has long emphasized and prioritized synchronous learning, where students, the teacher, and the material interact together. “Online feels like a textbook screen,” Rosenstock said. “It’s mostly done independently, often asynchronously, and it doesn’t help students learn to work collaboratively.” High Tech High does use Elluminate Live! for some experiences, but most interactions are face-to-face.

School leaders have found, however, that blended learning meets its needs in specific and limited ways. Almost all students in grades 6 to 12 use the ALEKS program, an artificially intelligent assessment and learning system, to supplement mathematics instruction. The teachers using ALEKS divide their classrooms into two groups and provide face-to-face instruction for half the group while the other half works on ALEKS. The two classrooms with the highest gains in math scores in 2009 to 2010 both participated in this blended program.

School leaders decided to use ALEKS because their students’ math scores on the state test were not as exceptional as they wanted. They thought the computer software could help students

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“drill and kill” math problems. Ben Daley, chief operations officer at High Tech High, reported that the ALEKS program has been very popular with both kids and teachers so far.

High Tech High also has begun to use Rosetta Stone to teach foreign languages. They say that research shows students learn more in a year with Rosetta Stone than with even the best face-to-face

foreign language teachers. “Rosetta Stone has spent millions in research and development, and it has a very clever way of interacting with its users,” Rosenstock said.

Rosenstock and Daley are especially reluctant to use online programs for writing instruction.

“Programs like WriteToLearn may help students learn things like punctuation,” said Rosenstock, “but how does it help kids learn how to really write?”

### Results

As of 2010, 100 percent of High Tech High graduates were accepted to college, and over 99 percent intended to begin college in the fall after graduation. Over 93 percent of High Tech High students passed the California High School Exit Exam (CAHSSE) on their first attempt compared to 80 percent of students statewide.

### On the horizon

School leaders are open-minded about using technology in the future, provided that it helps them better serve their students. For example, Rosenstock and Daley are interested in a web conferencing program that could allow a 25-student classroom to interact more compellingly, so that students can see each other and feel connected to each other, even when working in a virtual environment. They also envision a platform like Amazon.com for education, which would serve as a central dispatching place to share and select assets for online classes.

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### INSTITUTE FOR INNOVATION AND LEARNING

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades K–11

Enrollment 528

Blended subjects Comprehensive

Content K12, Inc.

SIS K12, Inc.

Independent LMS None  
Independent gradebook None  
Independent assessment tool None  
Link between LMS and SIS None  
Other tools None

Notable results

Students attending the Hoosier Academies represent counties and school districts across Indiana. The Indianapolis Learning Center has students from 21 counties and 60 school districts.

Operator type Individual charter school

Headquarters Indianapolis

Focus General

Grades served K–11

% FRL 28%

% AA or Hispanic 14%

Public rev./pupil \$5,800 to \$6,200

## Hoosier Academies

In partnership with K12, Inc.

Rotation

Students attend face-to-face

1 to 2 days per week

for each class and then do

the rest of the class online

independently, with the face-to-

face teacher becoming the

online teacher.

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INSTITUTE **NNOSIGHT**

History and context

K12 Inc., America's largest provider of online education for grades K–12, offers a number of full-time and part-time options for students who want to learn online. One of its increasingly popular options is the two-day hybrid, where students rotate between online learning from a remote location for about half the time and on-site, face-to-face instruction for the other half. In 2007 it partnered with Ball State University to create its first school of this type. Hoosier Academies is a public charter school with a learning center in Indianapolis, which serves students in grades K–11, and in Muncie, Ind., which serves students in grades K–8.

Blended model

Students at the Hoosier Academies attend a brick-and-mortar school two days a week. There, they meet with certified teachers who provide tutoring, face-to-face remediation, and other onsite learning experiences. They also engage in extracurricular activities if they wish, such as clubs and sports.

The students rotate to their homes or another off-site location to complete K12, Inc.'s online curriculum on their own for the rest of the week. Their face-to-face teachers are available online and by phone to answer their questions. The model requires common pacing to ensure that students are at the same place in their learning when they rotate to the traditional classroom twice a week. For young learners, an actively engaged adult at home is essential.

Hoosier Academies' teachers can serve approximately 50 students each, two cohorts of students at a time.

Results

Hoosier Academies students at the Indianapolis Learning Center performed slightly lower than the state average on the state standardized test in 2009–10. They scored one percentage point lower than the state average in English/language arts and just under seven percentage points lower in math.

Hoosier Academies grew its student enrollment in 2010–11. Over 50 percent of students who attended the Indianapolis Learning Center in 2010–11 were new students for that school year. These students came from a variety of previous school settings.

Hoosier Academies has been able to operate with public revenue of \$5,800 per student at the Indianapolis Learning Center and \$6,200 in Muncie. According to Hoosier Academies officials, Indiana spends between \$6,300 and \$6,800 on average per student across the state.

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## INSTITUTE NNOSIGHT

The school realizes efficiencies in its use of real estate, as it can serve two cohorts of students at a time. It also saves in personnel costs, particularly in administrative costs, because K12, Inc. manages much of the administrative burden for the school.

### On the horizon

Ron Packard, CEO of K12, Inc., said that K12 is working collaboratively with other charter school partners and school districts to set up different part-time online models that do not require common pacing, such as the model that the San Francisco Flex Academy is piloting (see the “Flex Public Schools” profile).

Packard also said that a recent K12, Inc. study showed that even when schools use K12, Inc. curriculum as an online textbook but preserve the traditional classroom structure, they realize significant leaps in academic progress. “In seven out of seven implementations, we have been successful [in improving test results],” he said. Packard believes that using K12, Inc. curriculum improves teacher effectiveness and student engagement, both in blended and traditional environments.

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## INSTITUTE NNOSIGHT

Blended grades 9–12

Enrollment 81

Blended subjects 20 courses in catalog

Content Jesuit Virtual Learning Academy

SIS None

Independent LMS Moodle

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS Manual

Other tools None

Notable results

In 2009–10, JVLA delivered 11 student courses and two professional development programs to participants from 16 schools. The number of offerings and the number of participating schools increased in 2010–11.

## Jesuit Virtual Learning Academy

Operator type Nonprofit or for-profit service provider

Headquarters Omaha, Neb.

Focus Parochial

Grades served 9–12

% FRL N/A

% AA or Hispanic 22%

Public revenue/pupil None

Supervised  
brick-and-mortar

Remote

Offline

Online

Online Lab

and Self-Blend

Students from the network

of worldwide Jesuit schools supplement their course catalog by participating in Jesuit Virtual Learning Academy online courses, either at school or on their own.

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INSTITUTE **NNO SIGHT**

### History and context

Across the world there are 430 Jesuit schools, half of which offer a traditional, college-preparatory program, and half of which are mission schools in less developed countries or inner-city locations in the United States. Roughly 47,000 students attend one of the 53 Jesuit schools in the United States.

Jesuit schools have a strong sense of mission, as well as a sizable group of people who are committed to it. Through his work in a Jesuit school, Jeff Hausman recognized the potential impact of tapping into this tight culture to build a user network for online learning among Jesuit schools. To do this, he and a colleague set up the nonprofit Jesuit Virtual Learning Academy, based in Omaha, Neb. The focus of the Jesuit Virtual Learning Academy is threefold: to provide (1) credit bearing coursework; (2) online faculty development; and (3) a technology platform that encourages communication and collaboration among Jesuit schools. Twenty-one of the U.S. Jesuit schools now take advantage of academy programs.

### Blended model

Each of the 21 participating schools offers up to 20 online courses to their students as a way to expand their course catalogs. The Jesuit schools purchase this content by paying a membership fee to the Jesuit Virtual Learning Academy. This academy, in turn, hires traditional Jesuit teachers

to backward design their courses onto the open-source, Web-based Moodle course platform and then teach the courses online. Online teachers use discussion boards, group activities, and other modalities to engage their students. The virtual academy reports final grades back to the Jesuit school, but it does not track other student performance data or adapt the content pursuant to student performance.

Academy courses are traditional online classes designed primarily for anytime, anywhere access. Teachers use real-time presentation and discussion tools to add additional value to the primarily asynchronous learning environment. The academy provides rarer subjects such as Mandarin Chinese, Arabic, AP Music Theory, AP Macroeconomics, and others. By focusing on non-traditional courses that are not currently available face-to-face at the schools, Jesuit Virtual Learning Academy minimizes resistance from teachers and parents.

Many of the Jesuit schools also purchase online professional development courses from the Jesuit Virtual Learning Academy. These six-week courses take advantage of the variable use of time that the online environment affords. Courses attempt to incorporate many of the best practices in adult learning, including the use of professional learning communities to allow teachers to benefit from each other's experiences.

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INSTITUTE **NNO SIGHT**

### Results

Jesuit Virtual Learning Academy completed its first full cycle of coursework at the end of the 2009–10 a. Though the sample size of baseline data from that first complete year was small, Hausman said that the AP test results and user satisfaction surveys (by students, faculty, and

schools) were encouraging.

On the horizon

Hausman said that Jesuit Virtual Learning Academy's ultimate value proposition lies in matching the collaborative nature of the Jesuit network of schools with the equally collaborative nature of new technologies to bring new learning resources into the traditional classroom. Using simple, lowcost

technologies, the academy already has in place classroom-to-classroom learning experiences involving Jesuit schoolteachers and students from the United States, Poland, and India.

To better support its collaborative community, the academy recently launched a platform that seeks to make order of the myriad Internet-based teaching tools in existence by cataloging them and allowing teachers to share, rate, and discuss resources found on the Internet.

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INSTITUTE **NNOSIGHT**

Operator type State department of education

Headquarters Frankfort, Ky.

Focus General

Grades served PreK–12

% FRL 55%

% Black or Hispanic 14%

Public revenue/pupil \$9,144

## Kentucky Department of Education

Kentucky Virtual High School (KVHS), pilot, hybrid grants

Blended grades

KVHS: 5–12

Pilot: Algebra I

Hybrid grants: 9–12

Enrollment

KVHS: 700

Pilot: 8,000

Hybrid grants: ~900

Blended subjects

KVHS: Comprehensive

Pilot: Algebra I

Hybrid grants: Varies

Content

KVHS: NROC, Aventa Learning, Apex Learning, FLVS

Pilot: NROC

Hybrid grants: Varies

SIS Infinite Campus

Independent LMS Blackboard

Independent gradebook Blackboard, Infinite Campus

Independent assessment tool Blackboard

Link between LMS and SIS No link

Other tools Wimba Pronto

Notable results

KVHS: 82% successful completion rate

Pilot: Too early

Hybrid grants: Qualitative data showed increases in student and parent satisfaction

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INSTITUTE **NNOSIGHT**

Supervised  
brick-and-mortar

Remote

Offline

Online KVHS

Hybrid

Pilot grants



## History and context

State officials in Kentucky anticipated the potential for online learning over a decade ago, and first opened the virtual doors for school in 2000 with the establishment of Kentucky Virtual High School (KVHS), which they designed to offer a range of online, e-learning services for schools and teachers—anywhere, anytime. They integrated KVHS’s resources with district programs to provide access to an expanded curriculum, AP and foreign language courses, options for credit recovery, and support for specific needs, including gifted and at-risk students. The state later folded KVHS into Kentucky Virtual Schools, a state-run online-learning organization that became the parent organization for both KVHS and e-Learning Kentucky, a professional development program for educators.

A few years after KVHS got its start, the Appalachia Regional Educational Laboratory (REL) and the Collaborative for Teaching and Learning (CTL) asked state officials about other applications for online learning beyond the purely virtual program. In January 2007, the Kentucky Department of Education, REL, and CTL launched the Hybrid Algebra I Research Project (pilot), a study to measure the effectiveness of four cohorts of high school students engaged in a blended curriculum for Algebra I. The state also launched the Hybrid-Learning Grant Program (hybrid grants) in 2009 to fund individual teachers who wanted to experiment with their own blended models, in exchange for sharing results with the state.

### Online Lab and Self-Blend

KVHS: Districts contract with KVHS to deliver a course to an entire classroom.

Also, students supplement by taking online courses remotely.

### Rotation

Pilot: Students learn 3 days face-to-face and 2 days in a computer lab.

### Rotation

Hybrid grants: Teacher chooses own pattern of rotating between online and face-to-face.

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INSTITUTE **NNO SIGHT**

## Blended models

### Kentucky Virtual High School

KVHS supports schools and districts in Kentucky by offering access to courses that brick-and-mortar

schools cannot accommodate. In the 2009–10 school year, KVHS delivered roughly 1,200 enrollments to 800 students each semester. The leadership team that launched KVHS chose Blackboard for the learning management system because KVHS was able to join a statewide

contract between Blackboard and public universities in the state.

KVHS has developed some of its own courses, but it also uses NROC, APEX Learning, Aventa Learning, and the Florida Virtual School. The KVHS staff and teachers analyze courses every year to determine which best meet the needs of students based on such factors as quality of assessments, reading level of content, developmental appropriateness of content, and how engaging the course is for students. KVHS reports assessment and transcript data to each student’s

home school, which uploads it into its student information system.

Approximately 40 Kentucky-certified teachers serve as the online teachers for KVHS courses. Teachers use Wimba products to communicate with students, along with the typical discussion boards, emails, and phone calls. Teachers are not limited to these tools alone and many use additional communication tools. Over the years, KVHS teachers have also created courses, served as content experts for third-party courses, reviewed newly developed courses, served as mentors for new teachers, and contributed in many other ways to the success of KVHS. Because it is designed as a support for schools and districts, KVHS allows any number of methods of student enrollment. Some students attend public school, while others are part of independent schools or are homeschooled. Some students take courses in a computer lab as part of their regular school day, whereas others self-blend from a remote location. Students can enroll in a school that has almost its entire catalog of courses from KVHS; participate in just one class that is not available at their home school; or take several KVHS courses at night to get ahead. The schedule aligns with the traditional school calendar; the fall session runs August through December, and the spring session runs from January through May. Students who want to selfblend are responsible for the \$330-per-full-credit fee, although the state does offer need-based scholarships for AP courses. When districts use KVHS courses to provide for an entire classroom in an online-lab environment, the districts cover these fees for the students. Most of the courses rely on online materials instead of textbooks, but several require students or schools to purchase supplementary hard-copy texts and materials. The state negotiates to allow cheaper course fees for schools that use a KVHS course for a large number of students, such as to replace a full-time classroom teacher.

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## INSTITUTE NNOSIGHT

### Pilot

In January 2007, the Kentucky Department of Education launched a pilot study with 42 schools, including 60 teachers and 8,000 students. They partnered with CTL and REL to study the outcomes of the pilot. The project followed four cohorts of students for four years to see how they performed after having learned Algebra I in a blended classroom. To prepare for the study, participating teachers dedicated a summer to professional development and participated in monthly trainings.

Students in the blended Algebra I course spent three days with a face-to-face teacher, and then two days in the computer lab, where the same teacher changed roles from an instructor to a coach by helping students from the sidelines as the students learned online. No additional adults were staffed in either the traditional classroom or computer labs.

The study relied on NROC for content because it was free and the researchers considered it high quality. They used Blackboard as the learning management system.

### Hybrid grants

In 2009 the Kentucky Department of Education began offering grants to teachers to support their experimentation with blended learning. The department provided approved teachers a free blended course shell, including the Blackboard learning management system, a license to Wimba for classroom webinars, content from NROC pre-loaded into the courseware, enough seat licenses for their classrooms, and three weeks of professional development. In exchange, teachers could use the shell to build a blended course for up to 30 students, provided that they committed to the following:

- Complete a three-week blended design training during the summer
- Engage the class in online learning at least once per week first semester, and twice per week second semester
- Administer a pre- and post-test to their class, as well as to a comparable class not participating in the grant program
- Participate in an online discussion group to share data and strategies

- Administer an end-of-the-unit student opinion survey
- Submit an exemplary blended unit of study, including samples of student work

In 2009–10 the Kentucky Department of Education awarded grants to 16 teachers, who each conducted his or her own micro-trials. Projects varied from core curriculum to liberal arts to health sciences. The majority of teachers used blending to differentiate learning and to provide

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INSTITUTE **NNOSIGHT**

additional support for struggling students. Some reported that the format helped them meet the needs of each student better than in a traditional classroom setting.

Results

Enrollments at KVHS have remained steady at the 1,200 enrollments-per-semester range. KVHS has been instrumental in helping districts avoid paying for a traditional teacher in cases when class enrollments are small. One district is using KVHS to deliver all Spanish I and II coursework for the 186 students interested in those courses. This has replaced the cost of two full-time traditional teachers, although the district must still pay a reduced-priced, per-student fee to KVHS. KVHS has historically had a successful completion rate above 75 percent, with a high of 82 percent in 2009–10.

Results for the pilot are not yet available.

Findings from the hybrid grants are qualitative in nature. Teacher-reported data shows an increase in student and parent satisfaction. Teachers said the program provided a positive way of giving intervention and extra support to low performing students, allowed students to take responsibility for their own learning, prepared students for college experiences, and addressed the need for different learning styles.

On the horizon

Kiley Whitaker and David Couch, Kentucky Department of Education officials who work with technology and virtual learning, said that the top need in Kentucky related to virtual learning is for the government to offer free tuition for KVHS courses, so that students who want to self-blend

do not have to pay per-course fees. They believe that this would greatly expand participation in KVHS courses.

Kentucky is exploring how to expand blended learning to solve the problem of students missing school for short stints, such as during snow days and flu epidemics. Currently about 20 percent of Kentucky students do not have high-speed connectivity in their homes. Twenty schools in the state also lack high-speed Internet access. Whitaker and Couch say that the state needs dynamic leadership to bring together the federal funds and private companies necessary to extend connectivity to all parts of the state.

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INSTITUTE **NNOSIGHT**

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades K–4 when fully implemented

Enrollment 115

Blended subjects Core subjects

Content iStation, Compass Learning, Learning.com, Study Island

SIS PowerSchool

Independent LMS Custom platform built by Education Elements and Agilix

Independent gradebook None

Independent assessment tool STEP Literacy Assessment, NWEA MAP

Link between LMS and SIS None

Other tools None

#### Notable results

Scores on the STEP Literacy Assessment climbed from 9% proficient or advanced to 78% by halfway through the first year.

Operator type CMO

Headquarters Los Angeles, California

Focus Urban

Grades served K–8

% FRL 92%

% Black or Hispanic 99%

Public revenue/pupil \$7,095

## KIPP LA

### Empower Academy

#### Rotation

Students rotate among online-learning, small group, and individual-instruction stations within each classroom.

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## INSTITUTE NNOSIGHT

### History and context

KIPP LA Schools operates five college-preparatory charter schools serving elementary and middle

school students in East and South Los Angeles. Its first two schools, KIPP Los Angeles College Prep and KIPP Academy of Opportunity, opened in the summer of 2003.

The mission of KIPP LA is to teach the academic skills, foster the intellectual habits, and cultivate the character traits needed for students to thrive in high school, college, and life.

In the fall of 2010, KIPP LA opened KIPP Empower Academy (KIPP Empower) serving kindergarten students (ultimately grades K–4) in South Los Angeles. KIPP Empower is the first school in the KIPP network to use a blended-school model. This decision to innovate on the traditional KIPP model was in reaction to cuts in already low public funding as a result of California’s budget crisis. In total, KIPP Empower lost \$200,000 of planned public funding at the time.

### Blended model

At KIPP Empower, blended learning occurs within the core academic classroom. In its first year, the school has four classes, each serving 28 or 29 students. Each classroom is equipped with 15 computers. Throughout the day the teacher rotates students among the computers, small-group instruction, and individualized instruction. During teacher-led instruction, group size is under 14 students per group for reading, math, writing, and science. Students on the computer use iStation, Compass Learning, Learning.com, Study Island, and other adaptive learning programs. KIPP Empower’s leaders believe that this adaptive-technology approach, coupled with enhanced individualized attention from the classroom teacher, will result in academic results equal to or greater than those of the traditional KIPP model.

KIPP Empower is working with Anthony Kim of EdElements to develop a learning platform that will enable the following: (1) single sign-on capability for students and teachers; (2) efficient administration of online learning; and (3) actionable reporting of online learning data that can be used by teachers to inform future individualization.

Traditional KIPP LA elementary schools have student-to-teacher ratios of 20-to-1. Through its blended-learning model, KIPP Empower is able to increase this ratio by eight students and eliminate one classroom, resulting in additional revenue of \$140,000 and reduced expenses of \$100,000.

## INSTITUTE NNOSIGHT

### Results

KIPP Empower is in its first year of operations, but has begun to experience promising results. At the start of the school year, only 9 percent of students tested as proficient or advanced on the STEP Literacy Assessment. Halfway through the year, 78 percent scored proficient or advanced. KIPP LA will make future results available as the program continues.

### On the horizon

By 2012, KIPP LA plans to increase from five to seven schools and from 1,300 to 1,750 students served. After this phase of growth, the organization plans to open seven additional schools to reach a total of 14 schools serving 6,000 students.

## INSTITUTE NNOSIGHT

Operator type CMO

Headquarters Oakland, Calif.

Focus Urban

Grades served 9–12

% FRL 79%

% Black or Hispanic 85%

Public revenue/pupil \$7,795

Supervised  
brick-and-mortar

Remote

Offline

Online

Blended grades 9–12

Enrollment 1,500

Blended subjects Comprehensive

Content CK–12/Leadership Public Schools “College Access Readers”

SIS PowerSchool Data Director, reported with Filemaker Pro

Independent LMS None

Independent gradebook None

Independent assessment tool NWEA MAP

Link between LMS and SIS None

Other tools None

Notable results Too early

## Leadership Public Schools

Face-to-Face

Driver

Teachers use adaptable,  
digital textbooks for selfpaced  
online learning to

help with unit recovery,

special education needs, and

English-language learners.

## INSTITUTE NNOSIGHT

### History and context

Leadership Public Schools (LPS) serves approximately 1,500 students in four urban high schools in Oakland, Richmond, Hayward and San Jose, Calif. Dr. Louise Bay Waters, CEO of LPS, has spent her 35-year career focusing on how to accelerate achievement among the lowest-performing urban students and close the achievement gap. The students at Leadership Public Schools are 79 percent free and reduced lunch, and almost all who attend college will be the first in their families to do so. Almost half of ninth graders enter LPS below the 5<sup>th</sup>-grade reading level. Thirty-six

percent are English-language learners. Waters and her team have struggled with how best to accelerate learning for this demographic, particularly because the organization’s mandate is to prepare 100 percent of its students for college by ensuring that all students take a college prep curriculum.

#### Blended model

Initially, LPS experimented with blending by sending struggling students to computer labs for online-learning interventions. Waters and her team used K12, Inc., Cyber High, Brigham Young University, and other providers to deliver various courses. They concluded, however, that in general, online learning did not work for her schools. In most cases, paying for an online teacher in addition to an adult supervisor in the computer labs, plus the cost of the content, was more expensive than paying for a traditional teacher alone. In addition, online programs were usually text heavy and required a level of independent learning ability that was impossible for most of the students.\*

Instead, Waters and her team decided that the most promising technology opportunity for their students was the growing adaptability of digital content. They reasoned that by using customizable digital textbooks, they could offer literacy support customized to each band of student, including those at or above grade level, those who struggled with English, and those with major learning gaps. Waters decided to reach out to CK–12, which provided standardsbased, mass-customization, online textbooks (flexbooks). CK–12 and LPS agreed to partner to

\* This may be an example of a disruptive innovation not being good enough yet for a mainstream market. Disruptive innovations usually begin at the low end, with functionality that is not yet good enough for core customers.

Eventually the technology improves and moves up market to customers in the mainstream. To the extent that other schools like Leadership Public Schools are not transitioning to online learning, it may be because the technology is not yet good enough to meet the more sophisticated needs of their students, such as the ability to deliver to students who cannot read well or work independently.

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#### INSTITUTE NNOSIGHT

develop and deliver a new generation of custom flexbooks called “College Access Readers.” LPS began deploying these College Access Readers across its classrooms in the fall of 2010. By 2012, it intends to provide the readers for all subjects, customized for all bands of student ability.

Teachers use College Access Readers to support and enrich their traditional classroom model.

They display content from the readers using LCD projectors or printouts. Ideally, each student will someday have a digital device to allow individual access to the content.

Thus, most aspects of the LPS model are not blended, as defined in this report, because they lack a self-paced online learning component. LPS does plan to use College Access Readers as self-paced

online learning vehicles for subsets of its population, including students who are absent (there are high numbers of pregnant teens), those needing credit recovery, and special education and ESL students who will use online text-to-speech English-Spanish versions of the readers. LPS provides an important illustration of when online blending has been successful only in meeting the needs of a small fraction of the population in a given demographic.

#### Results

LPS does not have specific results for the small segment of its population using online learning for

unit recovery, special education, or ESL interventions. Its College Access Readers deployment, which does not constitute online blended learning as defined in this report, is still too early to produce performance results. Foundation grants are subsidizing deployment of the readers, although the cost of the readers is offset by CK–12’s provision of free online textbook content.

#### On the horizon

Waters intends to expand and scale the College Access Readers quickly across her member schools. Within two years she hopes to have one-to-one laptops that will allow the readers to

be used online. She is interested in using online courses if she can locate some that she feels are appropriate for her students and at a cost that is lower than hiring traditional teachers.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades K–12  
Enrollment To be determined  
Blended subjects Comprehensive  
Content Connections Academy  
SIS Varies  
Independent LMS None  
Independent gradebook None  
Independent assessment tool None  
Link between LMS and SIS Wireless Generation, others  
Other tools  
Wireless Generation for professional development, formative assessments, class segmentation  
Notable results Too early

Operator type Nonprofit or for-profit service provider  
Headquarters Atlanta  
Focus Turnaround  
Grades served K–12  
% FRL To be determined  
% Black or Hispanic To be determined  
Public revenue/pupil  
\$9,000 to \$10,000, plus one-time startup expenses

## Matchbook Learning, LLC

Flex  
LMS and online teachers deliver the curriculum, while on-site teachers also provide instruction and targeted interventions using daily data reports.

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## INSTITUTE NNOSIGHT

### History and context

Matchbook Learning, LLC is a new venture that designs and implements customized blended solutions for K–12 brick-and-mortar public schools. Its founder, Sajan George, was the former managing director of the national education practice for Alvarez & Marsal, a global professional services firm that specializes in corporate restructuring. George created Matchbook Learning and its blended model in 2011 in response to an emerging market need for school districts to partner with education management organizations to assist the more than 5,000 “turnaround” schools in the United States—the bottom five percent of U.S. schools. The number of turnaround schools is expected to exceed 12,000 by 2015. “Despite the market need, there are very few turnaround models that are scalable and even fewer hybrid school models that are being applied to this turnaround need,” said George.

Matchbook Learning is launching an effort to change the fundamental strategy behind school turnarounds. George reasons that charter schools generally rely on the human capital strategy of



“a great teacher in every classroom,” but that this strategy is not scalable. For example, although Race to the Top funds are available to encourage states to attend to the bottom five percent of schools, these 5,000 schools traditionally have not had any way to access a sufficient number of superstar teachers to generate sustainable transformation.

This huge market need, combined with the push from the federal government through Race to the Top funds, sparked Goerge’s interest in formulating a novel turnaround strategy based on online-learning technology, rather than on human capital. George designed Matchbook Learning to partner with a range of the most promising online education providers to form this new solution and access this burgeoning market.

#### Blended model

The starting theory for Matchbox Learning’s blended solution stems from the notion that poorly performing schools do not need to replace their teachers, just redefine the teacher role. Matchbook Learning plans to equip each student in its blended schools with a netbook and wireless connection. It will use a learning management system and online teachers to move the students through content, plan lessons and assignments, grade work, provide daily assessments, and deliver summative assessments. The on-site teacher’s role shifts radically from presumable content expert to individual coach. The online platform provides a printout every day to report how each student is progressing and identify how the on-site coach should best provide support. The coach offers ad hoc nurturing and intervention, as well as classroom instruction.

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#### INSTITUTE NNOSIGHT

Matchbook Learning plans to use federal School Improvement Grants and Race to the Top funds for start-up costs that will include netbooks and other supplies and infrastructure. George expects that traditional per-pupil spending at urban, high-poverty schools, however, will be sufficient to sustain Matchbox Learning schools beyond the start-up phase. The model indicates a cost per pupil of \$9,000 to \$10,000, which assumes that Matchbook Learning provides a full takeover, but it is discounted if the company does not assume all of the costs of running the brick-and-mortar school. This is based on a 1-to-30 on-site-teacher-to-student ratio and a 1-to-60 virtual-teacher-to-student ratio, which nets out at a 1-to-20 teacher-to-student ratio effectively. George has a background in transformational cost cutting across numerous urban public school districts, including New York City, New Orleans, Washington, DC, Detroit, St. Louis, and Providence, R.I. He expects that he will continue to find significant cost efficiencies by reducing extra staff, absenteeism/substitute teachers, and textbook costs, as well as improving professional development, teacher recruitment, and other operations.

Matchbox Learning schools will retain all standard physical constructs that they already have in place, such as art programs, physical education, and sports. George believes, however, that many supplementary programs, such as after-school tutoring and summer school can be reduced or even eliminated as schools learn to make their regular programming work better, instead of relying on supplemental programming to fill the holes.

Matchbook Learning, LLC has formed two partnerships to deliver its model:

1. Connections Academy will supply the learning management system, all courses and content, virtual teachers, virtual principals, and professional development for their own virtual staff.
2. Wireless Generation will provide a system that translates data from the learning management system into customizable printouts for the on-site coaches. These reports segment the class according to which students most need face-to-face intervention and how, using a simple red-yellow-green color code. Wireless Generation will provide initial professional development for the on-site coaches and principal to train them in their new roles, and then continue to work with them to develop their skills. On-site coaches and online teachers will discuss student needs together each week.

Matchbook Learning will be the architect behind the model and the main contractor for any turnaround contracts. It will recruit principals, implement the systems, and oversee the execution. They will also attend to operational details, such as bussing, security, facilities, and maintenance.  
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## INSTITUTE NNOSIGHT

### Results

Results are not yet available for this program.

George says that cost alone is not the right metric when evaluating school turnarounds. He prefers to think about cost per successful graduate, and then minimize that ratio as much as possible by increasing the denominator.

### On the horizon

Matchbook Learning has been pre-approved so far in Kentucky, Michigan, Washington, and Tennessee as whole school turnaround partners. It is also in conversations with several major urban school districts around the country. Its founders hope to launch by fall of 2011. They are currently responding to proposal requests from states and districts that want a scalable solution for school turnarounds.

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## INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 7–12

Enrollment ~500

Blended subjects Comprehensive

Content Pearson, Aventa Learning

SIS Pearson's Chancery SMS

Independent LMS Blackboard

Independent gradebook Gradespeed

Independent assessment tool Discovery Education Assessment

Link between LMS and SIS Blackboard

Other tools None

Notable results Too early

Operator type District

Headquarters Nashville, Tenn.

Focus General

Grades served PreK–12

% FRL 72%

% Black or Hispanic 63%

Public revenue/pupil \$8,180

## Metropolitan Nashville Public Schools

Online Lab

and Self-Blend

The virtual school delivers

fully online courses to an

entire class of students in a

brick-and-mortar school, or

to a one-off student who is

self-blending off campus.

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## INSTITUTE NNOSIGHT

### History and context

When he became director of schools for the Metropolitan Nashville Public School District in

2009, Dr. Jesse Register appointed Kecia Ray as executive director of instructional technology and charged her with designing a “world-class online program” for the district. Register allocated \$1.5 million in Race-to-the-Top funds to outfit more Nashville classrooms with high-speedconnected

computers and to design the online-learning program.

The purpose of the online program was three-fold: (1) to allow students to enroll full-time in a district virtual school; (2) to provide online courses and online teachers for schools to use in place of face-to-face teachers; and (3) to expand course offerings for individual students who wanted to self-blend.

Ray began by forming a team of advisers, including Cathy Cavanaugh from the University of Florida; Chris Dede from the Harvard Graduate School of Education; John Ross, a consultant to the U.S. Department of Technology; and Kathy Hayden from California State University, San Marcos. The team began convening each month in virtual meetings to design Metropolitan Nashville’s approach.

#### Blended model

The vision for the district’s online program was to create a catalog of online courses, which students could take in a computer lab or classroom on campus with a virtual teacher, or from home for credit recovery or credit advancement. An available adult would supervise the online learning completed on campus, but not provide subject-matter expertise. For example, a school could use the district’s program to offer Chinese to a classroom of students for whom no face-to-face Chinese teacher was available. Likewise, if several students in a statistics class wanted to take AP statistics but the teacher only was able to teach basic statistics, that group could take the AP course in one half of the classroom while the rest of the class learned in a traditional format. Students could also take courses remotely, either full-time or on a supplemental basis. Ray and Register believed an online option would afford their schools and students tremendous flexibility. The district’s program would serve students in grades 7 to 12. “Kids need to be old enough to be successful,” Ray said. “They need a certain internal mechanism rolling. I like to think of it as an ability to beat a video game.”

The first phase of the project was to select a third party to deliver online content. The district did not plan to modify or customize content, at least in the initial stages of implementation. Ray selected two district personnel to serve as content specialists. They issued a request for proposals, received bids from several providers, and ultimately decided to contract with both Aventa

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Learning and Pearson. They also decided to use Blackboard for the learning management system because the district already had a contract with Blackboard Connect, a mass notification system that sent alerts to parents and students. District leaders wanted the two systems to be integrated.

The second phase of the project was to create instructional supports to help each student succeed. This included setting up a 24/7 tutoring program via videoconferencing, an online virtual library using the district’s own physical libraries, and counseling via chat, telephone, and videoconferencing. They trained school counselors to help gauge when students should be in online courses. The district began to set up a training department in instructional design because it hoped to use its own teachers eventually as the online teachers rather than outsourcing this job to the content providers.

Ray planned to use Discovery Education Assessment to deliver short-cycle assessments for math and English, because she liked the vendor’s ability to translate assessment results into individual plans for improvement.

#### Results

The district launched its full online program beginning with the 2010–11 school year, and results are still not available. The program accommodated roughly 500 enrollments in its first year.

Ray believes the district's program eventually will provide significant cost savings. With online learning, 25 students can be learning 25 different subjects in the same room with only one on-the-ground adult. She believes savings will come from reduced personnel and textbook costs and improved square footage efficiencies.

On the horizon

Ray would like future legislation to redesign the funding formula to better facilitate digital learning. Specifically, she would like to see funding follow a student in whatever learning environment the student is in. The program that provides the course gets paid. Funding should mirror the college formula, where schools think in terms of hourly costs per student instead of daily costs, she said.

Ray would like to rethink the payment of teachers, too, and have greater flexibility to differentiate contracts for online and on-site teachers. She believes that online teachers need specialized credentials to evidence their training in delivering online instruction.

Her technology wish list includes more immersive technologies to allow students to touch and move virtual objects and experience them spatially. She believes this would especially enhance math and science learning. She also wants more mobile technologies. "The Internet is a tethering

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device," she said. "Students need to be able to access the Internet in a more fluid way, so they can sit in a park, for example." She believes the iPad will change the way people teach, and that in the future, many teachers and students will depend on handheld mobile devices with a large enough viewing area. She also sees an eventual migration to protected cloud computing.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 6-12

Enrollment 15,000

Blended subjects Comprehensive

Content Michigan Virtual School, others

SIS Self-made catalog enrollment management system (CEMS)

Independent LMS Blackboard

Independent gradebook Blackboard/CEMS

Independent assessment tool None

Link between LMS and SIS Export final grades

Other tools None

Notable results

Course completion rate of 81% in the 2008-09 school year and 84% in the 2009-10 school year.

Operator Michigan Virtual University

Operator type Nonprofit or for-profit service provider

Headquarters Lansing, Mich.

Focus General

Grades served 6-12

% FRL Unavailable

% Black or Hispanic Unavailable

Public revenue/pupil \$166.67

## Michigan Virtual School

Self-Blend

Students can increase their course and scheduling

options by taking one or more online outside of class.  
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## INSTITUTE NNOSIGHT

### History and context

In 1998 the Michigan legislature established the private, nonprofit Michigan Virtual University (MVU) to serve as a catalyst for change by providing quality Internet-based programs that strengthened teaching and learning for K–12 education. Two years later, the legislature funded the Michigan Virtual School (MVS) as a division of MVU to provide access to broader course content through online learning for middle and high school students in the state. The MVS program focused on expanding access for special needs students, credit recovery, home-schooled students, public and non-public school students, and gifted and talented students who wanted advanced courses.

MVU’s role has evolved over the years. In its early days, it served primarily as a change agent. Most schools in Michigan were not asking for the creation of a statewide virtual school at the time, nor did many educators view online learning as a priority for public education. Michigan Virtual University introduced Michigan school districts to online learning and helped create a new awareness. After being in operation for four to five years, MVU began to take on the role of service provider. This role focused on providing high quality instructor-led online courses at affordable rates. During this time, MVS became a key part of MVU’s program. In recent years, a new role centered on teacher development began to emerge for MVU. Figure 6 shows a diagram of MVU’s key roles today.

Figure 6. Key roles for MVU  
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## INSTITUTE NNOSIGHT

### Blended model

Like other virtual schools that offer a la carte online courses, MVS can be the backbone behind several blended-learning models. For example, Cornerstone Charter Schools is contracting with MVS to provide online content and teachers for its new high school, which will operate with a flex model (see the “Cornerstone Health High School” profile). Other operators could contract with MVS to deliver courses in an online-lab, online-driver model, or other setup.

The majority of MVS students, however, experience MVS through the self-blend model. These students take MVS courses from a remote location while attending a traditional middle or high school for their other courses. Most have a district mentor who meets with them at least once face-to-face and helps monitor progress. The mentor has access to the learning management system and can communicate directly with the online teacher.

MVS provides the option of three course styles for students who want to self-blend:

#### Instructor-led courses

These courses are held in a virtual environment, yet mirror the student experience in a traditional classroom. The format uses the Blackboard learning management system to create an online learning environment for students. A Michigan-certified online teacher provides the lesson plan, direction, content, and feedback for the students. She makes assignments, leads threaded discussions, grades student work, sets deadlines, and administers assessments.

The online teacher also helps personalize the learning for each student and monitors each student’s progress. Students use chat rooms, email, threaded discussions, and podcasts to communicate with their teacher. These courses have a flexible admission date, but a fixed completion date.

The cost for these courses ranges from \$220 to \$275 per seat.

#### Instructor-less courses

For highly independent learners, MVS offers several online educational products and services that can be used by students with no instructor involvement. The products work best for students

who require little guidance or outside motivation and who want to self-pace completely. Each course offers 70 to 90 hours of interactive direct instruction, guided practice, and integrated formative, summative, and diagnostic assessment. The courses include targeted scaffolding for students who benefit from additional learning.

Apex Learning provides the content for these courses. The cost per seat is \$89.

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## INSTITUTE NNOSIGHT

### Instructor-supported courses

MVS recently began piloting a third option, instructor-facilitated courses, in which online teachers are available to answer questions, but assignments and assessments are auto scored. The online teacher works with one or more students to provide coach-like assistance with their online course or learning activities and ensure that students are making progress. These courses are less expensive than instructor-led courses and are geared toward higher achieving students who are able to self-direct their learning. Jamey Fitzpatrick, CEO of MVU, referred to this approach as the “academic help-desk” model.

Still in testing phase, this course style is available for the following subjects: Algebra I, Geometry, Biology, English 9, and English 10.

The consortium price is \$190 per seat; the non-consortium price is \$210 per seat.

MVS develops much of its own content and also licenses from various third parties. It has experimented with several partnerships, such as a deal with the Baseball Hall of Fame in New York to co-build a math statistics course. Courses reside in the Blackboard learning management system that MVU houses in its data center. The total public support for MVS during the 2010–11 school year totals \$2.5 million, which translates to \$166.67 per enrollment.

### Results

The average course completion rate in 2008–09 for all MVS courses was 81 percent. Data for 2009–10 suggests that the completion rate has climbed to 84 percent. MVS offers more than 150 courses, including courses in oceanography, forensic science, and Mandarin Chinese. MVU is studying possible financial efficiencies through its pilot model, which seeks to maintain academic performance while lowering teacher involvement. Fitzpatrick expects, however, that this model will only work for high achieving students.

### On the horizon

Fitzpatrick envisions much of MVU’s future impact to come not just from MVS, but also from its involvement with teacher training. To date MVU has trained over 500 teachers to deliver online learning. MVU is piloting an Online Teaching and Learning Mastery Program that uses project-based learning to offer K–12 teachers the opportunity to create online activities and entire online courses. The year-long course allows teachers to study online teaching and then make products either individually or collaboratively that they can use in their classrooms.

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## INSTITUTE NNOSIGHT

Blended grades 6–12

Enrollment 140 (grades 6 and 7 only)

Blended subjects Comprehensive

Content

Online games and tools, such as Gamestar Mechanic (systems thinking and game design), Atmosphir (game design), Mangahigh.com (math), Powerspeak (foreign language)

SIS District uses ATS, STARS, AERIES, Acuity

Independent LMS Oracle Student Learning

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS Manual

Other tools iPad apps, custom-built social network site



## Notable results

Academic results in first year were on par with those of district averages, although students showed gains in systems thinking, teamwork, and time management.

Operator New York City Dept. of Education  
Operator type District  
Headquarters New York  
Focus Urban  
Grades served PreK–12  
% FRL 45%  
% Black or Hispanic 65%  
Public revenue/pupil ~\$9,000 plus outside grants (Q2L)

## Quest to Learn

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Face-to-Face

Driver

When Q2L makes use of online learning, it is either in the form of teachers assigning online materials to model or extend the thinking around the main learning points in the unit of study, or to provide supplemental selfpaced study around foreign language or math.

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## INSTITUTE FOR NOBILITY

This first two sections of this profile are adapted from the “Quest to Learn” white paper by Katie Salen et al., MIT Press, Cambridge, Mass., 2011, available at <http://mitpress.mit.edu/catalog/item/default.asp?tttype=2&tid=12435>

### History and context

In 2006 the MacArthur Foundation began thinking about the design for 21<sup>st</sup>-century learning environments that would match the needs of children growing up in a digital, information-rich era. The Foundation partnered with Katie Salen, executive director of the Institute of Play, a nonprofit that applies the principles of game development outside the world of commercial gaming, and with New Visions for Public Schools, an education reform organization in New York City. Together, this partnership created the design for Quest to Learn (Q2L), a school that opened its doors to its first class in the fall of 2009 with 76 sixth graders. The school began adding a subsequent grade each year after 2009.

The idea behind Q2L is to engage students from a diversity of backgrounds through gamelike learning, which draws on the intrinsic qualities of games and their design to engage students in a deep exploration of academic subject matter. The founding team hopes that this design will create a framework that motivates and engages urban students, who are all too often disconnected and alienated from traditional brick-and-mortar comprehensive high schools.

Q2L grew from a design methodology focused on creating engaging, content-rich and standards-based, youth-centered learning environments. The learning model developed by the Institute of Play applies to all aspects of the school, including an innovative professional development program called Studio Q, a closed social network platform called Being Me, the curriculum, and overall approach to school culture. The model is highly collaborative, pairing game designers with teachers and curriculum specialists and integrating digital media, including games, alongside more traditional tools like textbooks, worksheets, and pencils.



Q2L is not a school whose curriculum is made up of the play of commercial videogames, but rather a school that uses the underlying design principles of games to create highly immersive, game-like learning experiences. Games refers to several game forms and media types: digital games (online, video games, mobile games, and the like), board games, card games, social games, and game hybrids that span digital and physical space. Salen pointed out what she believes are the many virtues of game-like learning: Games are carefully designed, learner-driven systems. They can produce meaning, they are dynamic and immersive, and they provide formative feedback on an ongoing basis. Games can help players develop ways of thinking and seeing the world as being made up of a series of complex systems.

Learning at Q2L takes place within a curriculum that has a foundation in math and science and aligns with New York State standards. The main courses, which Q2L calls Integrated Domains, include the following: Being, Space, and Place, a class connecting social studies with reading and writing; Codeworlds, a mix of math and English/language arts; Sports for the Mind, a class focused on digital media and game design; The Way Things Work, a science and math class where students learn how to take systems apart and put them back together again; and Wellness, a class focused on nutrition, physical education, and social and emotional health. The school day runs from 8 a.m. to 3:20 p.m. on Mondays, Tuesdays, Thursdays, and Fridays, and until 1:20 p.m. on Wednesdays. The first 10 weeks of each semester focus on students completing Discovery Missions, which teachers deliver within the contexts of each of the main courses (Integrated Domains). Each Discovery Mission gives students a complex problem they must solve by completing a series of challenge-based quests. During weeks 11 and 12 students embark on an “intensive” known as a Boss Level, where students and teachers work collaboratively on a semester-ending capstone project to demonstrate the skills and competencies acquired during the previous 10 weeks. In addition, many students participate in internships, community service, and service-learning opportunities, especially once the students will reach the upper grades. Teachers work in teams and collaborate with game designers from the Institute of Play on the design of an integrated curriculum. Longer instructional periods (75 to 90 minutes) make in-depth projects and experiences possible.

## INSTITUTE **INNOVATION**

Blended model

Q2L’s game-like learning model emphasizes learning by doing. For many of these games, teachers rely on Web-based programs and activities. They integrate technology into the classroom to add breadth and depth to their students’ educational experiences. The Q2L designers believe that digital technology can afford students greater opportunities to create and construct knowledge, demonstrate their understanding, and express themselves, when integrated in purposeful ways. For example, Q2L has a mixed-reality learning lab where students engage in custom-designed learning scenarios around core content. Its Being Me social network site integrates a digital citizenship curriculum with tools like debates, forums, and groups that are used across all domains.

Q2L’s use of digital resources in the classroom aligns best with the face-to-face-driver model of blended learning. When Q2L makes use of online learning, it is either in the form of teachers assigning online materials to model or extend the thinking around the main learning points in the unit of study, or to provide self-paced study around foreign language or math. Integration of these platforms with other learning spaces in the school, including the mixed-reality lab, physical classroom, and online social network site provides overlapping learning opportunities for students.

### Blended model

Q2L’s game-like learning model emphasizes learning by doing. For many of these games, teachers

rely on Web-based programs and activities. They integrate technology into the classroom to add breadth and depth to their students’ educational experiences. The Q2L designers believe that digital technology can afford students greater opportunities to create and construct knowledge, demonstrate their understanding, and express themselves, when integrated in purposeful ways. For example, Q2L has a mixed-reality learning lab where students engage in custom-designed learning scenarios around core content. Its Being Me social network site integrates a digital citizenship curriculum with tools like debates, forums, and groups that are used across all domains.

Q2L’s use of digital resources in the classroom aligns best with the face-to-face-driver model of blended learning. When Q2L makes use of online learning, it is either in the form of teachers assigning online materials to model or extend the thinking around the main learning points in the unit of study, or to provide self-paced study around foreign language or math. Integration of these platforms with other learning spaces in the school, including the mixed-reality lab, physical classroom, and online social network site provides overlapping learning opportunities for students.

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Results

As a district public school, Q2L operates under the same funding formulae that the rest of New York City’s public schools do. Grants from the Institute of Play, Q2L’s core partner, support additional research and development to create the school’s custom curriculum. After the school grows to full grade capacity in 2015, it will no longer need this research and development funding. Standardized test scores for the first year, 2009–10, showed that about half of the 6<sup>th</sup> graders met state standards for math and two-thirds met standards for English. These results were roughly on par with the average for the city. A separate research study found that Q2L students showed statistically significant gains in systems thinking, teamwork, and time management. Students from a school considered to be on Q2L’s peer horizon did not show similar gains.

On the horizon

In terms of lessons learned during the rollout, Salen said that an emphasis on collaboration between teachers and game designers at the Institute of Play, not just in the planning phases but also during implementation, is critical. She says Q2L must keep working to integrate more traditional assessment tools, like quizzes and exams, with the kinds of embedded, authentic assessment the Q2L model allows. Game designers and teachers need ongoing professional development to understand not only how best to work together, but how to work quickly. “The amount of new curriculum that has to be developed for the school ongoing is staggering to consider at times, and it is a core challenge to figure out how to handle the sheer enormity of the task among a small group of people,” she said. She also reported a challenge in communicating to parents about the curriculum, which uses tools that can feel unfamiliar.

The Institute of Play is planning to implement the learning model in three sister charter schools in Chicago. The schools will be run by Chicago International Charter School and will share resources, curriculum, and tools developed by the Institute of Play for Q2L (see the “Chicago International Charter School” profile). The creation of these new schools poses the challenge of how to grow the model with integrity; how to implement it across grades, networks, and cities to support teachers in familiarizing themselves with the model and eventually excelling within it; and how to share what has been learned about the deployment of tools. “Growing a school model like the one developed for Q2L requires a complex orchestration of personnel, resources, methodologies, and ideas,” Salen said. “It requires meta-reflection on the systems making up the learning ecology it presupposes and a synthesis of ideas in forms that are clear, actionable, and adaptable.”

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 6–12

Enrollment 3,661 course enrollments (2009–10 school year)

Blended subjects Comprehensive

Content Various, rebuilt by district

SIS AERIES

Independent LMS Blackboard

Independent gradebook Blackboard

Independent assessment tool Blackboard

Link between LMS and SIS Automated upload to AERIES

Other tools Wimba

Notable results

88.2% of RVS full-time students passed the English/language arts California High School Exit Exam in the 10<sup>th</sup> grade and 82.4% passed the Math section.

Operator Riverside Unified School District  
Operator type District  
Headquarters Riverside, Calif.  
Focus General  
Grades served PreK–12  
% FRL 61.1% (2009–10 school year)  
% Black or Hispanic 60% (2009–10 school year)  
Public revenue/pupil \$8,254 (2009–10 school year)

## Riverside Virtual School

Online Driver  
Students can work remotely from the “Education Options Center,” but are required to connect with teachers throughout the week through email, videoconferencing, or face-to-face office hours. Many courses require face-to-face meetings, such as science courses that require wet labs.  
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### History and context

To stave off the growing trend of students leaving its program to take courses at various online school programs, Riverside Unified School District (RUSD) decided in 2005 to explore options for creating its own online initiative. District officials benchmarked models in Florida, Ohio, Kentucky, and Idaho, and pilot tested an Aventa Learning AP Statistics course and AP American Government course. The pilot test enrolled 36 students in the 2005–06 school years. By the fall of 2007, Riverside Virtual School (RVS) opened its doors to 585 students. The program delivered 1,551 course enrollments in 2008–09 and 3,661 in 2009–10. Although approximately 10 percent of students enrolled at Riverside Virtual School full time, the majority used the online school to supplement their course selection. At the same time, full-time RVS students had the option to enroll at a comprehensive high school for one or more classes—or for extracurricular activities—in a face-to-face environment.

### Blended model

RVS purchased content from Aventa Learning and several other providers, and then broke the courses into learning modules and reconfigured them to meet the California standards and Riverside’s traditional-classroom pacing guide. RUSD chose its digital content providers specifically from those that grant access to the course content at a modular level and permission to modify, replace, and enhance content. This policy provided RUSD the opportunity to build an online program that was an extension of the instructional program of the district, as opposed to implementing separate and distinct online curricula. Generally, each course incorporated video, audio, multimedia, and text features to meet students’ various learning preferences. Students taking RVS courses today interface with RVS’s full-time staff of instructional supervisors via email, video conferencing, and drop-in office hours at the physical campus, called the Educational Options Center. Students are required to connect with teachers throughout the week, although they can fulfill this through email or videoconferencing. Many courses require face-to-face meetings, such as science courses that require wet labs, as well as courses such as physical education, art, music, and foreign languages. Overall, teachers say that they interact more with students as online teachers than when they are teaching a face-to-face course. Students also report having higher levels of engagement with their online teachers than they do in the face-to-face environment.

Curriculum mirrors the pacing guides and incorporates the district-adopted materials and assessments used in Riverside Unified’s traditional classrooms. This policy allows students to comply with National Collegiate Athletic Association (NCAA) and University of California  
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regulations related to online learning. In cases where those regulations have no impact, students are encouraged to design learning programs that best meet their individual needs. For example, the health course is not subject to NCAA or University of California review, and thus it offers an open enrollment, self-paced schedule.

Blackboard manages short-cycle assessments, but students must come in to the Educational Options Center for the five to eight proctored unit exams for each course. Students must pass the mid-term and final exam and, in some courses, attend wet lab activities to receive a passing grade.

### Results

RVS collects robust data for its full-time students, and this data shows that these students on average have the highest high school scores in the district based on California’s Academic Proficiency Index (API). For the remaining 90 percent of students who take RVS courses to supplement their traditional courses, the district has had difficulty parsing the data to determine how a one-off RVS course or two affects a student’s comprehensive state assessment results.

### Based

on anecdotal evidence, however, hundreds of students are able to access higher-level subjects and/

or achieve credit-recovery objectives, thanks to newfound online accessibility through RVS.

Because of the concurrent enrollment emphasis, the district has not viewed RVS as a money generator at this point. The district does not get a percentage of average-daily-attendance allocations

from Riverside students who take courses through RVS. It does, however, get a payment from other districts when outside students take RVS courses and receives state funding for students enrolled in the program full time. Also, the district realizes savings from the elimination of paper textbooks and other printing costs; the transition of professional development online; students completing the online health class in a third of the time as in a traditional class; and moving small-enrollment courses online.

### On the horizon

David Haglund and Jay McPhail, director of education options and director of instructional technology and career technical education respectively for RUSD, cite two concerns with California policies that regulate K–12 online programs. First, California’s funding regime for online courses dates back to 1950s correspondence-course regulation. The law stipulates that the state pays providers based on the number of hours of work that a student submits and requires that paper records be kept to demonstrate the allocation of hours to student work samples. RVS must employ double the clerical support to ensure compliance with this archaic attendance law, which minimizes any savings realized from the online strategy.

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Second, Haglund and McPhail state that California imposes onerous geographic restrictions. Riverside Unified can only educate students from counties that share at least one of its geographic borders. Thus Riverside Unified cannot serve Los Angeles County students because a narrow strip

of San Bernadino County prevents the other two counties from sharing a border. This law also prevents the district from serving students in other countries. The district could potentially skirt these regulations if it were to charter, but it has resisted this option in a desire to encourage systemic

reform in the state and the adoption of law and policy that support 21<sup>st</sup>-century school design. In terms of technology, Haglund and McPhail say that a top need is an adaptive platform that uses artificial intelligence software to customize and deliver a personalized learning experience for each student.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades K–5

Enrollment 1,328

Blended subjects Core subjects

Content

Headsprout, Accelerated Reader, Rosetta Stone, Dreambox Learning, Reasoning Mind, ALEKS

SIS PowerSchool

Independent LMS Self-developed

Independent gradebook PowerSchool

Independent assessment tool NWEA MAP, Synaptic Mash

Link between LMS and SIS Self-developed

Other tools None

Notable results

Schools are among the top 15 for academic performance among low-income schools in California. \$500,000 savings per school in traditional school expenditures that Rocketship reinvests in others parts of its model.

Operator type CMO

Headquarters San Jose, Calif.

Focus Urban

Grades served K–5

% FRL 87%

% AA or Hispanic 94%

Public rev./pupil \$7,585

## Rocketship Education

Rotation

Students learn 75% offline and 25% online. Online occurs in a separate learning lab during 2-hour block periods, where students learn reading, math, and other skills.

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History and context

In 2006, John Danner, founder and former CEO of NetGravity, and Preston Smith, principal of the highest performing school in San Jose, Calif., founded Rocketship Education (“Rocketship”), a nonprofit charter management organization. They aspired for Rocketship Education to serve one million low-income, urban elementary students across the nation.

According to Rocketship, it is the first elementary school blended-learning model. Currently, Rocketship manages three elementary schools in San Jose. The founders plan to expand nationally in 2014.

Blended model

Rocketship's blended-learning model involves 75 percent of classroom and 25 percent of online instruction. Each student attends one block of Math/Science, one block of Learning Lab, and two blocks of Literacy/Social Studies each day. During the Learning Lab block, students go to a separate room where they work on computers to focus on individual learning needs and general skills practice. This online learning and practice time allows classroom teachers to focus more of their student interactions on concept extension and critical thinking skill development.

In Learning Lab, students sit at assigned computer terminals where they initially encounter a screen from which they choose the content program specified for the day. After selecting the program, students complete activities under the program's guidance. They may also engage in offline activities, such as independent reading and enrichment programs.

Rocketship uses a variety of online content programs in reading and math during the Learning Lab time. For reading, these include Headsprout, Accelerated Reader, and Rosetta Stone. For math, content providers include DreamBox, Reasoning Mind, and ALEKS.

Monitors, rather than certified teachers, oversee the Learning Lab. The model allows Rocketship to staff its schools with approximately 75 percent of the usual teachers and facility space that a typical elementary school occupies. This results in an average student-to-teacher ratio of 31-to-1, although traditional classroom instruction occurs in a 23-to-1 student-to-teacher environment.

### Results

Across its two schools, Rocketship achieved 93 percent proficiency in math and 75 percent proficiency in English/language arts, which beat the state averages by 29 and 17 percentage points, respectively, and bested district averages by 26 and 14 percentage points, respectively.

Rocketship's first school, Mateo Sheedy, had an API score of 925 after its third year, which

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represents a ranking of 1<sup>st</sup> in Santa Clara County and 5<sup>th</sup> in California when compared to similar schools with at least 70 percent low-income students. Rocketship's second school, Sí Se Puede, had an API score of 886 after its first year, which represents a ranking of 2<sup>nd</sup> in Santa Clara County and 15<sup>th</sup> in California, when compared to similar schools.

Rocketship has set a goal for the online portion of its school day to drive one-quarter of a year of student growth. It is currently working with SRI International on a study to measure the effectiveness of its online instruction.

The Learning Lab allows for cost savings of approximately \$500,000 per school, which Rocketship reinvests in higher teacher salaries (roughly 20 percent higher than surrounding districts), a two-hour after-school Response-to-Intervention program, leadership training, and Academic Deans. The model also allowed the school to reach financial break-even in its first year of operation.

### On the horizon

Rocketship is planning to open seven additional schools in San Jose by 2013. Additionally, Rocketship is preparing for national expansion with plans to launch schools in a second region in 2014.

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Blended grades 9–12

Enrollment 4,500 to 4,800 (2009–10 school year)

Blended subjects Core subjects, some career/technical

Content

Plato, BrainPop, AutoCAD, iLinc, Microsoft Office, Adobe products,

Macromedia applications, CONTech (self-developed)

SIS PowerSchool

Independent LMS Blackboard ANGEL edition



Independent gradebook Blackboard ANGEL edition  
Independent assessment tool Blackboard ANGEL edition  
Link between LMS and SIS None  
Other tools None  
Notable results

Since 1998, SIATech has produced over 10,000 graduates from students who had dropped out. Students gain an average of 2 years in literacy and numeracy in 1 year among those in program for more than 10 months.

Operator type CMO  
Headquarters Oceanside, Calif.  
Focus Dropout prevention/recovery  
Grades served Ages 16–24  
% FRL 100%  
% Black or Hispanic ~75%  
Public revenue/pupil Varies by state

## School for Integrated Academics and Technologies (SIATech)

Supervised  
brick-and-mortar  
Remote  
Offline  
Online  
Flex

Students use proprietary  
SIATech online content  
with face-to-face instruction  
and as-needed support for  
all academic core courses.  
Meanwhile, the Job Corps  
program provides face-to-face  
vocational training.

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### History and context

The School for Integrated Academics and Technologies (SIATech) is a charter management organization that partners with the federal Job Corps program and other Workforce Investment Act (WIA) programs to help high school dropouts in Arizona, California, Florida, and New Mexico earn high school diplomas and prepare for post-secondary careers and/or college.

SIATech

has co-located schools at 14 Job Corps Centers to provide the core academics (English/language arts, math, science, social science, and technology), while Job Corps provides such things as the career technical program, career readiness training, student housing, medical, dental, social development, and evening activities.

Most of the students who attend a SIATech school have dropped out of traditional high schools and then joined Job Corps. Prior to the SIATech-Job Corps partnership, Job Corps students were limited to obtaining their GEDs as part of the Job Corps program, rather than obtaining a standard diploma. Most Job Corps students live full-time in dormitories at the Job Corps centers. The rest commute to the centers to attend their classes. Because of the two-year time constraint that the federal government places on Job Corps to serve students, SIATech is technically an 11<sup>th</sup>- and 12<sup>th</sup>-grade accredited school, although in practice it serves dropouts ages 16 to 24 who represent a range of grade levels.

Eleven years ago SIATech officials recognized that they needed to rethink the traditional education delivery model because that approach had failed too many students. They understood that the most essential “must keep” from their traditional model was the strong one-to-one relationship between a committed teacher and the disadvantaged student. They hypothesized,



however, that blending online learning into the required academic core program could offer a new, more customizable format to motivate and accelerate academic learning. Figure 7 depicts the four-part model that SIATech began to envision.

#### Blended model

The blended model that SIATech now has in place centers around every student having an individual learning plan and a computer workstation with high-speed connectivity, more similar to an office environment than a traditional classroom. “This format supports active rather than passive learning,” said Linda Dawson, superintendent and CEO of SIATech. Students participate in an eight-hour training day, divided into four hours of academics, which SIATech provides, and four hours of career technical training, which Job Corps delivers. Most of the Job Corps portion is face-to-face. The school year extends to 230 days.

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Figure 7. SIATech’s Keys to Success for Reaching Out-of-School Youth

Source: “An Economic Argument for Dropout Recovery in California,” SIATech, internal document.

The entire SIATech portion of the curriculum is available online. SIATech has created four content specialist teams that design all of its program content, combining the best and most appropriate elements from myriad content sources. SIATech outsources much of the online development of these courses to India, where engineers use a proprietary SIATech flash-based technique to make the content highly interactive. Despite its development of self-made content, SIATech has limited the licensing of its program. SIATech officials feel that because the content delivery is dependent upon effective teaching, the content itself might not be as successful or useful if used outside the SIATech instructional process.

SIATech uses Blackboard ANGEL edition for the learning management system, including the platform for chatting, discussion boards, emails, and storing gradebook information. Highly qualified, subject-certified teachers and their paraprofessional assistants are physically present in the learning labs as students work both online and offline to complete their courses. The staff maintains at least a 2-to-30 adult-to-student ratio in the classroom. Students submit work to these adults online through the learning management system, where teachers access it, review it, and then report grades. The face-to-face staff provides synchronous, as-needed help and instruction to complement the online learning. Students complete the program at an individually determined pace based on their individual learning plans. Resources are available “just in time” to allow for either an accelerated or remedial pace.

SIATech integrates several software programs into its academic program to help students prepare for future employment. These programs include AutoCAD, Microsoft Office, several Adobe products, Macromedia Dreamweaver, and others.

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Rather than adhere to seat-time metrics, SIATech focuses on students demonstrating competency. A course is complete when a student achieves 80 percent mastery based on benchmark assessments and summative evaluations. Students get real-time feedback on skill mastery through the short-cycle assessments built into the learning management system. In addition, fully online courses are available for high-stakes test preparation.

#### Results

Because SIATech students tend to be highly transient, the “point in time” measures that presume continuous enrollment from September through June do not work for an open entry/exit model. Thus, high-stake tests arguably are not appropriate for SIATech because they tend to measure institutional growth rather than individual student growth. SIATech prefers a value-added model, which measures individual student growth in literacy and numeracy from the time they enter a SIATech school until they leave. Using this metric, SIATech has reported that on average,

students achieve greater than two years of growth in one year in math, reading, and writing. Since 1998, nearly 10,000 out-of-school youth have earned their high school diploma at SIATech's 14 school sites.

SIATech officials reported that to the extent its blended model saves money, the school redeploys the funds in software, equipment, the extended school year, smaller class sizes, and research and development.

On the horizon

SIATech hopes to scale to 10,000 students by 2015. Dawson said that charter laws can make scaling difficult, so SIATech is reformulating its delivery model to try to scale without being totally charter dependent. This will involve enhanced partnerships with Workforce Investment Act (WIA) programs, school districts, colleges, and community-based organizations.

Among the top needs for SIATech scalability is access to more mobile computing devices—such as netbooks, smartphones, and iPads, for students who need to work remotely. Currently SIATech is piloting a program of issuing netbooks to students at its El Centro, Calif., campus to meet the needs of students whose schedules do not accommodate traditional school hours.

In addition SIATech hopes to develop even more collaboration across its schools, both in terms of students accessing great SIATech teachers at other schools and student-to-student collaboration. “Leveraging technology for program delivery together with highly active and interactive learning based on media-rich content, ‘just in time’ learning, and expert teaching is key to future success,” Dawson said. “SIATech continues to actively pursue policy changes at the

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federal, state, and local levels to get rid of archaic practices that cling to seat-time and impose accountability systems that do not meaningfully assess individual student growth. The success of public education depends on how we address these needed changes. The transformation of dropouts to graduates is the prize!”

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Blended grades 6–8

Enrollment 1,477

Blended subjects Math

Content 50+ content providers

SIS None

Independent LMS None

Independent gradebook Self-developed

Independent assessment tool Horizon Assessment System

Link between LMS and SIS None

Other tools None

Notable results

Students in summer 2009 acquired new math skills at a rate estimated to be seven times faster than peers. Students in spring 2010 showed gains that, when annualized, would equate to 1/2 to 2/3 of an additional year of gain. Students in spring 2010 showed significant gains across all academic quartiles.

Operator New York City Dept. of Education

Operator type District

Headquarters New York City

Focus Urban

Grades served PreK–12

% FRL 88% (School of One)

% Black or Hispanic 51% (School of One)

Public revenue/pupil Not available yet (School of One)

**School of One**

Supervised  
brick-and-mortar

Remote

Offline

Online

Rotation

The program projects daily station assignments onto the wall for each student, and students rotate among various learning modalities, including a traditional classroom format, virtual tutoring, small-group discussion, and software, depending on what works best for each student.

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### History and context

In the spring of 2008, Joel Rose, who was then chief executive of human capital at the New York City Department of Education, was visiting a friend in Miami who provided training to adults on various technologies. On the wall of one of the training centers was a sign that said, “Choose Your Modality.” Rose realized that schools would work better if students could learn each concept

in the way that best suited their personal needs, rather than in a one-size-fits-all classroom. He wrote a formal proposal to the chancellor of the New York City Department of Education that summer, and by February of 2009 had closed in on seed money. Rose’s team opened the first School of One program in the summer of 2009 in a middle school in lower Manhattan.

In the spring of 2010, School of One launched a seven-week after-school program at three sites and a six-week in-school program at another site. Both programs taught 6<sup>th</sup>-grade math to approximately 400 students. In the fall of 2010, School of One expanded to deliver math instruction to 1,500 students in grades 6–8.

School of One funders include Robin Hood, the Michael & Susan Dell Foundation, NewSchools Venture Fund, the Bill & Melinda Gates Foundation, The Broad Foundations, Cisco Systems, Inc., JP Morgan Chase, the Carnegie Corporation of New York, The Wallace Foundation, the Investing in Innovation Fund (i3), and others. Key program partners include Wireless Generation and Microsoft.

### Blended model

The School of One model begins with the premise that schools should start teaching children exactly where they are academically and let them progress at their own pace. School of One complements live instruction with other forms of instruction, including software, virtual tutors, and small-group instruction. It uses technology to give each student the right schedule each day. A team of 20 people administers the program from a central office, including sourcing content, assessing student progress, coordinating with school staff, analyzing performance data, refining the learning algorithm, and delivering daily schedules for students. It also develops its technology platform and oversees professional development. School of One has developed its own engine for assessment delivery and data analysis. “The whole thing requires a lot of integration,” Rose said.

Most School of One environments share a similar design. The school knocks down walls in three traditional classrooms to create a large space with several learning zones, such as for independent learning, small-group collaboration, and online learning. When a child enters the program, School of One uses an assessment to diagnose precisely what she knows, and then uses an algorithm to match the student to the appropriate learning pathway. It assesses progress at

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the end of every day to determine the right schedule for the following day. By late afternoon,

the program office sends its teachers a draft schedule for each student. Teachers can then send in requests to override the schedule when it makes sense and where possible. Each morning, the school projects the daily station assignment for each student onto monitors on the wall, similar to the flight monitors at an airport.

For the summer of 2009 pilot, Rose's team worked with over 11 content providers to amass more than 1,000 math courses across several instructional modalities. To date the program has over 5,000 lessons covering 4<sup>th</sup> to 9<sup>th</sup> grade math, which have been pulled from over 25,000 sources and 50 providers. The team repurposes the content to the appropriate length of time, skill level, and quality.

### Results

School of One has raised more than \$10.5 million to fund its launch. It does not rely on per-pupil funding from the state, but instead operates primarily on private and federal grants. The program has not yet determined the pricing model it will use over the long term.

Rose reports that several aspects of School of One's model are encouraging. First, the system makes students more aware of their strengths and weaknesses than they were in a traditional classroom structure. Motivation levels have increased because students feel a desire to conquer their daily online assessments and move on to new skills. They feel less afraid to admit when they do not understand because they are all working at their own pace. Some students who did not succeed in traditional math have responded well to new modalities like independent practice, virtual tutoring, software, and small-group collaboration. Meanwhile, teachers have detailed knowledge of every student every day, which allows them to respond more appropriately to struggling students. Teachers spend less time grading assignments and more time analyzing student needs and delivering small-group or individual instruction.

In terms of assessment results, Rose reported that students in the summer of 2009 pilot acquired new math skills at a rate estimated to be seven times faster than peers with similar demographics and pre-test scores. Students who participated only in the spring of 2010 inschool pilot showed gains that, when annualized, would equate to one-half to two-thirds of an additional year of gain in relation to their predicted academic trajectory without School of One. Students in the spring of 2010 after-school pilot showed significant gains across all academic quartiles, but strongest gains in the lowest quartile.

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### On the horizon

Rose noted four areas where School of One is seeking to improve. First, the team is working on improving support for English-language learners and special education students. Second, it is trying to develop tighter alignment between content and assessments, which can all come from many different sources. Third, it is striving to incorporate projects and activities to develop critical thinking and creative problem solving skills. Finally, School of One is upgrading data systems so information can be processed more effectively and accurately.

School of One will focus on 6<sup>th</sup>- to 8<sup>th</sup>-grade math for the foreseeable future while it refines its system. In the fall of 2011 it will expand to four additional New York City schools. Originally, the School of One team developed its technology in a way that was hard to scale. But now that they have run the program several times, the team is ready to rebuild a scalable version of the technology platform. Eventually Rose wants to sell the model to other districts for them to implement. Rose said that he is exploring spinning off from the New York City Department of Education to become a stand-alone nonprofit.

“We want to take this slowly and make sure we get the model right,” Rose said. “There have been too many reforms over the past 25 years that have tried to scale too quickly, and many good ideas have been lost along the way. We're not going to fall into that trap.”

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Operator type Individual charter school  
 Headquarters Arcata, Calif.  
 Focus General  
 Grades served 9–12  
 % FRL 52%  
 % Black or Hispanic 2%  
 Public revenue/pupil \$6,000

Blended grades 9–12  
 Enrollment  
 6<sup>th</sup> period: 15  
 Learning center: 35  
 Blended subjects Core subjects  
 Content Odysseyware  
 SIS Schoolmaster  
 Independent LMS None  
 Independent gradebook Schoolmaster  
 Independent assessment tool None  
 Link between LMS and SIS Manual  
 Other tools None  
 Notable results Too early

## Six Rivers Charter High School

Sixth period, learning center

Supervised  
 brick-and-mortar  
 Remote  
 Offline  
 Online  
 Learning  
 center

6<sup>th</sup> period

Online Lab  
 6<sup>th</sup> period: Students take 1 of  
 6 classes online in a lab with  
 a face-to-face facilitator.

Online Driver  
 Learning center: Students  
 learn online remotely but  
 attend a physical center 1 to  
 5 days per week for life skill  
 coaching, tutoring, academic  
 support, technical support,  
 and training.

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### History and context

Chris Hartley, principal of Six Rivers Charter High School authorized by the Northern Humboldt Union High School District in McKinleyville, Calif., faced mounting problems. Declining public funding meant that he had trouble providing the robust curriculum for his students that he envisioned, and his rural location only exacerbated the struggle to deliver a full range of courses. Looking for answers, he talked with Lisa Gillis, president of Integrated Educational Strategies (IES), to see whether blended learning could help. As a pioneer in blended learning, Gillis had a history of helping schools survey their needs and then develop a blended model based on their goals, timeframe, and students’ needs. Hartley decided to leverage this expertise by partnering with IES to launch a blended-learning program for his district.

Blended model

Hartley and Gillis agreed to a four-part technology strategy. Two parts of the strategy fell outside the definition of blended learning. For example, the first goal was to integrate online technology into traditional classrooms vis-à-vis virtual field trips, SMART boards, and other online, teacher-paced supplementation. The second initiative called for setting up the Six Rivers Virtual Academy (SRVA), a full-time virtual school for students who needed an alternative approach. SRVA opened for students beginning with the 2010–11 school year.

The third piece, however, marked a step into blended learning. Beginning in the fall of 2010, leaders divided the school day at Six Rivers Charter High School into six periods. Students learned

in traditional classrooms for five periods, but for the sixth period, they moved into a dedicated technology classroom for online instruction in core subjects. A facilitator monitored the students to ensure they stayed focused, but an online teacher delivered the curriculum. The facilitator also instigated face-to-face discussions, as prompted by the online teacher, in the small-group areas set up within the classroom. Hartley and Gillis believed that this “6<sup>th</sup> period” design provided an ideal solution to deliver a diversity of courses in the school’s rural setting at an affordable price. It also facilitated credit recovery for students who needed to retake a course to graduate.

Fourth, the leaders set up a learning center to serve as an alternative education school for students pursuing independent study as a way to meet their personal and academic needs. Students who enrolled in this alternative program studied online remotely for four days each week and then attended the center the remaining day. The center was available for student drop-ins every day from 10 a.m. to 4 p.m., if students preferred to work on-site. During the required face-to-face days, students received help with their specific social and academic needs, including attending life-skills classes and having access to academic and technical support.

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## INSTITUTE NNOSIGHT

Hartley and Gillis selected Odysseyware to provide the curriculum and learning management system. Northern Humboldt Union High School District had its own student information system, which did not integrate with the Odysseyware platform. Administrators have had to upload information between the two systems manually.

### Results

Initial enrollment in the learning center exceeded expectations. It grew from 15 students in September 2010 to 35 full-time and 19 concurrent students by February 2011. School leaders noted that students participating in this program showed an overall interest in subjects and higher levels of engagement. They responded well to the pacing-guide approach by demonstrating

higher levels of productivity and credit recovery. Attendance rates and credit completion rates have both improved for 80 percent of participating students.

In addition, the program has helped senior students who were behind get on-track to graduate. Roughly half of them follow an individual learning plan, which they formulate with their instructors. The individual plans have been instrumental in providing the necessary academic and emotional support for them to progress faster. Hartley and Gillis agree that the learning-center approach has provided a one-on-one connection and a support system that have strengthened student understanding of the material, met the diverse needs and individual learning styles of students, and built a sense of community amid an independent learning environment. Students have reported an increase in their level of confidence and commitment to perform in an academic setting.

### On the horizon

The next steps in the project implementation include incorporating elements of synchronous course delivery into the online learning, increasing professional development, improving academic support for students, and increasing the use of online-learning tools.



Six Rivers Virtual Academy has benefited from a grant with the California K12 High Speed Network to provide a laptop for students who qualify as free-and-reduced-lunch-program participants. Support from the Northern Humboldt Union High School District also has been instrumental in the success of the program. The district especially has been proactive in providing resources for the design and implementation of the virtual academy.

In terms of policy needs, school officials say that California's UC A-G policy limits coursework that students can take online to meet the prerequisites for college admission in California, and that this poses a barrier to full online access for all students.

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Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades 9–12

Enrollment 600 when fully operational

Blended subjects Comprehensive

Content Apex Learning

SIS To be determined

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS To be developed

Other tools None

Notable results Too early

Operator type Individual charter school

Headquarters Los Angeles

Focus Urban

Grades served 9–12

% FRL ~60%

% Black or Hispanic ~80%

Public revenue/pupil \$6,680

## USC Hybrid High School

Flex

School delivers curriculum online, but students work in subject-specific physical spaces with face-to-face subject experts offering support. They also spend significant time with hands-on projects.

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### History and context

Dr. David C. Dwyer, a professor of educational entrepreneurship at the University of Southern California (USC), obtained permission from the USC provost to design and operate a new secondary school under the USC brand. Dwyer had served as the chief academic officer at Apex Learning and director of education technologies at Apple Computers. He felt driven to culminate his years of education and technology industry experience in the creation of a new school with a distinct blended-learning approach. USC Hybrid High School is scheduled to pilot portions of the curricular program in the fall of 2011 and then launch with 150 9<sup>th</sup> graders in the fall of 2012. Dwyer will open the new school as a charter within the USC neighborhood. The school will



focus on students who are most at-risk of dropping out of high school. Because studies show that scheduling conflicts with this population account for a third of the dropouts, the new school ideally will be open 50 weeks a year, 10 hours a day, and seven days a week. Students will be able

to pursue a personalized learning plan on a customized schedule.

#### Blended model

The USC Hybrid High School model consists of three components:

First, the school will feature an online, standards-based curriculum blended with face-to-face support and hands-on projects. Dwyer plans to use Apex Learning as the primary online curriculum provider because of his familiarity with Apex’s content and because of its mastery learning and independent progress features. The product also provides dynamic assessment and generates actionable data about student performance and persistence. At the same time, the program will require students to participate in collaborative inquiry projects and community service opportunities. “Hands-on learning—the messy stuff,” said Dwyer, “is essential to deep understanding and the ability to apply what you learn in the real world.” Students will complete one to three projects per year. The school will also offer on-site extracurricular activities like sports and dance.

Second, the school will focus on each student’s family and community context. Drawing from the field of human developmental psychology and Abraham Maslow’s Hierarchy of Needs, Dwyer believes that adolescents’ basic needs—such as safety and physiological needs—must be met before they are able to work on higher-order cognitive processing and skills. The school will offer counseling and social work services, and college-preparatory and life-skill classes for students

and their parents or guardians. The school will also encourage student-led service activities to help the surrounding community.

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Third, the school will offer a “cocoon of support” to its students through a local team of face-to-face teachers and personnel. While the online teachers will be the master teachers in their specific content areas, face-to-face teachers will provide just-in-time support and supplemental instruction for reading, math, and English proficiency. The physical facility will feature four learning labs—one for math, science, language arts, and social studies. The program will require students to complete their online work for each subject in its corresponding learning lab, and school staff will proctor all exams. Students will have a mentor who follows them through the four

years and helps them put together a “calendar of responsibilities” to chart their path. They will meet every seven to 10 days to review and make adjustments to students’ schedules and academic plans. Like an adult workplace, USC Hybrid High School will be a continuous progress school, where students move through the curriculum at their own pace.

Dwyer plans to develop an open-source integrated data platform that combines information about behavior, achievement, attendance, family counseling, special nutrition requirements, and the like. The system will provide appropriate access to that data for students, their parents and guardians, teachers, mentors, and administrators. Student performance data from the Apex Learning LMS will feed into this data system and allow for highly personalized, data-driven learning plans for each student.

#### Results

The school is still in the conceptual stage. Dwyer is working on creating a business model that will

allow the school to function on publically available dollars alone. USC is providing significant in-kind support to assist the program’s development, such as Dwyer’s salary and offices for the

project's first staff. The goal is to be self-sustaining in five years.

On the horizon

Dwyer hopes this first school will be an iterative design laboratory, and that eventually he will be able to build dozens of these schools in urban settings. "The wildcard is the facility question," he said. "I'm trying to create a design that can be implemented in a lot of different settings—like strip malls, office buildings, and old schoolhouses to reduce facility costs and ultimately make the project sustainable."

USC Hybrid high will make extensive use of technology to accomplish the following: (1) engage the school's technology-oriented students (digital natives); (2) connect inner-city students to highly qualified teachers in all subjects; (3) provide means to collect and analyze student performance and progress data in real-time; and (4) increase the overall efficiency and cost

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effectiveness of the school. Dwyer believes that the necessary technology is in place to accomplish these ends.

From an education policy point of view, Dwyer knows that the anytime, anywhere learning model and the seven-day-a-week nature of the program will run into stiff average-daily-attendance

challenges. "The model needs to shift from 'seat time' to 'learning time' if we are ever going to make substantial progress at education reform," he said.

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Blended grades 9–12

Enrollment 550

Blended subjects Comprehensive

Content Apex Learning

SIS CPS System—Impact SIM (Pearson)

Independent LMS Schooltown.net

Independent gradebook CPS System—Impact Gradebook (Pearson)

Independent assessment tool Study Island

Link between LMS and SIS CPS developed

Other tools

SMART, Google, Educational Network, Explore Learning Gizmos, Geometer's

Sketchpad

Notable results

10% increase in freshman on-track rate each year of existence, 90% during year 3.

650 applications for 135 seats in 9<sup>th</sup>-grade class for 2011–12 school year.

Operator Chicago Public Schools (CPS)

Operator type District

Headquarters Chicago

Focus Urban

Grades served 9–12

% FRL 97%

% Black or Hispanic 100%

Public revenue/pupil \$7,424

## VOISE Academy High School

Supervised

brick-and-mortar

Remote

Offline

Online

Flex

Students attend the brickand-mortar school to learn

roughly 80% through online delivery, with face-to-face teachers providing individual support, and roughly 20% through traditional teacherbased instruction.

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INSTITUTE **INNOSIGHT**

This profile is adapted from the case study, titled “VOISE Academy: Pioneering a blended-learning model in a Chicago public high school,” by James Sloan and Katherine Mackey, Innosight Institute, December 2009, available at <http://www.innosightinstitute.org/media-room/publications/education-publications/voise-academy/>.

### History and context

In the fall of 2008, a new high school located in the poverty-stricken, crime-ridden neighborhood of Austin on Chicago’s West Side opened its doors to 151 freshmen. Called VOISE Academy (VOISE), this school was different from many of the new high schools opening in Chicago at that time, as it blended a traditional brick-and-mortar school environment with something much less familiar—a mostly online curriculum. Now in its third year of operations, VOISE, which stands for Virtual Opportunities Inside a School Environment, plans to add a new grade each year until it serves up to 550 students in grades 9–12.

VOISE was created under Chicago Public Schools’ (CPS) Renaissance 2010 initiative, the goal of which was to create 100 high-performing public schools in priority communities\* by the year 2010. CPS allows Renaissance schools more freedom in their curriculum and structure than traditional CPS schools† in exchange for higher levels of accountability. This increased autonomy has made it possible for VOISE to employ a mostly online curriculum.

### Blended model

VOISE follows a traditional school calendar and daily class schedule, with highly qualified teachers in the classrooms. But teachers are not the primary source of the learning content. Instead, students generally learn at their own pace and level through online courses that they complete on wireless laptop computers, with teachers acting as the instructional guides by encouraging and mentoring students and providing individualized instruction to them on an as-needed basis.

VOISE has found that its students often need the face-to-face teacher to get them started on an online module and orient them to the concepts. On average, students enter VOISE at a 4<sup>th</sup>-grade reading level and 5<sup>th</sup>-grade math level. They often find that jumping into the Apex

\* Priority communities refer to 25 of Chicago’s 77 neighborhoods that the IFF (formerly the Illinois Facilities Fund) prioritized as having the greatest need for quality public schools in Chicago. “Here and Now,” Illinois Facilities Fund, 2004.

† Traditional CPS schools include neighborhood schools, magnet schools, alternative schools, vocational schools, military schools, achievement academies, selective enrollment schools, math/science academies, and special education schools.

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curriculum is too demanding initially. Thus, the VOISE model has evolved to provide traditional, teacher-led instruction for roughly 20 percent of the learning time, and online learning for the other 80 percent. VOISE groups its students by level to allow teachers to gear the teacher-led instruction time to students at about the same place in the Apex curriculum. Some teachers use this time to introduce key concepts to their class before having the students move individually through an online lesson relating to that topic.

Teachers also engage with students face-to-face to help them learn particular skills, such as how to research topics online, make Microsoft PowerPoint presentations, or design Web pages. For example, one history teacher had his students work in small groups to create their own

imaginary city-state using Google SketchUp, a 3D modeling program, after they had completed an online lesson about ancient Greece.

In addition to the regular school day, the faculty and staff offer students extra learning time with teachers on weekdays after school until 5 p.m. and Saturdays from 9 a.m. to noon. This extra learning time is critical to helping the students—many of whom are performing below grade level—develop the knowledge, skills, and character needed to succeed in school and beyond. VOISE has a high-performance culture, in which the faculty and staff impose strict standards on the students, do not accept excuses, and stress that everyone can achieve. School uniforms, clean hallways, and strict enforcement of good behavior make it clear that the faculty and staff expect students to work, not play. College banners line the walls of the school and hang in the classrooms as a reminder that higher education is an attainable goal for each student. The faculty and staff theorize that setting high expectations and offering encouragement and support will give the students reasons to work hard and develop good study habits that their environment had not previously demanded of them.

### Results

VOISE's freshman on-track rate\* has increased by 10 percent each year since the school opened. The freshman on-track rate was 90 percent during year three, which was above Chicago's average \* CPS considers 9<sup>th</sup> graders "on track" if they have accumulated at least five course credits and failed no more than one semester course in a core subject (English, math, social science, or science) during the school year. According to CPS, "[f]reshmen who are designated as on track are three-and-a-half times more likely to graduate from high school in four years than students who are off track." "On Track Rate Fact Sheet," Chicago Public Schools, January 18, 2008, [http://research.cps.k12.il.us/cps/accountweb/Reports/Fact\\_Sheets.html](http://research.cps.k12.il.us/cps/accountweb/Reports/Fact_Sheets.html) (accessed December 7, 2009).  
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freshman on-track rate of 69 percent.\* This placed VOISE in the top quintile of CPS high schools. VOISE received 650 applications for 135 seats in the 2011–12 ninth grade class. CPS funds Renaissance schools on a per-pupil basis. Given the flexibility of the per-pupil funding, administrators operate VOISE with CPS dollars alone.

### On the horizon

In the fall of 2011, VOISE's founding students will progress to the 12<sup>th</sup> grade. Although CPS does not have plans to replicate the school anytime soon, VOISE continues to receive national attention for its innovative learning model.

\* "Freshman On Track Rates 2007–2010," Chicago Public Schools, October 18, 2010, [http://research.cps.k12.il.us/export/sites/default/accountweb/Reports/Citywide/ontrk\\_report\\_citywide\\_2010.pdf](http://research.cps.k12.il.us/export/sites/default/accountweb/Reports/Citywide/ontrk_report_citywide_2010.pdf) (accessed February 28, 2010). "High School Freshman On Track Rates 1997–2009," Chicago Public Schools, November 9, 2009, <http://research.cps.k12.il.us/cps/accountweb/Reports/allschools.html> (accessed December 7, 2009).

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### INSTITUTE NNOSIGHT

Supervised  
brick-and-mortar  
Remote  
Offline  
Online

Blended grades Ages 16–21

Enrollment 8,000

Blended subjects Comprehensive

Content Apex Learning, Achieve3000

SIS PowerSchool

Independent LMS None

Independent gradebook PowerSchool

Independent assessment tool None

Link between LMS and SIS Varies by state

Other tools ANGEL Learning

Notable results

LifeSkills has graduated over 10,000 students with high school diplomas since

inception.

Operator type Nonprofit or for-profit service provider  
Headquarters Akron, Ohio  
Focus Dropout prevention/recovery  
Grades served Ages 16–21  
% FRL 55%  
% Black or Hispanic 72%  
Public revenue/pupil Varies by state

## White Hat Management

### LifeSkills Centers

Flex

Students learn through selfpaced,  
online curriculum.

Teachers and support  
personnel offer help as  
needed.

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### History and context

White Hat Management is an education management organization that contracts with charter schools to run their operations. To date it operates 46 schools in six states under the auspices of three separate programs. DELA (Distance & Electronic Learning Academies) schools are state virtual schools for grades K–12, where students study completely remotely. HOPE Academies are charter schools that serve K–8 students in the state of Ohio. LifeSkills Centers are alternative education charter schools catering to students between the ages of 16 and 21 in Ohio, Florida, Colorado, and Arizona and between the ages of 16 and 19 in Michigan. This report focuses on the LifeSkills Centers, as they are home to the blended-learning aspect of White Hat’s operations.

#### Blended model

White Hat renovates old buildings and storefronts, such as Rite Aids and CVSs, to use as LifeSkills Centers. Each renovated building features a front desk with a receptionist and behind that, a large lab space with computer workstations for 35 to 40 students. White Hat serves students who have dropped out of high school or who are at-risk of dropping out. Often social service agencies refer them to the program. The school day is only four hours long. Students can choose between the 8 a.m. to 12 p.m. session and the 12:30 p.m. to 4:30 p.m. session. Some schools offer a third session at night.

When they first enroll at a LifeSkills Center, students spend two to four weeks in a “transition lab,” where they complete social and learning surveys, do activities on the Web-based Achieve3000

reading program, and meet with a psychologist, social worker, employability teacher, math teacher, reading teacher, and special-needs teacher. From there, they transition into the large lab space and begin their for-credit courses and rely on the individualized learning roadmaps that the team created for them during the transition period.

LifeSkills Centers use Apex Learning curriculum for all content delivery. Their own face-to-face teachers provide the flexible teaching support instead of online Apex teachers. White Hat uses Apex because it has found that Apex offers challenging curriculum that is easily customizable

for each student. Two certified teachers are on hand in the lab to provide flexible support during all hours the school is open. Most students complete one half-credit in one-and-a-half months. Students can take up to two courses at a time.

LifeSkills Centers draw funding from the per-pupil allocations that each state provides. They also apply for federal funding, such as Title I grants. The centers report their results on a state-

bystate  
basis through PowerSchool.  
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### Results

White Hat says that it is successful with 50 to 60 percent of the students who enroll. It served 8,000 students in 2010. Since 1998, has graduated approximately 10,000 students altogether.

### On the horizon

Kerry Jupina, vice president at White Hat who oversees the LifeSkills Centers, said that White Hat plans to expand the program beyond the five states that it currently serves. She said that the biggest obstacle to rapid expansion is that charter school boards typically want to see immediate results, but that the dropout population of students requires patience and time to get back on track.

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Blended grades 10–12

Enrollment 1,361 (2008–09 school year)

Blended subjects Core subjects

Content Apex Learning

SIS AAL (now owned by Pearson)

Independent LMS None

Independent gradebook None

Independent assessment tool None

Link between LMS and SIS Upload weekly SIS to LMS

Other tools None

Notable results

District's graduation rate rose by more than 8% between 1996 and 2006. Its cost per dropout-recovery student was roughly \$7,721 less than the district's per-pupil expenditure for the 2008–09 school year.

Operator type District

Headquarters Wichita, Kan.

Focus Urban

Grades served PreK–12

% FRL 50.4% (Learning Centers, 2008–09 school year)

% Black or Hispanic 42% (dropout recovery only, 2008–09 school year)

Public revenue/pupil \$3,969 (Learning Centers, 2008–09 school year)

## Wichita Public Schools

### Learning Centers

Supervised

brick-and-mortar

Remote

Offline

Online

Flex

Students attend a learning center in a storefront or office space, where they learn online, with face-to-face teacher support. Other students make up credits in a computer lab on a traditional campus after traditional school hours, with face-to-face teacher support.

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## INSTITUTE **NNOSIGHT**

This profile is adapted from the case study, titled “Wichita Public Schools’ Learning Centers: Creating a new educational model to serve dropouts and at-risk students,” by Katherine Mackey, Innosight Institute, March 2010, available at <http://www.innosightinstitute.org/media-room/publications/education-publications/wichitapublic-schools-learning-centers/>.

### History and context

Wichita Public Schools (Wichita), located in south central Kansas, is a large urban school district that serves a racially and socioeconomically diverse student population. With more than 50,000 students, it is one of the largest school districts in the Midwest and educates approximately 11 percent of all public school students in Kansas.

Wichita began contracting with Apex Learning during the 2007–08 school year to provide online courses to students enrolled in the Learning Centers, the district’s dropout-recovery and credit-recovery program. Previously, the program, which began in 1999, had used two different server-based computer programs for its curricula. In 2007, the program’s administrators decided to

update the curricula and, in particular, switch from a server-based to an online curriculum. They believed that online courses would be cheaper and more convenient to maintain. After researching

online options, they selected Apex Learning primarily because its courses were more rigorous than

other online courses the district had tested and were aligned to state standards. During the 2008–09 school year, the Learning Centers program served 1,361 students in 3,257 enrollments.

### Blended model

#### Dropout recovery

Wichita operates four dropout-recovery centers, which are located in storefront spaces at local malls and in office spaces at community centers. All of the centers are similarly designed with a large, open space divided into a variety of work areas, including individual study stations equipped with roughly 30 computers with headsets; tables for group study and project work; a sitting area with couches and lounge chairs for comfortable reading, one-on-one interaction with teachers, student discussions, and peer counseling; a resource center with instructional materials and career information; and an office space equipped with desks for the teachers.

Each dropout-recovery center employs two full-time, licensed teachers—one for English and social studies and another for mathematics and science—who grade essays and written assignments, monitor student progress, assist with coursework as needed, and make sure students stay on task. Each center also employs either a social worker or a student support staffer, who coordinates and arranges for various services such as mentoring, child care, transportation, meal vouchers, and housing.

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Students generally take only one course at a time to help them focus on mastering the material rather than balancing too many courses at once. Once they have satisfied the district’s graduation requirements, the students receive a standard high school diploma—rather than a GED—from one of Wichita’s traditional high schools.

The program does not require student attendance during set hours each day. Instead, students may go to the centers at any time between 8 a.m. and 6 p.m. on Mondays through Thursdays and between 8 a.m. and noon on Fridays. Although it gives students the flexibility to set their own schedules, the program requires them to complete at least a half credit each month and attend the centers for at least 15 hours per week to remain enrolled. Outside of these requirements, students are free to divide their study time between the dropout-recovery centers, where they have access



to a teacher, and home. This flexibility allows students to work around their employment and family schedules—and it also enables the dropout-recovery centers to serve a greater number of students. During the 2008–09 school year, Wichita’s dropout-recovery centers helped 912 students complete 2,326 enrollments.

#### Credit recovery

Seven of the district’s 11 traditional high schools have credit-recovery centers located inside the school buildings where students can go after school to retake the courses they have failed. Each credit-recovery center consists of a room lined with rows of computers (there are roughly 30 computers in each center) and an office space with a desk for the teacher. One or two teachers who teach at the high school where the credit-recovery center is located take turns staffing the center after school in exchange for hourly pay.

The credit-recovery centers are open until 6 p.m. on Mondays through Fridays. Student attendance is not required during set days or hours. This flexibility allows students to work around their after-school activities and enables the centers to serve a greater number of students. To motivate students to finish their online courses, the district charges current high school students a fee of \$75 per half-credit course (dropouts pay a yearly registration fee of \$5), but offers at least 100 scholarships every year to students who cannot afford to pay the course fee. During the 2008–09 school year, Wichita’s credit-recovery centers helped 449 students complete 931 enrollments.

#### Results

Since the program’s founding in 1999, the four dropout-recovery centers have collectively helped 974 students that the traditional schools had failed earn their high school diplomas—or roughly 26 percent of the students they have so far served or are still in the process of serving.

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The district’s graduation rate was still below the state average in 2006, but it had risen by more than eight percentage points since the Learning Centers program first began in 1999. An increase in the graduation rate of minorities had driven much of this, as graduation rates for African Americans had risen by 17.4 percentage points and Hispanics by 22.3 percentage points between 1999 and 2006.

One reason for this increase was undoubtedly the credit-recovery portion of the program, which allowed students who might have dropped out or failed to graduate on time because they were missing credits to recover these courses and graduate. Another reason was the additional graduates from the dropout-recovery centers, which accounted for roughly a percentage point increase in any given year in the district’s graduation rate.

Unlike other schools in the district, the program does not require, nor does it receive, any portion of district funds obtained from property taxes. This means that the program is significantly

less expensive to operate on a per-pupil basis than traditional schools in the district. For example, even if one considers all of the costs—operating and capital—of the Learning Centers program during the 2008–09 school year, the cost per dropout-recovery student was roughly \$3,969\*—or approximately \$7,721 less than the district’s per-pupil expenditure for the 2008–09 school year. This number does not take into account that the program also served 449 credit-recovery students during the 2008–09 school year, which means that the program’s true costs per student were even lower.

#### On the horizon

Wichita does not plan to expand the Learning Centers program, and it recently decided to close one of the dropout-recovery centers. The state’s new graduation formula only counts students who graduate in four years, so district leaders believe the district will earn a higher Adequate Yearly Progress (AYP) status if they focus resources on students

who fall within their four-year cohort at the comprehensive high schools, rather than invest in students who are taking more than four years to graduate.

\* This number was derived from dividing Wichita’s total expenditures (\$1,972,792) for four dropout-recovery centers and seven credit-recovery centers by the total number of students (497) enrolled at the dropout-recovery centers.

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## Technology Trends

The 40 profiled organizations, although not a statistically representative sample of the U.S. market, provided a large enough data set to indicate strong patterns in the distribution of content providers and technology tools across the emerging blended-learning landscape.

### Content providers

The market of companies and organizations providing content to the profiled organizations is highly fragmented (see Figure 8). K12, Inc. has the biggest presence, with five implementations of its Aventa Learning products, three implementations of its K12, Inc.-branded courses, and one implementation of the A+ program by American Education Corporation, which K12, Inc. acquired recently. Apex Learning and NROC are the next largest, with seven and four implementations respectively. These leaders, however, represent only a fraction of the total noisy and disjointed pie that is the current state of the K–12 online-content market. Several of the profiled organizations use more than one content provider. School of One reported that it uses over 50 content providers in all.

Figure 8. Content providers among profiled organizations

Apex Learning (7)

Aventa Learning (K12) (5)

NROC HippoCampus (4)

K12 (3)

Rosetta Stone (3)

Accelerated Reader (1)

ACCESS (1)

Acton Toolkit (1)

Adobe (1)

American Education A+ (K12) (1)

Atmosphir (1)

AutoCad (1)

BrainPop (1)

Brownsville (1)

College Access Readers (CK-12/Leadership Public Schools) (1)

Compass Learning (1)

CONTech (SIATech) (1)

Destination Reading (HMH) (1)

Earobics REACH (HMH) (1)

eCADEMY (1)

EPGY Online High School (1)

Fairmont Preparatory (1)

Gamestar Mechanic (1)

Ideal NM (1)

iStation (1)

Jesuit Virtual Learning Academy (1)

Learning.com (1)

Learning Today (1)

Macromedia (1)

Mangahigh.com (1)

Microsoft Office (1)

NovaNet (1)

Odysseyware (1)

Plato (1)

Pearson (1)

Powerspeak (1)

Quest to Learn (1)

Reasoning Mind (1)

Revolution Prep (1)

ST Math (MIND Reach Institute) (1)

Study Island (1)

UC College Prep (1)

Achieve 3000 (2)

ALEKS (2)

Connections Academy (2)

Dreambox Learning (2)

e2020 (2)

EdisonLearning (2)

Florida Virtual School (2)

Headsprout (2)

Michigan Virtual School (2)

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**Student information systems**

Pearson dominated the student information system (SIS) field, with 12 PowerSchool implementations and three implementations of other Pearson products (see Figure 9). Twelve other providers delivered student information systems to the profiled operators.

Figure 9. SIS providers among profiled organizations

- Quest to Learn (1)
- Reasoning Mind (1)
- Revolution Prep (1)
- ST Math (MIND Reach Institute) (1)
- Study Island (1)
- UC College Prep (1)

**PowerSchool  
(Pearson) (12)**

**AERIES (3)**

**K12 (3)**

- Acuity (McGraw-Hill) (2)
- ATS (2)
- STARS (2)
- AAL (Pearson) (1)
- Blackboard (1)
- Chancery SMS (Pearson) (1)
- ConnectionsAcademy (1)
- CPS System – Impact SIM (Pearson) (1)
- EdisonLearning (1)
- Excelsior Pinnacle (1)
- Infinite Campus (1)
- Schoolmaster (1)
- SchoolMAX (1)

**Learning management systems, gradebooks, and assessments**

The leading provider of both learning management systems (LMSs) and digital gradebooks in this sample is Blackboard, with seven and six implementations, respectively. Following the Northwest Evaluation Association (NWEA), Blackboard is also the second-leading provider of online assessments. An important thing to bear in mind is that most content providers deliver their curriculum within a built-in LMS, which includes a gradebook. They also usually provide their own built-in assessments. Thus the LMSs, gradebooks, and assessments in the figures below only reflect occasions when a profiled organization uses a separate, independent LMS, gradebook, or assessment. Most commonly, the organizations use an independent LMS and gradebook to integrate several content providers into a single system. They generally use independent assessments to ensure that the content providers are honest in their built-in assessments. Like the other technology tools, the distribution of LMS, gradebook, and assessment providers is quite fragmented (see Figure 10, Figure 11, and Figure 12).

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Figure 10. LMS providers among profiled organizations

Moodle (3)

**Blackboard (7)**

- Agilix (1)
- Desire2Learn (1)
- DPNet (1)
- e2020 (1)
- Edmin (1)
- Edmodo (1)
- Education Elements (1)
- Odysseyware (1)
- Oracle Student Learning (1)
- Rocketship Education (1)
- Schooltown.net (1)

**PowerSchool  
(Pearson) (5)**

**Blackboard (6)**

- CPS System – Impact Gradebook (Pearson) (1)
- Desire2Learn (1)

DPNet (1)  
Edmin (1)  
Excelsior Pinnacle (1)  
Gradebook (1)  
Gradespeed (1)  
InfiniteCampus (1)  
PowerTeacher (1)  
School of One (1)  
Schoolmaster (1)

### **NWEA MAP (5)**

Accelerated Reader (1)  
Acuty (1)  
Discovery Education

Figure 11. Gradebook providers among profiled organizations

Moodle (3)

### **Blackboard (7)**

Agilix (1)  
Desire2Learn (1)  
DPNet (1)  
e2020 (1)  
Edmin (1)  
Edmodo (1)  
Education Elements (1)  
Odysseyware (1)  
Oracle Student Learning (1)  
Rocketship Education (1)  
Schooltown.net (1)

### **PowerSchool (Pearson) (5)**

### **Blackboard (6)**

CPS System – Impact  
Gradebook (Pearson) (1)  
Desire2Learn (1)  
DPNet (1)  
Edmin (1)  
Excelsior Pinnacle (1)  
Gradebook (1)  
Gradespeed (1)  
InfiniteCampus (1)  
PowerTeacher (1)  
School of One (1)  
Schoolmaster (1)

### **NWEA MAP (5)**

Accelerated Reader (1)  
Acuty (1)  
Discovery Education  
Assessment (1)  
DPNet (1)

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Figure 12. Assessment providers among profiled organizations

### **Blackboard (4)**

### **NWEA MAP (5)**

Accelerated Reader (1)  
Acuty (1)  
Discovery Education  
Assessment (1)  
DPNet (1)  
Horizon Assessment  
System (1)  
Pearson (1)  
Scantron (1)  
STEP Literacy Assessment (1)  
Study Island (1)  
Synaptic Mash (1)

### **Other tools**

The profiled organizations reported the use of various other technology tools to deliver their blended-learning programs. These include the following:

Adobe Connect Professional

ANGEL Learning

Centra Symposium (Saba)

Illuminate

Explore Learning Gizmos  
Filemaker Pro  
Geometer's Sketchpad  
Google Education Network  
iPad apps  
Mobile phones  
Q2L social network  
SMART Technologies  
SMARTHINKING  
Survey Monkey  
uBoost  
WebEx  
Wimba Pronto  
Wireless Generation

They also cited several technologies that they hope to have access to someday to facilitate their programs (see the technology wish list in Appendix B).

Questions remain as to how policy will shape the future of technology in the online-learning marketplace. Will quality metrics help create the conditions for businesses to emerge that compete on network effects and consolidate the industry? Or will a lack of outcome-focused policy foster a "race to the bottom," whereby providers compete mostly on price rather than outcome? In this scenario, the marketplace could remain significantly fragmented and cluttered with low-end entrants.

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## Steps for Success

How will the rise of K–12 blended learning impact the learning environment of tomorrow? The answer depends on whether online learning becomes a disruptive innovation to today's brick-and-mortar classrooms or a sustaining innovation for them. The implications are enormous.

If the blending of online learning into schools takes place disruptively, it will transform the sector. Disruptive innovations bring accessibility, affordability, and customization to sectors that before were complicated, expensive, and standardized. Blended learning has this transformative potential.

On the other hand, if blended learning is deployed head-on against the incumbent system, the incumbent system will merge and morph it into its standard operations and it will not be transformative. It may still bring intriguing improvements to the traditional system, but its ability to update the fundamental school design will be lost.

These observations about disruptive and sustaining innovations have been repeated in industry after industry. The education sector is no different. This thinking carries significant implications for how state elected officials, district superintendents, and school leaders should move forward to set up the best context to channel blended learning to its highest potential.

### Beginning with nonconsumption

Success with disruptive innovations always begins at the easiest point of entry by competing against nonconsumption. Disruptive innovations typically get their start by offering an application to people for whom the alternative is nothing. In fact, targeting nonconsumption is far more important to the long-term success of the application than the technology itself.\*

This pattern suggests that blended-learning models have the greatest potential to follow a disruptive trajectory if they begin by offering online learning in brick-and-mortar settings to students who are nonconsumers of mainstream schooling. Examples from this report include Wichita's learning centers for dropout recovery, Six River Charter High School's alternative education learning centers, EPGY Online High School's program that allows gifted and talented

students to self-blend advanced courses, and Alabama ACCESS’s model that delivers online courses to rural areas that have no alternative, among several others.

• Disrupting Class, Chapter 3.

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When it targets nonconsumption, blended learning is more likely to emerge as disruptive to class, as it is becoming in the examples above, with all of the transformative potential of a disruptive innovation. When it goes head-to-head with the incumbent system by serving mainstream students first, blended learning is more likely to be crammed into the current classroom and sustain, rather than transform, the traditional classroom model.

### Autonomous zones

Innovation stands the best chance of success if its leaders choose the right organization structure to manage it successfully. When an organization seeks to create deep changes around the economics of its business model, the right organizational structure is an autonomous team. An autonomous team allows its participants to step away from their functional responsibilities in which agreeing with each other is difficult and become an independent team with its own set of purposes. In this new structure the team can rethink the organization’s resources, processes, and, importantly, its revenue formula.\* Thus, leaders at all levels seeking to transform the education system must establish autonomous spaces where they can deploy innovative models in the right context and create new funding models.

If the regulatory structure demands the right things from these autonomous zones—affordable quality focused around each individual student—then education technology companies and school operators will chase the right goals. After all, demand drives innovation, as suppliers focus on nailing the jobs that paying customers—in this case society through the government—prioritize. Policymakers must seek to create a better framework for blended-learning models in every realm of public education—from charters to traditional districts—that, broadly speaking, escapes the current input-focused rules,† in exchange for higher accountability around outcomes. Strong charter laws that already do some of this by allowing exemptions from class-size

restrictions and certification requirements,‡ for example, in exchange for tough accountability requirements make new charter schools ripe for this innovation.

\* For a full discussion of the importance of both creating autonomous business units and deploying “the tool of separation” to do this, see Disrupting Class, Chapter 9.

† These input-focused rules dictate such things as how funds can and cannot be spent and student-teacher ratios.

‡ For more on a model law for charter schools, see Todd Ziebarth, *A New Model Law for Supporting the Growth of Public Charter Schools* (Washington, DC: National Alliance for Public Charter Schools, 2009).

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### Equivalent funding and student savings accounts

One of the challenges in this new blended-learning environment is that many programs and schools claim that they cost less than other programs and therefore offer significant savings, but there are few policies or practices in place to know if this is truly the case. In many cases, for example, while schools save money in one area, they simply reinvest it in another area that is also crucial to their success. This is not a bad thing per se—as the freedom to invest in things that make a difference and away from historical expenditures that offer less return is critical—but it is also different from offering a program that is truly lower in cost.

There should, however, be incentives for providers, first and foremost, to achieve high-quality outcomes and, secondarily, to do so at a lower cost. There should also be incentives in place for students and their families to choose those providers. Doing so would also likely help to create more disruptive pathways into the U.S.’s K–12 education system.

As a starting point, all programs, regardless of their legal structure (for example, chartered, district-run, for-profit, or nonprofit), should have access to equivalent funding, provided their students are successful. Second, if a program is able to deliver this success at a lower cost than the

per-pupil funding provides, the program should have the option to invest some of the difference in education savings accounts for its students, who can spend the funds on education-related goods and services, such as college tuition and tutoring. Given that the U.S. spends more per pupil than nearly any other country in the world and that its real per-pupil spending has doubled over the past 40 years with no commensurate gain in outcomes, policy along these lines is vital, particularly as budgets continue to decline over the coming years.\*

#### Other key policies

At this point, the most comprehensive guidelines for building the right regulatory context to support blended learning at the state level are found in the Digital Learning Now! framework, created under the direction of former governors Jeb Bush and Bob Wise. Its “10 Elements of High-Quality Digital Learning” sets the stage for a new approach to education that rewards

\* Two pieces give some preliminary ideas for how this could work. See Dakarai Aarons, “San Francisco Creates College Accounts for Kindergartners,” Education Week, October 5, 2010 ([http://blogs.edweek.org/edweek/District\\_Dossier/2010/10/san\\_francisco\\_creates\\_college.html](http://blogs.edweek.org/edweek/District_Dossier/2010/10/san_francisco_creates_college.html)) and Rick Hess, “Proposals for a Cost-Conscious Era: K–12 Spending Accounts,” Education Week, October 15, 2010 ([http://blogs.edweek.org/edweek/rick\\_hess\\_straight\\_up/2010/10/proposals\\_for\\_a\\_cost-conscious\\_era\\_k-12\\_spending\\_accounts.html?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+RickHessStraightUp+%28Rick+Hess+Straight+Up%29&utm\\_content=Google+Feedfetcher](http://blogs.edweek.org/edweek/rick_hess_straight_up/2010/10/proposals_for_a_cost-conscious_era_k-12_spending_accounts.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+RickHessStraightUp+%28Rick+Hess+Straight+Up%29&utm_content=Google+Feedfetcher)).

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excellence, leverages teaching talent, and personalizes the educational experience for students at all levels.\*

There are several important components of this policy that states must get right to maximize blended learning’s transformational potential, including:

- Eliminating the cap on the enrollment of students in online or blended-learning programs or courses;
- Eradicating rules that restrict class-size and student-teacher ratios;
- Abolishing geographic barriers to what online courses students may take;
- Removing “school site” definitions that limit blended-learning models where a portion of student learning occurs in traditional school buildings and the rest occurs offsite;
- Moving to a system where students progress based on their mastery of academic standards or competencies as opposed to seat time or the traditional school calendar;
- Lifting the rules around certification and licensure to let schools slot paraprofessionals or capable but non-state-certified teachers into appropriate assistive or instructional roles and enable schools to extend the reach of great teachers across multiple, geographically disparate locations;
- Allowing schools to adopt staffing arrangements and redefine teacher roles according to teacher effectiveness and student needs;
- Enabling operators to design staffing, pay, curriculum, scheduling, budgets, student discipline, and school culture to meet the needs of their students;
- Facilitating assessments that can be taken at any time;
- Creating funding models that allow fractional per-pupil funds to follow students down to the individual course, not just the full-time program;
- Tying a portion of the per-pupil funds to individual student mastery, whereby states pay bonuses when students achieve mastery at an advanced academic level or students realize the biggest gains between pre- and post- assessment (so as to incentivize programs to serve students who have historically struggled the most);



• See the “Elements of Digital Learning” at [http://www.digitallearningnow.com/?page\\_id=20](http://www.digitallearningnow.com/?page_id=20).  
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• Holding operators to strict accountability measures that allow state and district officials to identify and intervene rapidly in struggling schools and close those that fail repeatedly to meet achievement targets.

The organizations profiled in this paper shared several policy changes that they believe would facilitate blended-learning innovation as well (see the policy wish list in Appendix C).

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## Appendix A: Programs by Model

Face-to-Face Driver

Big Picture Learning

Chicago International Charter School

High Tech High

Leadership Public Schools

Quest to Learn

Rotation

Alliance College-Ready Public Schools: pilot study

Brownsville Academy High School

Carpe Diem Collegiate High School and Middle School

Chicago Public Schools: Additional Learning Opportunities Initiative

City Prep Academies

Fairmont Preparatory Academy

Hawaii Technology Academy

Hoosier Academies

Kentucky Department of Education: hybrid grant

Kentucky Department of Education: pilot

KIPP LA

Rocketship Education

School of One

Flex

Acton Academy

AdvancePath Academics, Inc.

Connections Academy

Cornerstone Health High School

EdisonLearning: dropout-solutions centers

Flex Public Schools

Florida Virtual School: iPrep Academy

Grand Rapids Public Schools

Matchbox Learning, LLC

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School for Integrated Academies and Technologies, Inc. (SIATech)

USC Hybrid High School

VOISE Academy High School

White Hat Management

Wichita Public Schools

Online Lab

ACCESS Distance Learning  
 Alliance for College-Ready Public Schools: summer program  
 Capital Area Online Learning Association  
 EdisonLearning: blended products  
 Florida Virtual School: ELearning Centers  
 Florida Virtual School: Virtual Learning Labs  
 Jesuit Virtual Learning Academy  
 Kentucky Department of Education: KVHS  
 Metropolitan Nashville Virtual Learning  
 Six Rivers Charter High School: 6<sup>th</sup> period  
 Online Driver  
 eCADEMY  
 EPGY Online High School  
 Riverside Virtual School  
 Six Rivers Charter High School: learning center  
 Self-Blend

All virtual schools that offer a la carte courses to individual students facilitate self-blending.

Examples from this paper include the following:

ACCESS Distance Learning  
 Capital Area Online Learning Association  
 EPGY Online High School  
 Florida Virtual School: classic  
 Jesuit Virtual Learning Academy  
 Kentucky Department of Education: KVHS  
 Metropolitan Nashville Virtual Learning  
 Michigan Virtual School  
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## Appendix B: Technology Wish List

### Content

- Better incorporation of research into content design. For example, do kids have to scroll down? Does sound help? Video or flash animation? (Mark Kushner, Flex Public Schools)
- A tool that enables student feedback, like a Pandora's thumbs up (Matt Mervis, Diploma Plus)
- Immersive technologies for students to experience math and science more spatially (Kecia Ray, Metropolitan Nashville Public Schools)

### Devices

- iPad or comparable device, once it is ready for a school environment (Alan Rudi, Fairmont Preparatory Academy; Dr. Tom Ryan, eCADEMY; Linda Dawson, SIATech; Kecia Ray, Metropolitan Nashville Public Schools)
- More mobile computing devices, such as netbooks and smartphones; otherwise, Internet access becomes a tethering device (Linda Dawson, SIATech; Kecia Ray, Metropolitan Nashville Public Schools)

### Integration

- Either a single content provider, or a system that integrates all content so students have a single log-on (Holly Brezycki, Capital Area Online Learning Association)
- A seamless system that integrates curriculum data, assessment data, and student information data (Rick Ogston, Carpe Diem Collegiate High School and Middle School; Jeff Piontek, Hawaii Technology Academy)

- Adaptive technology for all grade levels. Must be able to connect assessment data with curriculum modules, and connect those to state standards, then push out customized lesson plans for each child (Dr. Tom Ryan, eCADEMY; Mark Kushner, Flex Public Schools; David Haglund and Jay McPhail, Riverside Unified School District)
- A platform that organizes the myriad Internet-based teaching tools and assets (Larry Rosenstock, High Tech High; Jeff Hausman, Jesuit Virtual Learning Academy, is currently working on this)

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### Communication

- An improved data interface between online teachers and face-to-face teachers (Mickey Revenaugh, Connections Academy; Nancy Mallison, Florida Virtual School)
- A better virtual meeting place for students to do group projects (Larry Rosenstock, High Tech High)

### Affordability

- Connectivity for students in impoverished areas (Matt Mervis, Diploma Plus)
- Core high school content in an interesting, interactive format that is less than \$200 to 250 per semester. Some of the quality online content is more than twice as expensive as a good teacher for a full class (Dr. Loiuise Waters, Leadership Public Schools)
- 24–7 online help desks instead of only during traditional school hours (Dr. Tom Ryan, eCADEMY)

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## Appendix C: Policy Wish List

“Any policy about procedure, rather than performance, undermines the creation of a child-centered system.” (Robert Sommers, Chief Educational Design Officer and former CEO, Cornerstone Charter Schools)

### Teachers

99 Relax federal policies surrounding the “highly qualified teacher” designation, which can prevent hiring knowledgeable content experts (Rick Ogston, Carpe Diem Collegiate High School and Middle School)

99 Remove requirements that set a minimum for percent of funding that must be spent on teachers. Remove student-to-teacher ratio requirements. (Mark Kushner, Flex Public Schools)

### Outcomes

99 Complete the transition to Common Core standards to eliminate the tension between those and state standards (Matt Mervis, Diploma Plus)

99 Help charter school boards be more patient with results for students who have dropped-back-in, because getting them on track takes time (Kerry Jupina, White Hat Management)

99 Point-in-time measures based on high-stakes tests that presume continuous enrollment from September through June do not work for an open entry/exit model. A value-added model is better (Linda Dawson, SIATech)

### Funding

99 Federal stimulus funds have more restrictive, unwieldy compliance requirements. Better off without them (Rick Ogston, Carpe Diem Collegiate High School and Middle School)

99 Remove funding equations that are tied to students completing a certain number of

hours of work or keeping an elaborate paper trail (David Haglund, Riverside Unified School District)

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99 Enact competency-based policies rather than seat-time mandates (Jeff Piontek, Hawaii Technology Academy)

99 Shift the model from seat time to learning time (Dr. David Dwyer, USC Hybrid High School)

### Research

99 Foster due diligence to differentiate between high- and low-quality online programs (Jan Keating, EPGY Online High School)

### Barriers

99 Remove rules about which districts can serve which students (David Haglund, Riverside Unified School District)

99 Move away from notions of grade levels and traditional calendars (Dr. Tom Ryan, eCADEMY)

99 Amend California's UC A-G policy that limits coursework that students can take online to meet the prerequisites for college admission in California (Lisa Gillis, Integrated Educational Strategies, Inc.)

### Leadership

99 Appoint a dynamic leader to bring together the federal funds and private companies to extend connectivity to all parts of the state (Kiley Whitaker and David Couch, Kentucky Department of Education)

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### About Innosight Institute

Innosight Institute, founded in May 2007, is a 501(c)(3) not-for-profit think tank whose mission is to apply Harvard Business School Professor Clayton Christensen's theories of disruptive innovation to develop and promote solutions to the most vexing problems in the social sector.

### About Charter School Growth Fund

The Charter School Growth Fund invests philanthropic venture capital in the nation's highest performing charter school operators to dramatically expand their impact on underserved students.

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### About the author

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