



DIGITAL LEARNING NOW!

An Initiative of ExceInEd

ONLINE LEARNING: MYTHS, REALITY & PROMISE



Supported by:
Foundation for Excellence in Education

In Association with:
Getting Smart

Authors:
**John Bailey
Susan Patrick
Carri Schneider
Tom Vander Ark**

July 2013



DIGITAL LEARNING NOW! SMART SERIES

This is the eighth paper in a series of interactive papers that provides specific guidance regarding the adoption of Common Core State Standards and the shift to personal digital learning.

JOIN THE CONVERSATION



DigitalLearningNow.com
GettingSmart.com
iNACOL.org



Facebook.com/DigitalLearningNow
Facebook.com/GettingSmart
Facebook.com/inacol



@DigLearningNow
@Getting_Smart
@nacol
@John_Bailey
@SusanDPatrick
@CarriSchneider
@TVanderark
#DigLN
#SmartSeries
#OnlineLearning

For access to this and other papers in our series online:



DIGITAL LEARNING NOW!
An Initiative of ExceInEd



TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
ONLINE LEARNING: MYTHS, REALITY & PROMISE	3
INTRODUCTION	4
Why Online Learning Matters	7
MYTHS	9
Myths about Students	9
Myths about Online Teaching and Learning	12
Myths about Systems and Policies	13
REALITY	15
The Reality for Students	15
The Reality for Teachers	18
EXHIBIT: Top Teachers	19
The Realities of the System	20
PROMISE	21
Personalized Learning for All	21
Student Access to High-Quality Options	22
Trends	22
EXHIBIT: How To Start On Online Learning Program	25
RECOMMENDATIONS	27
The Reality for Students	27
Authorizing & Informed Choices	28
An Agenda for Research & Development	29
EXHIBIT: Assuring Quality In Online Learning	30
CONCLUSION	31
Appendix A: Resources	34
Appendix B: Digital Learning Legislative Activity	36
Authors Bios	39
Acknowledgements	40
Disclosures	40
Endnotes	41

EXECUTIVE SUMMARY

The U.S. Department of Education's [National Education Technology Plan](#) calls for “an alternative to the one-size-fits-all model of teaching and learning.” Championing personalized learning, the report goes on to explain, “Personalization refers to instruction that is paced to learning needs [i.e., individualized], tailored to learning preferences [i.e., differentiated], and tailored to the specific interests of different learners. In an environment that is fully personalized, the learning objectives and content as well as the method and pace may all vary.”¹

From classrooms to legislatures, advocates for personalized learning are recognizing that online learning has the potential to advance educational opportunities for all students and to deliver on the promise of personalization — at scale.

In highly personalized environments, online learning will be a central strategy that benefits all students. As we see the proliferation of new learning models, an increasing number of students will use online learning as part of their learning trajectories.

Despite growth in online learning opportunities — from a range that includes school districts to private providers — organizations such as the International Association for K–12 Online Learning (iNACOL) continue to confront myths about what online learning is and is not. Left unchallenged, these myths stand to block student access to a growing pool of high-quality online opportunities. Fortunately, as online learning options grow, so too does the body of evidence that replaces outdated myths with a more realistic picture of student and teacher experiences with online learning.

“Online Learning: Myths, Reality & Promise” challenges current myths and replaces them with realities that will advance the field of online learning. In doing so, the authors are candid about the strengths of online learning and offer recommendations on aspects that need additional attention to further strengthen it.

MYTHS & REALITY

The paper's sections on myths and realities confront misconceptions about what online learning means for students, teachers and the system as a whole. Key topics include:

- The range of students served by online learning;
- The power of personalized online learning;
- The daily experiences of online learners and teachers;
- The role of technology; and
- Evidence in support of online learning.

Student success stories and teacher profiles are woven throughout this section to show “the faces of online learning.” In addition to countering individual misconceptions with myth-busting evidence to the contrary, this section of the paper also reveals additional realities about online learning, acknowledges its challenges and identifies areas of opportunity that can lead to additional improvements across the sector.

PROMISE

The promise of online learning can be characterized by three primary advantages to students — customization, motivation and equalization. At its core, online learning offers personalized learning for all. Building on various personalized learning frameworks, this section explores the potential of online learning to keep students at the center of the educational experience.

Extending student access to high-quality options is a necessary complement to shifting to personalized learning. Online learning reinvents options for students, as they are no longer bound to the limitations of their home zip code. This section acknowledges the importance of expanding access before reviewing trends in online learning such as district implementation, course choice policies, blended learning and competency-based learning that boost student access to high-quality options.

RECOMMENDATIONS

Building on the Digital Learning Now! policy framework, the recommendations section highlights state policy priorities necessary to support online learning. Recommendation areas include offering informed choices and setting an agenda for research and development.

Across the country, schools are implementing college and career readiness standards, preparing for the next generation of assessments, seeking ways to improve efficiency and productivity, exploring the potential of technology and extending student access to high-quality learning opportunities. With thoughtful implementation and an acknowledgement of its challenges, the shift to online learning has the potential to aid stakeholders across the system in taking on these interrelated challenges. Furthermore, online learning can deliver on the promise of personalized learning *to all students in a way that up to now has not been possible.*

ONLINE LEARNING: MYTHS, REALITY & PROMISE



INTRODUCTION

In 2006, the North American Council for Online Learning (NACOL) published [The Top Ten Myths about Virtual Schools](#). Seven years later, NACOL has evolved into the International Association for K–12 Online Learning (iNACOL) reflecting the rapidly growing interest in online learning from around the world. Unfortunately, despite growing acceptance of online and blended learning across both K–12 and higher education, many of the same myths persist despite evidence to the contrary.

MYTH:

Online learning is a small, and completely district, alternative to traditional education - students who attend online schools do not attend traditional schools.

REALITY:

Distance learning, including online learning, has always been a means by which to enhance traditional education. According to the U.S. Department of Education, a majority of school districts currently have students taking classes using distance learning technologies.² Nearly 96 percent of all high schools indicate they have students enrolled in a distance education class. And far from restricting these opportunities, nearly 75 percent of these districts plan to expand the number of courses offered to their students.³

The International Association for K–12 Online Learning ([iNACOL](#)) is the leading advocate for quality blended and online learning options. Supporting advocacy, research, networking and professional development, iNACOL is also the leading supporter of competency-based learning (see [CompetencyWorks](#)).

Online learning models build on a long legacy of distance learning technologies. The late Senator Edward Kennedy sponsored the Star Schools Program Assistance Act in 1987 that was signed into law by President Reagan to develop multi-state partnerships for exchanging courses in math, science and foreign languages. School districts also leveraged interactive video teleconferencing units to share teachers and to expand course offerings.

These models could only scale a handful of courses to a limited number of students because the courses were expensive to produce and distribution was expensive due to high-priced telecommunications lines needed for videoconferencing or time rented from satellite companies. The Internet has dramatically lowered the costs not just for building courses but also for distributing them. As a result, the number of providers has grown exponentially and includes specialized private providers to university systems to school districts to nonprofits. The converging of lower cost technologies to access courses and an explosion of diverse providers means schools will be able to leverage online learning as a way to offer students alternatives, expand course offerings and improve student performance.

Last school year, millions of U.S. K–12 students benefited from online courses — some full time, some part time — offered in school districts and charter schools in all 50 states. Elementary students will likely take some of their secondary and post-secondary courses online. Most teachers will learn online as part of their preparation and professional development.

SKYLAR

OREGON VIRTUAL ACADEMY

Skylar attends Oregon Virtual Academy. Online education works for Skylar and his family because he can work at his own pace. “My parents and I chose online learning because throughout my days in early elementary school (first–third grade), I would finish my studies earlier than most of my classmates,” explains Skylar. “I would get bored and start to become a distraction, whether by talking, drawing or walking around.” At ORVA, Skylar can move on as soon as he is ready or take more time if he needs it. “I like to be challenged.” For Skylar, the best part of online education is the flexibility. “Once Dad and I finish school, we can leave to start our afternoon job teaching Lego Robotics after-school classes at other nearby schools. Plus, I have drama classes every Friday.” The hardest part has been getting used to Dad as a learning coach in addition to parent — and becoming used to the school’s website. “Whenever we tell our friends or family about the virtual school, they almost instantly think I’m locked up in my house all day and that I’m not getting any ‘social development.’” Skylar notes that he gets plenty of time to socialize.

Skylar’s familiarity with computers and discipline help make online education a good fit for him. “I’ve always been able to operate a computer and navigate the Internet extremely well. I get up every morning at 7:00 a.m. to see my mom leave for work, and I then eat breakfast and hang out until 8:30 a.m. sharp, when my dad and I start school.” ORVA also offers Skylar the chance to participate in the virtual school newspaper, in which he can write movie and video game reviews and funny comics. He likes that his lessons correlate with each other: “I can be learning about the Pythagorean Theorem in Math and learning about the time Pythagoras lived and where he lived in my history lessons, all in the same day,” says Skylar. And, of course, he enjoys “going” to school in his pajamas, holding his cat. Skylar has big plans for the future: after high school, he plans to earn a degree related to film, graphic or game design and then get a job at Mojang in Sweden to design games and graphics. Back in Oregon, Skylar wants to start his own indie game and film studio. “My online school is challenging, and so it helps me absorb more content than I could in a normal ‘brick-and-mortar’ school. It gives me free time to do research on what I want to do, and it gives me time to brainstorm ideas for future movies/games that I’d like to design, direct and produce.” (Source: *Personal Communication, Email interview, June 2013*)

Online learning is a maturing strategy to provide education options to students and families, improve working conditions and career options for educators and make schools more productive.⁵

According to [Keeping Pace](#), an annual report on the sector:⁶

Online learning is teacher-led education that takes place over the Internet, with the teacher and student separated geographically, using a web-based educational delivery system that includes software to provide a structured learning environment. It may be synchronous (communication in which participants interact in real time, such as online video) or asynchronous (communication separated by time, such as email or online discussion forums). It may be accessed from multiple settings (in school and/or out of school buildings).

Online learning schools, sometimes called virtual or cyber schools, may offer full- and part-time enrollment depending on state policies. Most school districts report that they are offering or planning to offer online learning options.⁷

Blended learning refers to efforts that incorporate the benefits of online learning into a physical setting. It includes an intentional shift for a portion of the day to an online setting to improve teaching and learning. Digital learning typically refers to both online and blended learning.

Last year, one third of all college students took at least some of their courses online.⁸ With the explosion of massively open online courses (MOOCs) in 2012, postsecondary participation in online learning is likely to accelerate.

The Defining Dimensions of Online Programs

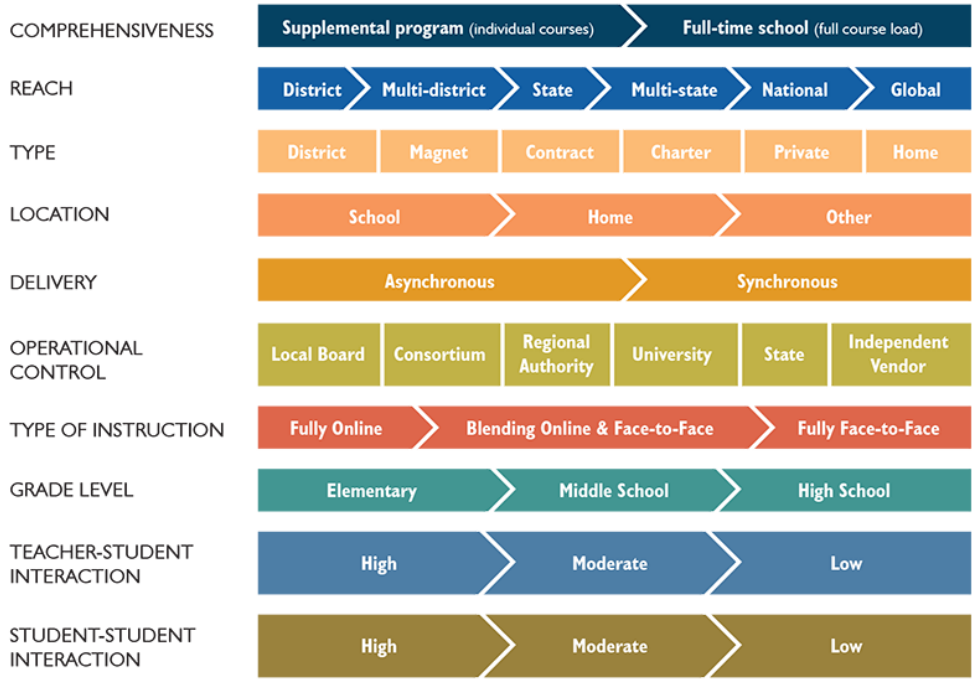


Figure adapted from Gregg Vanourek, A Primer on Virtual Charter Schools: Mapping the Electronic Frontier, Issue Brief for National Association of Charter School Authorizers, August 2006.

© Keeping Pace with K-12 Online and Blended Learning, 2012, kpk12.com

WHY ONLINE LEARNING MATTERS

American schools are early in the shift to personal digital learning — a transition that holds the promise of personalized learning, competency-based environments and improved college and career readiness.

Stakeholders across the system are busy implementing Common Core State Standards (CCSS), preparing for the next generation of assessments, seeking ways to improve efficiency and productivity through the thoughtful implementation of technology, extending student access to high-quality learning opportunities and reimagining the teaching profession to serve today’s learners. Online learning has the potential to aid school, district, state and national leaders to take on these challenges.

The following are 20 reasons online learning matters:

1. Reaches students where, when and how they learn.
2. Creates opportunity for quality, personalized learning at scale.¹⁰
3. Removes geographic and budgetary barriers to increasing equity by expanding access to the best available teachers and courses.
4. Empowers teachers, students and parents with the choice to teach and learn in the right environment for them.
5. Allows students to learn using the same tools they must master to succeed in today’s modern workforce in which more and more training is delivered online.
6. Levels the playing field so that all children, regardless of where they live, are able to receive the world-class education they deserve.
7. Makes it possible to assess students on competency-based mastery of content whenever they are ready to progress versus time-based progress.
8. Provides essential data so that states, schools, teachers, students and parents can know where students are — and where they need to be — along the learning path, allowing for trajectory mapping and course correction before problems arise.
9. Gives more students access to rigorous college preparatory courses and expands access to college credit options including dual enrollment and every Advanced Placement course.
10. Boosts access to a broad array of foreign languages and electives.
11. Generates opportunities for innovations in learning platforms, assessments and data to better serve the right content to the right student at the right time.¹¹
12. Leads to employment alternatives for teachers who are seeking more flexibility or a different role.¹²

13. Extends the reach of great teachers.¹³
14. Enhances great teaching with continually updated tools and content.
15. Improves sustainability of rural schools.¹⁴
16. Has the potential to reduce dropout rates. Sometimes, online courses are the only way for young people with difficult life circumstances to complete high school.
17. Enriched online programs with onsite support systems and blended formats offer personalized competency-based learning with strong supports.¹⁵
18. Reduces facilities demands.¹⁶
19. Allows for bottom-up adoption of digital content and tech tools by teachers who best know their classroom needs.
20. Creates an opportunity to reimagine the very nature of teaching and learning to better serve the needs of all students.

Drivers of Online Learning⁴

Schools and students are embracing online learning due to numerous reasons:

- expanding the range of courses available to students beyond what a school or district can offer;
- expanding access to highly effective teachers, particularly in high-need subjects such as math and science;
- affording opportunities for at-risk students, elite athletes and performers, dropouts, migrant youth, pregnant or incarcerated students and students who are homebound due to illness or injury, allowing them to continue their studies outside the classroom;
- providing credit recovery programs for students who have failed courses and/or dropped out of school, allowing them to get back on track to graduate;
- providing continuity of education for highly mobile student populations such as migrant youth; and
- reducing scheduling conflicts by providing more flexible options.

ZACH

FLORIDA VIRTUAL SCHOOL

Zach attends Florida Virtual School from Melbourne Beach, Florida. A budding entrepreneur, Zach likes that online learning allows him to work at his own pace and gives him the flexibility to do all the things he loves — surfing, traveling, being creative and working on Grom Social, his social networking site for kids by kids. His mom chose FLVS for its course options and opportunities for advancement. Zach says the classes are challenging, and he likes his teachers. “I am definitely into technology,” he says, “and I work well in a virtual environment. You have to be self-motivated and organized. It’s also important to have awesome family support.” The hardest part of switching to online school is not seeing his friends who go to traditional schools every day, but the flexibility is worth it. “My future goal is to continue growing Grom Social and I hope to be accepted into Harvard.” (Source: *Personal Communication, Email interview, June 2013*)



MYTHS

The first online schools were launched in the United States in the mid 1990s. The number grew over the last decade through the expansion of full-time virtual charter schools and school districts experimenting with how to best incorporate online programs. However, online learning options available to most American students continue to face inaccurate and outdated perceptions. The following three sections expose and address myths associated with online learners, teaching and learning, and system and policies.

MYTHS ABOUT STUDENTS

MYTH: Online learning is only for motivated and well-supported, tech-savvy students.

There is no typical profile of online learners. For some, it is the best option. For students with chronic health conditions that make attending a physical school difficult, it provides improved educational options. For families that move frequently, it can provide a stable education placement. For many, online learning is the only alternative to a failure experienced in a traditional school setting. Online learning also offers a personalized pathway with more choices for students who feel disengaged in a traditional setting.

A recent report indicated that a significant portion of the new population accessing their online learning platform is high-poverty, high-mobility, over-aged and under-credited students.¹⁷ Some schools are using online learning to engage at-risk student populations. For example, Tucson, Arizona mayor collaborated with Sunnyside Unified School District to create a new initiative using online courses for students who have dropped out of school as an opportunity to return to high school and graduate.¹⁸

MYTH: Online learning is only for high school and college students.

According to Keeping Pace, in the 2012–13 school year, more than 275,000 students were enrolled in full-time online learning schools in grades K–12. In its state-level snapshot on online learning activity, the report shows availability of online learning options to students of all grade levels for both supplemental and full-time courses. Florida and Minnesota stand out as the states with the most supplemental access for elementary students in grades K–5. Middle school students have supplemental access in over half of the country. Full-time access for elementary and middle school students is available in approximately 30 states.¹⁹

As one elementary online teacher said, “For every student, there is a different reason — behavior issues, health conditions or students who are just a little different — but they come alive in this program, and it is a godsend for these families.”²⁰ Florida Virtual School and Connections Academy formed a partnership to serve students in K–12 with a full curriculum of Common Core State Standards aligned courses. Based on the most recent parent survey, 95 percent of parents agree that the curriculum is high quality; 94 percent of parents

agree their children are satisfied, 92 percent of parents would recommend it and 93 percent of parents agree that technology tools improve their child’s learning experience.²¹

Furthermore, a growing number of elementary and middle schools are providing blended learning for their students.

MYTH: Online learning can’t serve students unless they have constant parent supervision and support.

Online learning can occur from home under parental supervision or from schools or satellite learning centers under staff supervision. It may also be accessed from a classroom, with close teacher supervision, as part of blended learning. High-quality online programs provide personalized instructional support for students. Because high-quality online learning allows for greater student input and choice, students also master an important real-life competency — taking ownership of their learning. As students mature, they are expected to work more autonomously and take more ownership of their own learning. In secondary school, high-quality online providers offer an array of student supports from tutors to guidance counselors to help students complete courses. Often, students have access to their teachers for real-time conversations over the phone or through instant messaging. Technical help desks provide 24-7 help to resolve technology issues.

A new generation of technology platforms is also enhancing student support. For example, [Khan Academy](#) provides coaches, parents and teachers with unprecedented visibility into their students’ data. The system helps identify where students are struggling so teachers can

Missouri’s Park Hill School District (PHSD) is just one example of a growing crop of traditional school districts catering to students who want high-quality online options. PHSD, and others like it, have developed profiles of successful online learners that ask “[Is Online Learning Right for Me?](#)” and help guide families to gauge readiness for an online learning environment. Not surprisingly, there are some overlapping characteristics of high achievers in traditional and online settings such as time management skills and persistence. It’s important to acknowledge that there are key differences as well. Succeeding in an online course requires additional technical skills such as facility with technology and personal dispositions such as self-motivation.

proactively reach out to the students who need the most help. Some online learning is focused only on student support. Many programs add on-demand, just-in-time tutoring, such as [Tutor.com](https://www.tutor.com), to help students stay on track by giving them access to expert tutors whenever they need them.

MYTH: Online learners work in isolation.

Most students say they know their teachers better and report higher levels of personalized attention than they would receive in a traditional classroom.²³

High-quality online learning programs can provide a higher degree of interaction and personalization than can a traditional setting in which one teacher must simultaneously provide for the instructional needs of an entire classroom of students.

Students typically have more one-on-one interactions with their teachers and fellow students in online courses, especially when team projects are assigned. Teachers report getting to know their students better, and students who are shy or do not think well “on their feet” tend to contribute more in online environments.²⁴

FLVS’ live learning sessions allow students to interact with teachers and with their peers. “The Hub” is a resource for students to meet with advisers.²⁵

MYTH: Online learners have little social interaction.

Today, many high-quality online learning providers utilize social learning, video conferencing and collaborative projects.²⁶

Interaction is not limited to online. The students who form friendships in real-time online classroom sessions, virtual study groups, clubs, and online activities often meet outside of school.²⁷ Online students

Letters to Salman Khan.

These three excerpts from appreciation letters to the creator of Khan Academy show the power of online learning experiences from the student and parent perspective.²²

Student:

“I was always a strong student when it came to math. Making good grades really wasn’t a challenge; however, when I entered high school, I failed a couple of tests and lost all my confidence in my abilities to learn. I basically gave up. For a while, I was failing, which is completely unlike me. At the start of second semester, though, I began watching your videos every day and brought my grades up with your help! Now I have a solid A in calculus, and I am at the top of my class again. When my teacher asked how I did it, I said, “It was really simple. Khan Academy videos helped me learn. I didn’t memorize anything; I honestly just understand now.” Thank you so much Khan Academy. You have really made learning a joy for me again!”

Parent:

“I am the parent of a high-functioning autistic child. The available services at my son’s school could not reach him. He cannot learn in a large group setting, and the small group learning available was way below his skill level. This left him feeling stupid and discouraged. It makes me wonder how many kids are like him. With Khan Academy, his math skills are blossoming, but more importantly, his confidence in his academic abilities is growing by leaps and bounds.”

Student:

“I always wished that I could ‘rewind my teacher’ in class like I am able to do in online learning videos. I love science, but when it comes to math, my brain totally shuts down and goes into ‘sleep mode.’ I am in fifth grade. I have a wonderful teacher, but the information just comes out too fast. Khan Academy has opened a door for me that was almost permanently closed.”



For more on the Kahn Academy, see [Salman Khan’s popular 2011 TED Talk](https://www.ted.com/talks/salman_khan).

maintain meaningful social connections; some are in book clubs, some have “pen pals,” and some participate in community sports and clubs.²⁸ FLVS, for example, offers 19 online clubs, including an honors society, as well as 14 clubs in the full-time online program designed specifically for students in grades K–5.²⁹

Full-time online learners are often active in community-based extracurricular activities. In some states, students are able to participate in extracurricular activities at their local school. Students often engage actively both online and off as they complete assignments and socialize with other students and adults in their schools, at home and in the community.³⁰

MYTHS ABOUT ONLINE TEACHING AND LEARNING

Online learning is about technology not teaching.

Like traditional schools, teachers drive the quality of online instruction. Most providers offer a significant amount of synchronous instruction. Instructors can be proactive, reach in and identify what kids need, determine who is disengaged and follow best practices to engage them.

MYTH: Online learning is easier.

Just as in the traditional classroom instruction, quality and rigor in online learning will vary based on the teacher and the curriculum. Many students say that online courses are more rigorous because students cannot hide in the back of the class and because demonstrating mastery through work and engagement in discussions is required. Virtual charter schools are typically required to submit

their curriculum for review and, like all public online schools and course offerings, demonstrate alignment with state standards. High-quality programs require active student participation and operate in settings under supervision of state-certified teachers, require students take state assessment tests, have attendance policies and have competency-based academic progress requirements in effect.³¹

MYTH: Students don't receive as much attention because online learning class sizes are larger.

Because online learning is not bound by traditional school schedules and bell schedules, there are more opportunities for students and teachers to interact with each other as needed throughout the day. Students can email or text their teacher at any time to receive one-to-one help and additional instruction. Now more than ever, advanced technology platforms are helping to serve just the right content to each student. As a result, teachers have more time to spend with students who are struggling or who need some extra assistance. In other words, students actually can receive more attention in online learning courses.³²

MYTH: Students spend all of their time on a computer.

In many models, students have plenty of off-line activities. While there is a range depending on the model, some start young students with less than 20 percent of their time on the computer.³³ For elementary students, some providers send each learning coach a 100-pound shipment of books, worksheets, training videos, and science materials at the beginning of the year that are used as part of the course.

WILLIAM

RIVERSIDE VIRTUAL SCHOOL

William, a fourth grader from California, says his past year at Riverside Virtual School was “amazing.” His teachers not only have great personalities but are also great mentors, too. Attending a virtual school has allowed William to have experiences that he couldn't have had otherwise. In the fall, he went to Montana with his dad's university geology class to help collect specimens in Glacier National Park, and in the winter, he drove with his mom along California's coast, stopping to see elephant seals and Hearst Castle. “All year long, I took art classes at the Riverside Art Museum and volunteered at my neighborhood elementary school,” writes William. “I also helped run an art night and a science night at this school.” The RVS campus also offers William “tons of amazing things to do” that he couldn't have done at a traditional elementary school: an art teacher who spent time teaching him how to use pastels and entered his drawing into an art contest; a monthly visit to the elementary science lab and a science teacher who helped him enter a science fair; and training for the presidential physical fitness test in P.E.

Congratulations to William, who won the elementary division for the Riverside Unified School District's (all grade-levels, all schools) science and engineering fair.

(Source: Adapted from Personal Communication from student to RVS staff. Used with permission.)

MYTH: The NCAA won't accept online learning credits.

Just as in traditional school settings, quality of courses and instruction can vary. Quality assurance processes such as the NCAA High School Review Committee's shine a light on this variance. The NCAA allows online courses for high school athletes to be eligible for college as long as they are college preparatory in nature for core courses and exhibit clear characteristics in which the nature of instruction, assessment and interaction (with evidence) are all college preparatory.³⁴

MYTH: The military won't accept graduates from online schools.

The FY2012 National Defense Authorization Act (NDAA) requires that any student who receives a diploma from a legally operating secondary school or otherwise completes a program of secondary education in compliance with the education laws of the state in which the person resides, including graduates of online schools, are given the same opportunity to enlist in the U.S. Armed Forces as are students who graduate from brick-and-mortar high schools.³⁵

MYTHS ABOUT SYSTEMS AND POLICIES***MYTH: Online schools skim the easiest-to-serve kids.***

Most states have enrollment laws that prohibit skimming of the highest-achieving students. Charter school laws in particular require schools to use a lottery if interest exceeds open-enrollment slots. Online learning attracts a range of students — some who are gifted who are seeking to take more advanced subjects and some who have struggled in a traditional setting and are seeking the flexibility and individual attention online learning offers.

MYTH: Online learning is a lot cheaper than brick-and-mortar schools are.

While it is true that online programs do not have some of the same costs associated with physical buildings and transportation, there are other costs that traditional schools do not have. The hardware, online services, and the growing sophistication of technology platforms to deliver courses and content all entail significant costs. In addition, many online programs maintain student-teacher ratios similar to the ratios of traditional schools. For these programs, as with physical schools, a major cost is in teachers and other personnel, and these costs increase in a linear fashion with the increase in the number of students.³⁶

There is also some evidence that online learning can increase productivity — meaning that for the same costs, the same outcomes can be achieved only faster. In some cases, face-to-face instruction can even be cost prohibitive. This is the case in instances in which there is low demand for a course and a district can't justify hiring a teacher to serve a small number of students. In this example, the district could save money by accessing an online course instead.

MYTH: There is no evidence that online learning works.

Online learning models are just like traditional schools — there are effective ones and ineffective ones. As noted in Keeping Pace, "Online and blended learning can result in better student outcomes if implemented well, or flat/negative outcomes if implemented poorly."³⁷

There are 10 years of data to suggest that online learning is effective in secondary and post secondary learning.³⁸ There is ample evidence that builds a compelling

LOGAN**RIVERSIDE VIRTUAL SCHOOL**

Logan is a sixth grader at Riverside Virtual School and says he's had a great year. "My experiences at RVS have been the best I've had at any school so far. The teachers have been kind, and I felt like I belong here." At first, Logan missed his friends from his old school, but one of his friends also attends RVS, and he soon made new friends. He's also able to participate in advanced band and go to band concerts at his old school. "The labs at RVS are excellent," says Logan. "In P.E., Mr. Hanes gives us fun activities to help us with different sports, such as lacrosse, basketball and tennis. In the science lab, Mrs. McAllister shows us how to make different kinds of boats to see how many coins they can hold before they sink." Logan is excited to begin seventh grade at RVS next year. (Source: Adapted from a school speech. Used with permission.)

case for why online learning is viable option for many students. For example, the U.S. Department of Education conducted a meta-analysis of evidence-based studies of primarily postsecondary online learning programs and found that “students who took all or part of their class online performed better, on average, than those taking the same course through traditional face-to-face instruction.”³⁹

A randomized controlled study, the “gold standard” of evaluation design that meets the department’s “What Works Clearinghouse” standards, found that students attending high schools that offered a specific online Algebra I course scored higher on the assessment than did those enrolled in a traditional class.⁴⁰ Even more impressive is that the study also found positive effects on future advanced mathematics course taking: In schools that offered the online Algebra I course, 51 percent of the eligible students went on to participate in an advanced mathematics course sequence by 10th grade, compared with 26 percent of eligible students in control schools.⁴¹

As a part of their ongoing efforts for continual improvement, many school districts and charter organizations track student progress in online environments as a metric for the model’s success. Championed blended learning success stories like Rocketship Education, Carpe Diem, School of One, and KIPP Empower show that online learning can yield student achievement results that outpace student peers in traditional settings.⁴² In a recent study, the University of Arkansas evaluated the Arkansas Virtual Academy and found that students attending the online public charter school perform well compared with similar students in other public schools.⁴³ In Florida, End of Course (EOC) exams are used to evaluate student mastery. Data from FLVS show that part-time FLVS students outperformed

the state average by 15 percent in the Achievement Levels 3, 4, and 5 for Algebra I.⁴⁴

As district adoption of online learning continues to grow, so too does the evidence that online learning offers a way to extend student access to high-quality opportunities.

MYTH: There is no accountability for private vendors.

Online schools are held to the same levels of accountability as traditional schools are. In many states, providers are held to higher standards through performance-based pay. They are only paid the full amount per student once students successfully complete a course — a standard that no traditional school is currently held to, although many school funding experts believe they should be. In addition, online schools that are charters have the ultimate accountability mechanism — they can be shut down just as any poor performing charter school can. School districts or nonprofit charter holders can provide online learning. Both often contract with private providers — both nonprofit and for-profit — for content and instruction. The double accountability of a contract and a charter typically provides significantly more oversight than is present for traditional schools. Providers no matter if they are private, non-profit, or other school districts should be held to high quality standards. If they don’t perform, they should not have the continued right to serve students.

MYTH: Online schools don’t have to meet the same standards “regular” schools do.

Online schools comply with all the same federal and state laws traditional schools do. They often require additional state oversight including content and course approval. Virtual charters are open to all students by lottery.

DREW

OHIO CONNECTIONS ACADEMY

Drew, 16, is a senior in Greenville, Ohio. He attends Ohio Connections Academy, a full-time online school. Drew is a highly competitive Irish dancer (currently ranked #1 in the world, he notes) and the first person of color ever to win a world title or the All Ireland National title. “Without E-schooling, I don’t believe that I would have achieved these accomplishments,” he writes. Online learning gives Drew the flexibility he needs to train, practice and travel while still receiving an excellent education. “My teachers at OCA are always available to me — just a phone call or email away. They will set up private, live chat lessons where we are able to utilize a white board online so that I can see the work as they walk me through the lesson. Because of the support of the entire staff at OCA, I have been able to maintain a 4.0 grade point average while I chase my dreams. I have recently been accepted into the National Honor Society.” (Source: Adapted from [2/1/2012 Public Testimony to Ohio House of Representatives Education Committee](#))



REALITY

Clearly, a fair amount of myth busting remains necessary to more accurately capture the reality of online learning for students, teachers and the system as a whole. However, just setting the record straight by shattering the most common myths isn't enough. We must also acknowledge the realities as told by the students, teachers, providers and other stakeholders. In doing so, we can determine the strengths within the current online learning ecosystem, begin to identify the challenges that present opportunities for widespread improvement and chart a course for realizing the promise of online learning.

THE REALITY FOR STUDENTS

In November 2011, the U.S. Department of Education's National Center for Education Statistics (NCES) reported that just over half of districts nationwide (55 percent) had students enrolled in distance education courses in the 2010–2011 school year.⁴⁵ The most recent report on student access to online learning is the “Keeping Pace with K–12 Online Learning” report that provides a comprehensive annual picture of the current state of access.⁴⁶ According to “Keeping Pace,” the number of K–12 students currently enrolled across various online education programs is unknown, but estimates are that 5 percent of the total K–12 student population — several

million students — is currently enrolled in at least one online course. About 275,000 of these are students attending full-time online schools. While individual schools collect demographic information, such as number of minority or low-income students served, there is no nation-wide source for such data. As of fall 2012, state virtual schools (such as FLVS) existed in 27 states. Thirty-one states plus Washington, D.C. had at least one full-time online school operating statewide. However, the availability of supplemental online courses across states varies, with states offering courses to some or all students in certain grades. No state currently offers supplemental online courses to all students at all grade levels, although Florida's state law calls for a full range of supplemental and full-time online options to be available to all K–12 students. The

report's "State-level Snapshot of Online Learning Activity" indicates that there are 16 states with full-time online learning available to all students in all three categories — elementary, middle and high school level.⁴⁷

As in traditional school settings, online learning may not be the best learning environment for every student. However, students who have often been unsuccessful or disengaged in a traditional setting may thrive in online schools. According to a report prepared for the U.S. Department of Education, districts monitor student progress in online courses using a number of metrics in addition to final grades, including completion and submission of assignments, interim course grades, attendance reports, log-on activity and time spent online.⁴⁸

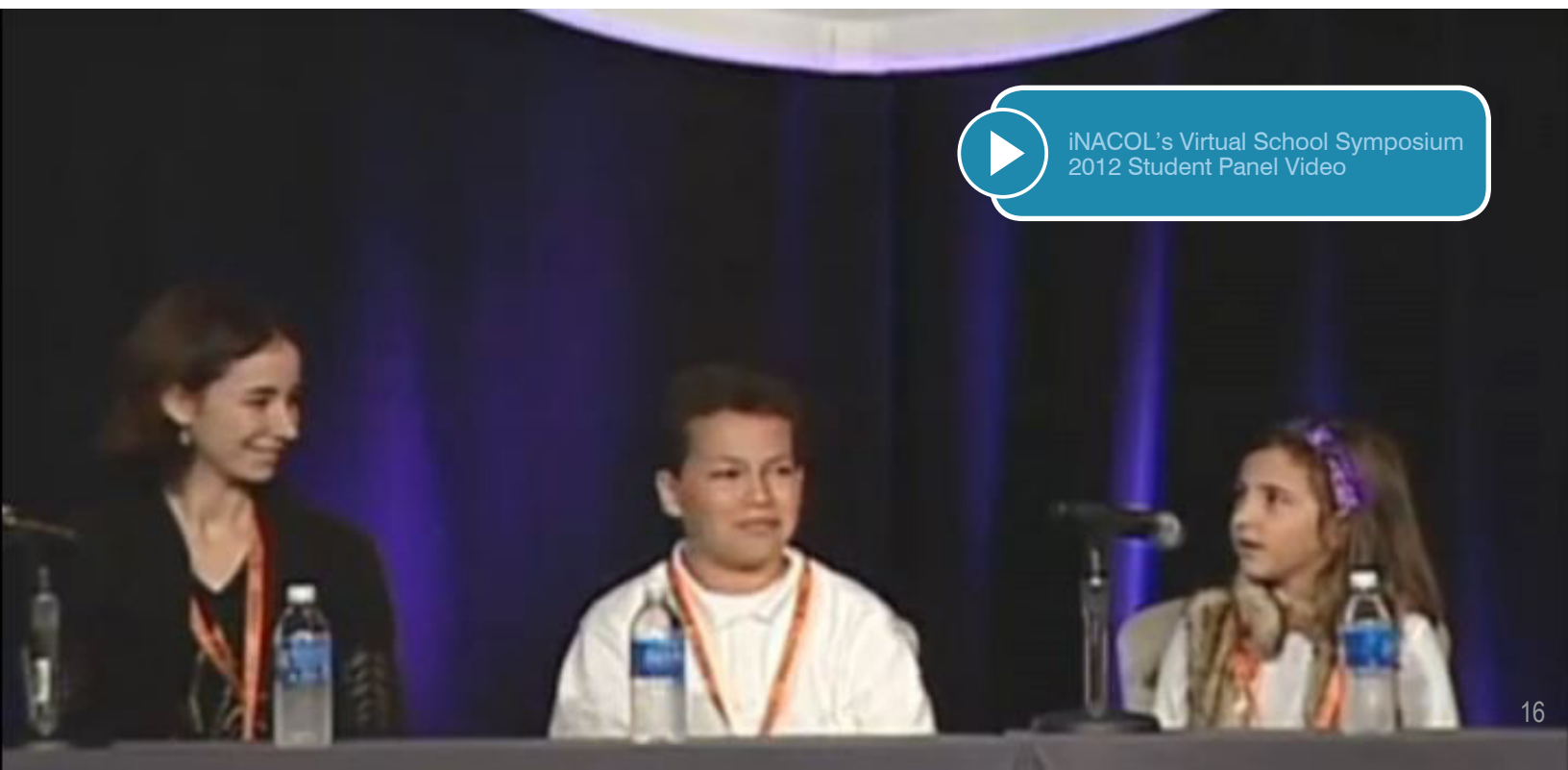
MICHAEL

RIVERSIDE VIRTUAL SCHOOL

Michael came to Riverside Virtual School at the beginning of his ninth grade year. Up until that point, Michael had been homeschooled. His family chose to come to RVS to ensure he had access to Advanced Placement courses and had the opportunity to play sports with his peers. Michael is a gifted tennis player. His plan was to play tennis, study hard and earn his way into an engineering program in college. Michael graduated this month, with a 4.27 GPA and over \$40,000 in scholarship money toward his mechanical engineering degree at California Baptist University. *(Source: Personal Communication, Email interview, June 2013)*



iNACOL's Virtual School Symposium
2012 Student Panel Video



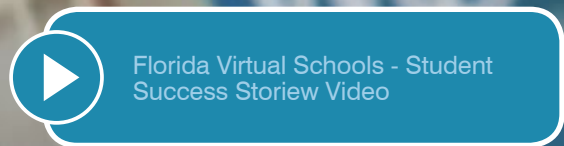
In reality, the same challenges traditional schools face with reaching struggling students are the same as those faced by online providers. Students whose parents do not attend information sessions or meet with teachers withdraw at much higher rates. Students who enroll late can struggle to catch up to their peers and fall further behind. In response, providers are exploring ways to provide students with more supports for success. For example, like traditional schools serving struggling students, some online providers use a double block of math for struggling secondary students and supplement coursework with daily online tutoring.⁴⁹ Opportunities to interact with guidance counselors are important components of online learning programs in Florida, Louisiana and other states.

Powerful Partnerships in Online Learning

Celebrating its 15th anniversary, Florida Virtual School (FLVS) provides online learning to all 67 Florida school districts, all 50 states, and nearly 70 countries.⁵⁰ FLVS serves students from K–12 from public, private, charter and homeschool settings with more than 120 online courses ranging from core academics to credit recovery, electives, foreign language, honors and Advanced Placement. All courses meet or exceed Florida state standards and are currently being aligned to Common Core. FLVS employs more than 125 National Board Certified Teachers, has been the recipient of numerous national and international awards, has garnered praise from the U.S. Department of Education and Southern Regional Education Board, and has earned the highest accreditation rating possible from AdvancED in every category. There are many unique features of FLVS that make it a national exemplar in online learning — including performance-based funding, rolling enrollment and mastery-based learning over seat time.

FLVS shows the power of district partnerships. Miami Dade School District has embraced a “flex model” (characterized as a small individualized school with an online curriculum) that is powered by FLVS content.⁵¹ The district’s iPrep Academies serve students in grades 9–12 with an accelerated high school curriculum in a non-traditional academic setting that utilizes both face-to-face and online instruction. Throughout Miami Dade schools, students log into FLVS courses from online learning labs inside their schools to supplement the courses taught on campus.⁵² There are learning labs in two-thirds of Dade secondary schools and 314 learning labs across Florida —14,000 students enrolled in 23,000 courses.

Like online learners across the country, FLVS students come from all walks of life — from Olympic gold medal gymnast Aly Raisman and “Billy Elliot” Broadway star Ruby Rakos to everyday kids like Aditi Hota who graduated from FLVS and went on to major in mathematics at Harvard. For more student success stories, see video below.



THE REALITY FOR TEACHERS

One of the most prevalent, inaccurate and destructive myths related to online learning is that technology matters more than teaching does.

iNACOL has been confronting this myth head on since the association's inception. In its 2006 [Top Ten Myths about Virtual Schools](#), iNACOL stated that the most important part of online teaching and learning is the quality of the teacher providing instruction online, not the technology. iNACOL reported that online learning is “about curriculum and instruction for students. The “medium” is not the message because the student, instructor, content, and learning goals are key. Networks simply make it possible to provide communication, access to extended resources, and use of sound, graphics, video, text, interactivity, and other digital capabilities to strengthen instruction.”

Years later, teachers are still battling this pervasive myth, although there is growing recognition of the reality for online teachers that it isn't an either/or proposition, but instead teachers use online tools to deliver personalized instruction and to individualize learning for students in ways never before possible.

In [Improving Conditions and Careers](#), the authors contend, “As student roles evolve ... to meet the demands of new college and career-ready standards and the next generation of assessments, there is an unprecedented national opportunity to reimagine and reinvigorate the teaching profession.”⁵³

Specifically, drawing on the work of Public Impact's Opportunity Culture, the authors explore three ways in which digital learning creates these opportunities:

- “Extending the reach” of in-person excellent teachers to more students and to teaching peers;
- Teaching remotely, allowing great teachers to reach students anywhere and to have more flexible careers; and
- Expanding impact through online sharing of teacher-created content (the opportunity for “boundless instruction”).

Online learning creates new opportunities for teachers and new mechanisms for reaching students. Some providers require teachers to work in a central office, while other teachers have the flexibility to telecommute from home. Teachers report that about half of their time is prescheduled with calls, synchronous instruction, class meetings and other online meetings; the other half is tutoring, coaching, grading work and troubleshooting. Some online teachers say they have never worked harder, but they love the flexibility, the collaboration and the difference they make for their students.⁵⁴

Just as online learning isn't for all students, online teaching isn't for all teachers. However, more teachers are turning to online resources for greater portions of their job. A recent survey of teachers found that a majority report participating in an online class for their own professional development.⁵⁵ Most online programs have professional development requirements for their online teachers. In addition, a small number of university teacher preparation programs, nonprofit and for-profit groups, are beginning to develop certificate programs in online teaching and other continuing education options.⁵⁶

CHARIS

MICHIGAN VIRTUAL CHARTER ACADEMY

Charis is a ninth grader at Michigan Virtual Charter Academy in DeWitt, Michigan. Her parents decided to try online education for her and her older brother for one year after the loss of their younger brother to cancer. They've both been attending MVCA ever since. Charis finds her courses at MVCA more challenging than those at her old school, and she enjoys that. She also likes using technology and is self-motivated, so the online setting works well for her. “For my parents, the most difficult part of making the switch to online learning has been to understand their role as learning coaches for my brother and me.” Charis says the best part of switching to online learning for her has been getting one-on-one help from teachers if she needs it — and her parents like the accountability that is built into her program. She has learned to like math and has particularly enjoyed taking Latin and French. “I'm also very social and enjoy the interaction with my teachers and classmates. I've made quite a few new friends!” She adds that online learning is not homeschooling, and she isn't taught by a computer; she has teachers and classmates. Another big plus for Charis is the flexibility of online learning. “I'm a musician, and online learning has allowed me the time and flexibility I need to focus on my music.” (Source: *Personal Communication, Email interview, June 2013*)

EXHIBIT: TOP TEACHERS

The National Online Teacher of the Year award is presented by the Southern Regional Education Board and iNACOL, the International Association for K-12 Online Learning, to recognize teachers “for excellence through achieving success in an online environment.” Since 2010, school administrators have been nominating their excellent online teachers for the award. Nominees must spend at least 85 percent of their online contract time teaching online, and must have taught online for at least three years. Nominees’ students have proven academic success and recognition from students, parents, administrators and professional peers.



Pearson Foundation - A Day in the Life featuring Kristin Kipp

NATIONAL ONLINE TEACHER OF THE YEAR, 2013

RENEE CITLAU

ANAHEIM, CALIFORNIA

Citlau wrote, online learning “expands the school day so that teaching and learning are no longer bound by the constraints of time and location. ... Technology tools help me to differentiate instruction and support student learning. Webinars, mind maps, simulations, threaded discussions, podcasts, videos, and games allow students to learn material in a variety of ways. Through analysis of online assessment data, I modify instruction and develop individualized learning plans for students so that they can learn material at their own pace.”

NATIONAL ONLINE TEACHER OF THE YEAR, 2012

LESLIE FETZER

HOLLY SPRINGS, NORTH CAROLINA

“Teaching for NCVPS [North Carolina Virtual Public School] allows me to reach students not only in my local community and classroom, but across the state in engaging ways. I am able to create a lesson meant for a single student who is challenged to learn. ... Teaching online gives me the advantage of having a repertoire of tools and media that I can use to reach students. I am limited only by my own imagination. Their learning challenges prompt and inspire me to be more imaginative and more creative, and I am more fulfilled for it.” Fetzer is now Policy Director at NCVPS.

NATIONAL ONLINE TEACHER OF THE YEAR, 2011

KRISTIN KIPP

EVERGREEN, COLORADO

Kristin Kipp is a teacher with Education Frontier, Jefferson County’s 21st Century Virtual Academy. She looks at online education through what she calls her three lenses: how students interact with the course, with her as a teacher and with each other/other students. “One thing that I really value is multiple strings of communication.” With online education, Kipp says, “Everybody’s working on his or her own personalized coursework, so kids really can have a personalized experience with exactly what they need.”

Watch [Q&A with Kristin Kipp](#) or her [interview](#) with BlackBoard TV. Check out [a day in her life](#) or her discussion about online education policy with the [Ohio Digital Learning Task Force](#) (at the 10-minute mark).

NATIONAL ONLINE TEACHER OF THE YEAR, 2010

TERESA DOVE

TAZEWELL, VIRGINIA

Teresa Dove, the first National Online Teacher of the Year award recipient, lives in Virginia but teaches math online for Florida Virtual School. Dove has said that teaching online allows her to spend much more time working individually with students; spending time with students only during a traditional class period is “not enough, and our kids deserve better.”

THE REALITIES OF THE SYSTEM

While we've provided evidence that refutes common myths about online learning, there are additional realities of the system that require focused attention to ensure that online learning reaches its full potential.

The 2011 edition of *Keeping Pace* frames the problem like this: "The challenge accepted by many researchers is to change the question from 'does online learning work?' to 'under what conditions does online learning work?'"

Drawing on lessons from the field, it's important to identify what is working and to be candid about what is not so as to build a robust landscape of high-quality online learning opportunities. As with traditional settings, online learning works well for some kids but not as well for others. As in traditional schools, online learners must be supported by high-quality instruction, rigorous standards and meaningful assessments that guide learning. In the absence of these supports, students in an online environment are often destined to the same gaps in performance and achievement that are so prevalent across K–12 education.

Data from sources ranging from leading national providers to individual school programs reveal that to further strengthen online learning opportunities and ensure maximum benefits to students, the field should consider these issues:

Start dates: Late enrollers are a challenge for most online schools, but most large schools have several start dates and three or four cohorts all with the same end date. The last cohort may not have a full load — maybe just two courses for a short semester.

Disengaged students: Like traditional schools, students who engage generally do well, and kids who don't flounder. Engagement is even more important than in a traditional model — lack of engagement is directly related to lack of achievement. Fortunately, the technology platforms that enable online learning can monitor student engagement and help flag students who are not as active with their courses as they should be. In an interview for the *New York Times*, Adrian Guardia, a Texas A&M instructor described noticing a student who was apparently doing well based on his quiz grades. But according to CourseSmart's "engagement index," the student had opened his textbook only once. "It was one of those 'aha' moments," said Mr. Guardia, who is tracking 70 students in three classes. "Are you really learning if you only open the book the night before the test? I knew I had to reach out to him to discuss his studying habits."⁵⁷

While there are clear benefits and opportunities, it is important to acknowledge concerns about the weak performance of some online learning programs and providers. To the extent that some states have experienced weak academic results, they are typically a result of three factors:

- late enrollment by poorly prepared students;
- weak operators; and
- mismatch of programs, assessments and reporting systems.

Strong authorizing, oversight and collection of performance metrics based on student outcomes and growth, rolling enrollment and better information will help address the first two factors. Better and comparable individual student growth measures, entry and exit data on student learning growth and on-demand (or frequently scheduled) systems of assessments for better data will help with the third factor.

Attributes of Next-Generation Learning from a Student's Point of View

- Personalized to my needs and learning goals.
- Flexible so that I can try different ways to learn.
- Interactive and engaging to draw me in.
- Relevant to the life I'd like to lead.
- Paced by my own progress and measured against goals I understand.
- Constantly informed by different ways of demonstrating and measuring my progress.
- Collaborative with faculty, peers, and others; not limited by proximity.
- Responsive and supportive when I need extra help.
- Challenging but achievable, with opportunities to become an expert in an area of interest.
- Available to me as much as it is to every other student.

Source: [*RETHINK: Planning and Designing for K-12 Next Generation Learning*](#)



PROMISE

In *Getting Smart*, Tom Vander Ark noted the three primary advantages of online learning to boost achievement and equity lies in advances in each of these areas.⁵⁸

- **Customization:** adaptive learning (automatically leveled) with individualized pathways;
- **Motivation:** more engaging content with an emphasis on modalities that produce persistence; and
- **Equalization:** 24/7/365 access to quality content and great teachers for all students.

Current trends in K–12 online learning provide evidence that the field is advancing toward solutions that can deliver on the promise of online learning.

PERSONALIZED LEARNING FOR ALL

Perhaps the most compelling reason to champion online learning is its potential to keep students at the center of the educational experience through personalized digital learning.

Participants in a [two-day symposium on system redesign for personalized learning](#) identified these top five essential elements central to personalized learning:⁵⁹

1. Flexible, Anytime/Everywhere Learning.
2. Redefine Teacher Role and Expand “Teacher”.
3. Project-Based/Authentic Learning Opportunities.
4. Student-Driven Learning Path.
5. Mastery/Competency-Based Progression/Pace.

High-quality online learning has the potential to meet these essential elements. The field is beginning to acknowledge this potential.

[The Next Generation Learning Challenge](#), a grant program that will support “breakthrough school models,” lays out the following design principles of personalized learning related to instruction:

- **Student Centered:** Designed to meet the diverse learning needs of each student every day.
- **High Expectations:** Committed to ensuring that every student will meet clearly defined, rigorous standards that will prepare him or her for success in college and career.
- **Self-Pacing and Mastery-Based Credit:** Enables students to move at their own optimal pace and receive credit when they can demonstrate mastery of the material.
- **Blended Instruction:** Optimizes teacher and technology-delivered instruction in group and individual work; we require that at least 25 percent of all students’ core literacy and math learning time be spent using digital content that gives students control over their path and pace.
- **Student Ownership:** Empowers students with skills, information and tools they need to manage their own learning.

Rethinking the design of learning around students has implications for all of education. One exciting implication is the opportunity to create a more coherent educational experience for students. New definitions for coherence, and mechanisms for achieving it, are necessitated by anytime-anywhere, multiple-provider online environments. Creating a coherent experience for students will need to include logical learning progressions along

a series of units/courses, supported by a portable electronic student record and learner profile.⁶⁰

STUDENT ACCESS TO HIGH-QUALITY OPTIONS

If personalized learning opportunities represent the most important aspect of online learning, increased student access to high-quality options is a close second. Online learning reinvents options for kids because it decouples learning from the restrictions of the physical, traditional environment. With online learning, students are no longer bound to the limitations of their own schools and districts. Similarly, schools and districts are able to serve students who have traditionally been outside of their reach — bringing top teachers and courses to students who wouldn’t otherwise have access to them. With a growing set of online course providers both inside and outside of existing school districts, students benefit from a slate of part-time and full-time options and may select the option that best meets their individual learning goals and needs.

Many states are acknowledging the importance of expanding student access to high-quality options by creating course choice policies that extend student access. Examples include Utah, Georgia, Louisiana, Texas, Pennsylvania and Michigan.

TRENDS

There are many exciting trends in K–12 education that represent the potential of online learning to personalize instruction and to empower teachers with new tools to engage students. Developments in tools, platforms and content have created fertile ground for “bottom-up” adoption of resources by savvy teachers, students and families that are finding ways to harness the power of online learning.

FAITH

REYNOLDSBURG HIGH SCHOOL

Faith is a senior at Reynoldsburg High School in Reynoldsburg, Ohio. She is a member of the National Society of High School Scholars and the Reynoldsburg Lady Raiders Track Team and is the executive international learning coordinator of student government. She likes Chinese language and literature, international business and social networking. “Reynoldsburg is a traditional public school that integrates learning technology,” explains Faith. After taking three years of in-class French, Faith decided to try one of the new online language courses her school offered. She chose Chinese, and it was “a breath of fresh air!” Online education allows Faith to focus on athletics and other out-of-school activities in addition to her academic studies. Faith found fellow students also taking classes online and enjoys their study company. “[They] are all determined to get through their studies with fewer outside distractions, more useful study materials and more relevant social networking.” (Source: Adapted from [2/1/2012 Public Testimony to Ohio House of Representatives Education Committee](#))

Districts. The most important trend in K–12 online learning is the speed with which school districts are adopting the strategy to improve the quality and array of options, to control costs and to build sustainability. Research from SREB reveals projects that as many as three-quarters of all public school districts in their member states will offer online options by 2015.⁶¹ Districts are partnering with external providers and becoming providers themselves.⁶² (See the exhibit on page 25 for more information on how to implement online learning.) Recent developments in Philadelphia are indicative of this trend, as evidenced also by large urban districts with virtual schools such as Albuquerque, Denver and Pittsburgh. This fall, the Philadelphia School District will open a new, full-time online school — a program that the district promises “will offer the academic flexibility and customized learning that many students and families demand.”⁶³ iNACOL’s Susan Patrick notes, “Urban districts are attempting to meet many of the same needs that other online programs are, such as providing options for students who have struggled academically or behaviorally in regular schools.”⁶⁴ Education Week reports that, with a targeted enrollment of between 500 and 1,000 students next year, the [Philadelphia Virtual Academy](#) will meet both parent and student demand with “a customized academic schedule” and “a wider range of educational choices for their children, including college-prep and early-college high school options.”⁶⁵

Course Choice. As districts introduce online options, more students are gaining the ability to “self blend” their high school experiences. John Bailey’s recent U.S. House of Representatives testimony outlines how Utah and Louisiana have expanded access to individual online courses. Texas and Michigan recently passed similar legislation, with progress in this area also occurring in Pennsylvania.

Riverside: Building Schools Around Students.

“Keeping Pace” highlights California’s Riverside Unified School District (RUSD) as “a good example of a district with comprehensive online and blended offerings.” Its online program, the [Riverside Virtual School \(RVS\)](#), supports both a full-time student population and a much larger part-time program that offers self-blending options for students in RUSD and across Southern California. The full-time enrollment this past school year peaked at 162 students, in grades 3–12.⁶⁶ At the same time, 4,500 course enrollments were processed for students taking one or two classes in addition to what they were enrolled in at their home school campus. This includes students from RUSD schools, from partner districts via the California Open Campus (CAOC) and through partnerships with private and international school programs. By way of an example, beginning this year, students in a rural school district in the desert area of California had the opportunity to take foreign languages and Advanced Placement (AP) classes for the first time.

Dr. David Haglund, recently named Assistant Superintendent of K–12 Instructional Support, explains, “Schools need to be responsive to the learning needs of students, even when those run contrary to the existing structures. Our job — or at least what students need us to do — is to build a school around each student.”

RVS’s instructional strategies and student supports exemplify Dr. Haglund’s goal. A “BYOS” (build your own school) program is in effect at RVS and in some measure, across RUSD. Each student progresses through his or her program in a manner that is supportive of his or her individual learning needs and objectives. This includes opportunities for students at the virtual school to take a seat-based course or play on a sporting team at the school in their neighborhood. As you might expect in a competency-based program, no two schedules are alike, and forward progress is not bound by time or other arbitrary constraints. When students demonstrate mastery of course content standards — they move on. Under development is a new diploma track that will be completely unbound by time and focused on development of research projects that demonstrate mastery of the CCSS and assist in meeting college entrance requirements for the University of California. A new “Scholars Diploma” will be granted to students who meet the rigorous academic standards and complete a capstone project that is submitted to a panel including representation from business and higher education.

The middle school program is a school-wide AVID (Advancement via Individual Determination) program, which is designed to support college access to traditionally underrepresented student populations. The high school program incorporates AVID as an elective track, and AVID strategies are embedded into all RVS courses. The school site is set up in such a way as to support students in various learning labs, including access to content area experts and tutors. The lab spaces include separate spaces for physical sciences, life sciences, foreign language, kinesiology (PE), reading, drawing and painting, mathematics, writing, social science, media arts, AVID, Cisco Networking, and for academic English learners. Honors and AP science labs are conducted in the science lab facilities at the comprehensive high school campuses. In addition to the learning labs, there are four open-use computer labs on campus, where students can go to find a quiet place to work or sit for assessments.

Legislators and advocates [in Utah] drew upon Digital Learning Now!'s 10 Elements of High Quality Digital Learning to develop a policy that drives choice to the course level where students can select courses offered by multiple public and private providers throughout the state. The law allows dollars to follow students to the course of their choice. Other states are introducing course choice as well, including Michigan and Texas.

Blended Learning. Online learning content and strategies are appearing in classrooms nationwide, making blended learning one of the biggest trends in online learning. New content and platforms are being developed and tested in blended schools. Digital content is replacing textbooks, and much of it was initially used in formal or informal learning online. Flex academies (online learning with onsite support) are popping up everywhere.⁶⁷ Students in these environments benefit from access to online learning with all the custodial benefits and support services of being in a traditional school. Online learning also plays an important role in the shift to competency-based and personalized learning environments.

Competency-Based Learning. Allowing students the flexibility to move ahead when they are ready is essential. Students learn in different ways and at different paces. Online learning should be designed to be competency-based in practice, allowing students to move ahead when they demonstrate mastery and to receive extra help when they need it. Policies need to be designed around competency education and student-centered learning, not seat time. Digital learning and technologies can support systems in which students show what they know to progress to the next level through platforms and e-portfolio systems. Individual pacing, differentiated instruction and personalization are inherent in many

online models — that's why [iNACOL](#) is the leading advocate of competency-based learning. (See [CompetencyWorks](#) for many examples.)

Performance-Based Funding. Florida, Utah, and Louisiana base a portion of funding for online learning upon successful completion. In [Bailey's U.S. House of Representatives testimony](#), he notes that Utah's law "funds success rather than just seat time. A pay-for-performance element allows online-course providers to receive 50 percent of the state's per-pupil funds for a given online course up front and the remaining 50 percent only when a student successfully completes the course." In a recent paper, [Funding Students, Options, and Achievement](#), we recommended that a small portion of funding for all students be used to create incentives for completion and achievement.

College Credit Opportunities. As recently noted, online learning should make it possible for every U.S. high school student to have access to every Advanced Placement course as well as to a range of dual enrollment opportunities.⁶⁸ [Reynoldsburg high school academies](#) (Columbus, Ohio) use MOOCs, online AP and onsite community college courses to expand opportunities to earn college credit.

Parent Groups. It is common for full-time online schools to create or support local communities to provide student and family support and curriculum extensions. There are a handful of parent groups such as the [Treasure Valley Academy Coop](#) in Boise in which parents can share custodial and extracurricular responsibilities. [Arizona Virtual Academy](#) has established numerous community relationships with groups and organizations (YMCAs, and so on) in which full-time or part-time online learning is taking place.

HAMILTON

ECOT

Hamilton, 15, lives in Columbus, Ohio, and is a full-time online junior in the online high school ECOT. She enjoys sports, dance and music and wants to become a surgeon. She and her sister shifted to online learning because the traditional schools in their district didn't have a good reputation. But Hamilton got more than she bargained for. "Little did I know," she said, "digital learning would open more gateways than I could ever have imagined." Online education provides freedom and flexibility. When she finishes her work, she goes skiing or takes an extra day off to rest. Hamilton likes that her teachers are available all day and that they always remember her name. Students interact a great deal during her classes. "This school is not just for dropouts or for the kids who are struggling." She adds, "It is also for the brilliant students who need more intellectual nourishment." (Source: Adapted from [2/1/2012 Public Testimony to Ohio House of Representatives Education Committee](#))

EXHIBIT: HOW TO START ON ONLINE LEARNING PROGRAM

1 Clarify goals

Expand advanced options including AP, dual enrollment, STEM, foreign languages.
Offer students choices and options for courses and services.

Add hard to staff courses.

2 Get to know your state policy

Check out iNACOL's [Statement of Principles for Model Legislation in States](#).

See Digital Learning Now! [Report Card](#).

Read [Keeping Pace](#) profile.

3 Hire the best people

Hire someone with experience to lead the program.

Like traditional delivery, quality depends on great teaching and supports.

4 Consider partners

Consider open educational resources and sharing openly developed content across schools and districts.

Research high capacity national partners that can provide turnkey support or a buffet of content, assessment and technology tools for starting an online learning program.

5 Pick a platform

If you don't rely on a partner, you'll need to pick a learning management system (LMS) and content.

6 Leverage online tools & capacity to blend schools

You may be able to use the LMS, formative assessment tools and the catalog of digital content resources in online learning to power blended classrooms.

7 Staffing

Use iNACOL National Quality Standards for Online Teaching to evaluate professional development offerings for educators; or use these standards to create professional development and training. Consider partnering with a College of Education for providing a license endorsement for online teaching.

Explore staffing course delivery using distributed teaching models online for hard-to-staff courses.

8 Provide guidance on self-blends

Consider making an online class a graduation requirement. Most students will be learning online when they leave high school whether it's in the military, corporate training, or college.

Communicate with guidance counselors about new opportunities to learn online. It's important to provide guidance to students starting in eighth grade about the range of courses offered online in high schools.

9 Marketing

Getting the word out about new learning models is important. What makes your offering distinctive? What supports do you provide for registration, counseling, advising and facilitating courses? Can you offer onsite support—for scheduled times and flexible drop in with one-on-one attention?

10 Budget

Now it's time to build a budget. You'll need at least six months to plan, hire and train staff; and do some marketing.

Consider reallocation of instructional materials line items for technology hardware, software, content and infrastructure.

The largest budget items are people: educators, administration and support staff to run programs.

8 KEY ISSUES WHEN STARTING AN ONLINE LEARNING PROGRAM:



Funding



Policies



Budget/Staffing



Administrative Systems



Curriculum



Teachers



Students



Quality

Source: [iNACOL's How to Start an Online Learning Program](#)

PLANNING FOR QUALITY: 4 FOCUS AREAS

Content

- Acquisition
- Purchase options
- OERs
- Content quality
- District alignment
- Linked to student outcomes

Technology

- Interoperability
- Total Cost of Ownership
- Devices
- Access
- Integration with existing Student Information System (SIS)
- Learning Management System (LMS)

Teaching

- Instructional standards
- Quality PD for current staff
- Teacher recruitment & hiring
- Teacher evaluation strategies
- Teacher support system

Operations

- Facilities
- Student recruitment
- Budget
- Program evaluation
- Strategic planning

Source: Evergreen Education Group's [Keeping Pace with K-12 Online & Blended Learning](#)

iNACOL QUALITY STANDARDS

[National Quality Standards for Online Courses](#)

[National Quality Standards for Online Teaching](#)

[National Quality Standards for Online Programs](#)

[Measuring Quality from Inputs to Outcomes: Performance Metrics for Online Schools](#)

FINAL THOUGHTS

There is no one “right” way to implement online learning. While there may be many paths to a successful online learning program, the focus should remain squarely on student needs and extending their access to high-quality learning opportunities. Always come back to the goal of student learning.



RECOMMENDATIONS

THE REALITY FOR STUDENTS

To provide guidance to state policy makers, DLN was formed in 2010. Two former governors, Jeb Bush and Bob Wise, chaired the policy development process, and 100 national experts were engaged to outline the 10 Elements of High Quality Digital Learning. The framework is a blueprint for state education policy including online learning. Specific recommendations include:

- All students should have full- and part-time access to online learning without caps or barriers and without regard for their previous enrollment status;
- States should support efforts to improve Internet access, both devices and broadband infrastructure;
- Courses should be available on a rolling year-round basis, and end-of-course tests should be available on-demand or frequently scheduled;
- Teachers should have reciprocal and performance-based certification;
- Funding should be weighted, flexible, portable and performance-based;
- States should authorize multiple full- and part-time providers.

The [2012 Digital Learning Report Card](#) reveals that states are making significant progress in advancing reforms that support the 10 Elements, noting that more than 700 bills involving digital learning were considered in 2012 and more than 152 signed into law. Nearly every state enacted a bill that advanced a digital learning policy. (See Appendix B for Digital Learning Legislative Activity in 2011 and 2012.)

AUTHORIZING & INFORMED CHOICES

Charter authorizers should require add/drop periods early in each semester. Authorizers could also encourage online learning providers to set multiple start dates or rolling enrollment systems.

Authorizers and/or providers should make counselors available before and during enrollment period to help students and families understand what taking a course is like. Parents should be required to attend a meeting to discuss enrollment and their responsibility for creating a positive learning environment (if the student will be accessing the course from home). For parents of elementary online learners, acting as a child's "learning coach" takes considerable time. Students spend four to six hours on schoolwork each day and need oversight to make sure they remain on task.⁶⁹

Authorizers and providers can provide more information to parents about utilizing online learning. Minnesota's "iseek education" resource offers [What Parents Need to Know about Online Learning](#) and iNACOL offers a [Parent's Guide](#).

State policy makers should balance efforts to inform choices with access to educational options. Efforts to inform can easily become barriers to access.

States should enter into course reciprocity agreements so provider approvals in one state are deemed approved to serve kids in consortia member states. This would ease the approval burden on states and result in increased efficiency in a landscape with an increasing number of online learning opportunities offered from districts and other non-district providers.

Similarly, teacher certification reciprocity agreements among states will extend student access to top teachers while extending career opportunities for teachers. The [NEA's Online Teaching Guide](#) explains, "Policies that impose unreasonable requirements on qualified online teachers actually reduce the richness and quality of learning available to schools and young learners. For example, some jurisdictions have imposed requirements that restrict online learning opportunities to those led by teachers who hold a valid teaching license from a specific state. Such requirements can unduly constrain student and teacher educational opportunities, reduce potential return on enormous investments in technology and connectivity for improved schooling, and reduce options for this most promising strategy for increasing quality educational opportunities for America's students."

States need to collect better data on enrollments, participation rates, completion rates and outcomes, and data should be published in an Open Data Format (using the [White House's Open Data initiative](#) as suggested guidance).

JORDAN

WINTON WOODS ACADEMY

Jordan is a ninth grader at Winton Woods Academy of Global Studies in Cincinnati, Ohio. "Compared to schools I have been in without much technology, I prefer one with technology because in my experience, the technology has sped up school work, I feel more motivated and it allows variety into a school's curriculum." Jordan's favorite thing about online education is using the Internet to conduct research and communicate with people around the world. (Source: Adapted from [2/1/2012 Public Testimony to Ohio House of Representatives Education Committee](#))

AN AGENDA FOR RESEARCH & DEVELOPMENT

Working with its members, iNACOL recently identified a set of top research needs for the field:

- Influences of policy at national, state and local levels on school design, cost and growth; includes legislation, certification, accreditation and funding models.
- Focus on students and learning regarding what each learner needs in order to succeed.
- Structure and interoperability of student/course/school data systems and reporting to ensure school and program improvement, including instructional feedback and learner support.
- Organizational leadership to foster innovation and a culture of change in online and blended models.
- Teacher preparation and professional development programs to support career-long development of teachers for online and blended teaching.
- Course designs for the range of content demands and student types, including examinations of various pacing, forms of interaction, groupings, etc.
- Examinations of learning assessments aligned with program goals and course objectives, i.e., assess mastery of standards and attain broader competencies needed for career, college and citizenship success; frequency and design of assessments.

To this list, we would add four additional issues that need to be addressed:

- Portable records that follow a student from school to school and grade to grade will improve the ability of providers to personalize learning from day one. (See [Data Backpacks](#) from Digital Learning Now! for more information on portable records.)
- Comprehensive learner profiles and predictive analytics will drive adaptive learning and power customized playlists for each student. (See the [Powering Personalization](#) infographic from Digital Learning Now! for more information on comprehensive learner profiles.)
- Common scales and measures of academic growth will allow comparability across different providers and alignment with state testing systems.⁷¹
- Strong data privacy measures will be needed with shared records. Parents will need to manage privacy settings. As more students take more courses online, it will be necessary to improve identity verification and academic integrity.

iNACOL's [Measuring Quality from Inputs to Outcomes](#) offers advice on creating student performance metrics to assure quality in online schools. The authors explain, "Education leaders in numerous states are considering better approaches to evaluating student performance outcomes. A key starting point for evaluating online schools' effectiveness are measures of proficiency. Beyond proficiency, or how much a student knows at a distinct point of time, there are other measures of student learning that examine a student's growth of knowledge, skills, and deeper learning to prepare them for college and careers over time. Many states are moving toward formally using multiple measures of student learning in assessing outcomes and performance."⁷⁰ The report identifies five outcome-based measures that can be used to move toward evaluate schools and assure quality:

- Proficiency.
- Individual student growth.
- Graduation rate.
- College and career readiness.
- Closing the achievement gap.

EXHIBIT: ASSURING QUALITY IN ONLINE LEARNING

The mission of the International Association for K–12 Online Learning (iNACOL) is “to ensure all students have access to a world-class education and quality online learning opportunities that prepare them for a lifetime of success.” iNACOL publishes standards for online learning, which cover institutions, teaching and learning, support, and evaluation.⁷² iNACOL has also made available a series of videos introducing its quality standards:



ONLINE INTERACTION: Interaction and communication with students in an online educational setting must involve more than recorded lectures and computerized quizzes.



COLLABORATION: Opportunities for students to work with each other are essential for online learning.



DIFFERENTIATION: Online education allows teachers to offer students differentiated instruction that meets their needs: there are multiple paths to the same concepts.



COMMUNICATION: Teachers need to establish a personal connection and open lines of communication with their students.



COURSE STRUCTURE: Organization of courses should help students stay oriented and on track.



FACILITATION: Online courses don’t run automatically; good facilitation is necessary, including orienting students new to online learning.



ASSESSMENTS: Special consideration is required for online assessments to prevent cheating or Googling of answers.



ACCOMMODATION: Students with special learning needs will require online teachers to know their students and to know how to accommodate them.



CONCLUSION

Online learning is growing because it offers a range of benefits to students, families, teachers and schools. The U.S. Department of Education recently noted nine benefits:⁷³

1. Broadening access to quality education, especially for rural schools;
2. Engaging students in active learning, based on learning sciences;
3. Individualizing and differentiating instruction based on student performance on diagnostic assessments and preferred pace of learning, thereby improving the efficiency with which students move through a learning progression;
4. Personalizing learning by building on student interests, which can result in increased student motivation, time on task and ultimately better learning outcomes;
5. Making better use of teacher and student time by automating routine tasks and enabling teacher time to focus on high-value activities;
6. Increasing the rate of student learning by increasing motivation and helping students grasp concepts and demonstrate competency more efficiently;
7. Reducing school-based facilities costs by leveraging home and community spaces in addition to traditional school buildings;
8. Reducing salary costs by transferring some educational activities to computers, by increasing teacher-student ratios or by otherwise redesigning processes that allow for more effective use of teacher time; and
9. Realizing opportunities for economies of scale through reuse of materials and their large-scale distribution.

The shift to digital learning and the transition to a more student-centered system with broader access to options are inevitable. The decade-long transition will be gradual allowing districts time to adjust and add online and blended learning programs. It's not likely that full-time enrollment in online programs will ever reach 10 percent of the student population. However, it's very likely that most high school students will take some of their courses online before the end of the decade. Educational leaders would be wise to begin planning now for these shifts.

If, as a nation, we are to extend the promise of online learning to every student, we have to do more than dispel the current myths. We have to share the stories of successes and failures. We have to find ways to work together to move beyond point solutions to full-scale, integrated systems that prioritize coherent learning experiences for students. We must have the difficult conversations about implications for the preparation and professional development of teachers. We need to work across sectors to address infrastructure and find ways to make online access affordable and available to all. We have to start with students and what they need most— rather than layer technology on top of the same system. We have to stay true to our mission to expand online learning, not because the adjacent district is doing so, but because we know it is matched to the learning goals for our students. We need to stay bold and be daring, so we don't run the risk of replicating the shortcomings of (often ineffective) traditional models in an online environment. We have to open up policy space for foundational conditions for student-centered, personalized learning through competency-based education. In short, there is much work still to be done.

LAUREN

K12/MICHIGAN VIRTUAL ACADEMY

Lauren attends K12/Michigan Virtual Academy from her rural district. She had previously attended two different private schools and public school, but the small city has zero funding for gifted and talented programs at the middle school level. "We had many meetings with the principal and were consistently told there was no funding for a child who needed to advance. We were told it would be nearly impossible to accommodate our daughter's needs," says Lauren's mother, Donna. "In our household, education comes first — above everything else. When you make your child's education the top priority for the whole family, the skills required for online learning fall into place." Those skills, she adds, including independence in managing the curriculum, focusing on a steady work schedule, the initiative to ask questions and long-term goals — college and beyond. At first, Lauren's family was reluctant to try online education due to stereotypes it held. Now, Donna says, "If we sound passionate about it, it's because we are." The best thing about switching to online learning has been "everything" — from the communication about Lauren's progress to the accessibility and attention of teachers and the focus on educational goals. Without peer pressure, Lauren has flourished academically. She then flourished as a person, too. "As parents, we felt an enormous relief for her and her future." Donna says the biggest myth about traditional schools is that the "one-size-fits-all" social environment works for all students. "This is what consistently sold our daughter short. The student who is more introverted, that is a very serious student, who has had academic goals since they were very young — deserves to be served equally. That the student who wants to advance should be allowed to advance and that online learning allows him or her a better chance to grow and develop." Lauren has local friends, but they don't share many interests. She shares more interests with her friends online — she trades English lessons for Chinese lessons and has a friend in Puerto Rico. Her plan is to major in political science and join the U.S. Foreign Service following graduating from college. If she obtains an internship with the Foreign Service, she'll be able to continue studying online. "Without [online learning], there is no way she would be prepared to meet her goals," says Donna. "It would simply have been impossible." (Source: Personal Communication, Email interview, June 2013)

ADDITIONAL INFORMATION:

APPENDIX A: RESOURCES

ONLINE LEARNING RESEARCH & RESOURCES

Babson Survey Research Group, “Going the Distance: Online Education in the United States, 2011” (2011): <http://www.babson.edu/Academics/centers/blank-center/global-research/Documents/going-the-distance.pdf>

Blackboard K12 and Project Tomorrow, “Learning in the 21st Century: A 5-Year Retrospective on the Growth in Online Learning” (2012): http://www.tomorrow.org/speakup/learning21Report_2012_Update.html

Digital Learning Now!’s “Smart Series” reports on online education: <http://www.digitallearningnow.com/dln-smart-series/>

EduStart, LLC report, “Emerging Blended-Learning Models and School Profiles” (2012): <http://www.ghcf.org/default/Documents/Emerging%20BL%20Models%20and%20School%20Profiles%20FINAL%2009.21.12.pdf>

Keeping Pace with K–12 Online & Blended Learning (2012): <http://kpk12.com/reports/>

iNACOL Online Learning Research Database: <http://www.k12onlineresearch.org/index.php/P190>

iNACOL, “Measuring Quality From Inputs to Outcomes: Creating Student Learning Performance Metrics and Quality Assurance for Online Schools” (2012): http://www.inacol.org/cms/wp-content/uploads/2012/11/iNACOL_Quality_Metrics.pdf

iNACOL, “Promising Practices in Online Learning” report series (2008–2009): <http://www.inacol.org/resources/publications/promising-practices/>

iNACOL, “Top Ten Myths About Virtual Schools”: <http://www.inacol.org/cms/wp-content/uploads/2013/04/TenMythsAboutVirtualSchools.pdf>

National Center for Education Evaluation and Regional Assistance report, “Access to Algebra I: The Effects of Online Mathematics for Grade 8 Students” (2011): http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_20124021.pdf

Queen, B., Lewis, L., and Coopersmith, J. “Distance Education Courses for Public Elementary and Secondary School Students: 2009–10.” National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, November 2011: <http://gsehd.gwu.edu/documents/gsehd/resources/gwuohs-onlineresources/reports/ies-nces-distanceeducationcourses-20092010.pdf>

Southern Regional Education Board’s publications on online learning: <http://www.sreb.org/page/1295/>

Tomorrow.org’s report, “Learning in the 21st Century: A 5-Year Retrospective on the Growth in Online Learning” (2012): http://www.tomorrow.org/speakup/learning21Report_2012_Update.html

Tomorrow.org’s report, “Speak Up 2011: National Findings K–12 Educators”: http://www.tomorrow.org/speakup/SU11_May_Report.html

US Department of Education report, “Evaluation of Evidence-Based Practices in Online Learning” (2010): <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

US Department of Education report, “Understanding the Implications of Online Learning for Educational Productivity” (2012): <http://www.sri.com/sites/default/files/publications/implications-online-learning.pdf>

CASE STUDIES AND RESEARCH FROM SPECIFIC ONLINE EDUCATION PROGRAMS

A case study of Dreambox software by Rocketship Education, “Accelerated Learning” (2012): http://www-static.dreambox.com/wp-content/uploads/downloads/pdf/DreamBox_Rocketship_21st_Century_School.pdf

Florida Virtual School’s Policy Brief (2013): http://www.flvs.net/areas/aboutus/Documents/2013_FLVS_Policy_Brief.pdf

K12’s Academic Report (2013): <http://www.k12.com/sites/default/files/pdf/2013-K12-Academic-Report-Feb6-2013.pdf>

The Michael & Susan Dell Foundation, “Blended Learning in Practice” (2012) — a case study of Rocketship Education: http://5a03f68e230384a218e0-938ec019df699e606c950a5614b999bd.r33.cf2.rackcdn.com/msdf-rocketship_04.pdf

Minnesota Department of Education provides many reports on accountability and assessment of its own online education programs: <http://w20.education.state.mn.us/MDEAnalytics/Data.jsp>

Virtual Schooling at the Middle Grades: A Case Study, Journal of Distance Education: <http://www.jofde.ca/index.php/jde/article/view/145/386>

WHERE TO FIND ONLINE EDUCATION PROGRAMS

Keeping Pace’s database of state virtual/online schools: <http://kpk12.com/states/>

The Southern Regional Education Board’s list of state virtual school programs: http://www.sreb.org/page/1331/state_virtual_schools.html

APPENDIX B: DIGITAL LEARNING LEGISLATIVE ACTIVITY

The [2012 Digital Learning Report Card](#) reveals that states are making significant progress in advancing reforms that support the 10 Elements, noting that more than 700 bills involving digital learning were considered in 2012 and more than 152 signed into law. Nearly every state enacted a bill that advanced a digital learning policy.



DIGITAL LEARNING LEGISLATIVE ACTIVITY

Bills considered during each calendar year, the number that died, and the number that were enacted.

2011					2012				
STATE	PENDING	DIED	ENACTED	TOTAL	STATE	PENDING	DIED	ENACTED	TOTAL
AK	-	1	1	2	AK	-	3	1	4
AL	-	11	2	13	AL	-	11	2	28
AR	-	8	5	13	AR	-	-	3	3
AZ	-	14	7	21	AZ	-	13	3	16
CA	-	13	10	23	CA	1	28	9	38
CO	-	1	2	3	CO	-	-	3	3
CT	-	6	4	10	CT	-	3	3	6
DC	-	-	-	0	DC	-	35	1	1
FL	-	31	10	41	FL	-	5	9	44
GA	-	4	4	8	GA	-	5	4	9
HI	-	21	4	25	HI	-	27	1	28
IA	-	26	1	27	IA	-	37	3	40
ID	-	4	4	8	ID	1	3	8	12
IL	-	6	5	11	IL	-	8	1	9
IN	-	10	5	15	IN	-	5	1	6
KS	-	1	2	3	KS	-	32	4	36
KY	-	15	2	17	KY	-	8	4	12
LA	-	5	6	11	LA	-	3	4	7
MA	5	3	1	9	MA	23	-	5	28
MD	-	5	1	6	MD	-	11	6	17
ME	-	2	7	9	ME	-	-	3	3
MI	5	5	3	13	MI	13	-	5	18
MN	-	37	1	38	MN	2	42	3	47
MO	-	11	2	13	MO	-	8	2	10
MS	-	14	1	15	MS	-	25	4	29
MT	-	17	4	21	MT	1	-	-	1
NC	-	12	8	20	NC	-	18	4	22
ND	-	2	3	5	ND	-	-	-	0
NE	-	8	3	11	NE	-	8	1	9
NH	-	2	3	5	NH	-	3	1	4
NJ	-	8	1	9	NJ	16	8	2	26
NM	-	9	4	13	NM	-	9	1	10
NV	-	7	4	11	NV	-	-	-	0
NY	3	2	1	6	NY	42	-	5	47
OH	1	5	3	9	OH	1	-	4	5
OK	-	7	3	10	OK	-	12	4	16
OR	-	12	6	18	OR	-	1	1	2
PA	28	6	2	36	PA	25	1	3	29
RI	-	4	2	6	RI	-	4	4	8
SC	-	2	-	2	SC	-	6	-	6
SD	-	1	1	2	SD	-	-	2	2
TN	-	12	4	15	TN	-	30	4	34
TX	-	38	16	54	TX	-	-	-	0
UT	-	7	2	9	UT	-	9	10	19
VA	-	14	6	20	VA	6	-	7	13
VT	-	4	1	5	VT	-	5	-	5
WA	-	7	5	12	WA	-	26	1	27
WI	-	3	2	5	WI	-	3	1	4
WV	-	11	6	17	WV	-	11	3	14
WY	-	1	-	1	WY	-	1	1	2
TOTALS	42	455	180	677	TOTALS	131	467	151	749



2012 LEGISLATIVE HIGHLIGHTS

Summary of Select Enacted Legislative Highlights and Alignment to the 10 Elements

	1	2	3	4	5	6	7	8	9	10
	STUDENT ELIGIBILITY	STUDENT ACCESS	PERSONALIZED LEARNING	ADVANCEMENT	QUALITY CONTENT	QUALITY INSTRUCTION	QUALITY CHOICES	ASSESSMENT AND ACCOUNTABILITY	FUNDING	DELIVERY
AL HB 165				X						X
AZ SB 1255				X						
AZ SB 1456									X	
AR SR 3										X
CA AB 644										X
CA AB 1246					X					
CO HB 1212		X								
CO HB 1124	X								X	
FL HB 7063	X						X			
FL HB 7059				X						
GA SR 646										
GA HB 175							X		X	
GA SB 289	X							X		
ID SB 1327		X								
ID HB 604									X	
ID HB 626							X			
ID HB 426		X								
ID SB 1328				X						
IA SF 2284	X			X	X	X				
KS HB 2390										X
KY HB 37		X								
LA HB 976			X				X			
ME LD 675		X		X						
ME LD 1422				X						
MD HB 745					X					
MD SB 674						X	X			
MD SB 689	X					X		X	X	
MA HB 4274				X						
MI SB 619	X	X								



	1	2	3	4	5	6	7	8	9	10
	STUDENT ELIGIBILITY	STUDENT ACCESS	PERSONALIZED LEARNING	ADVANCEMENT	QUALITY CONTENT	QUALITY INSTRUCTION	QUALITY CHOICES	ASSESSMENT AND ACCOUNTABILITY	FUNDING	DELIVERY
MI SB 622, SB 623, SB 709, SB 710				X						
MI SB 969, HB 5267				X						
MN HF 2078					X					
MN SF 1528	X					X				
NY AB 10205					X					
OH HB 555		X						X		
OH SB 316				X		X				
OK SB 1816									X	
OK SB 169	X									
PA HB 1901		X				X				
RI SB 2276, HB 7126	X				X					
RI SB 2356										
SD SB 186					X					
TN HB 3062				X		X				
UT SB 286								X		
UT SB 248										X
UT SB 178		X								
UT SB 97					X			X		
UT HB 15					X					
UT SB 213		X								
UT HB 513	X				X					
VA HB 1215							X			
VA HB 578						X				
VA HB 1061	X									
WV SB 0110										X
WV SB 0371								X		
TOTALS	11	10	1	12	10	8	6	6	6	6

AUTHORS BIOS

JOHN BAILEY

Executive Director, Digital Learning Now!

John serves as the Executive Director of Digital Learning Now!, a national initiative of the Foundation for Excellence in Education that works with policy makers and innovators to accelerate the adoption of new models of education. John previously served at the White House as Special Assistant to the President for Domestic Policy during the Bush administration and was the Deputy Policy Director for the U.S. Secretary of Commerce, where he worked on innovation policy. John's experience also includes working at the Bill and Melinda Gates Foundation, where he built a portfolio of advocacy grants to advance college- and career-ready policies. He served as the nation's second director of Educational Technology and has been a formal or informal advisor to three presidential campaigns. He is on the board of directors for the Data Quality Campaign and serves on the regional board for the social innovation fund Indego Africa. He also serves as a senior advisor to Whiteboard Advisors, which provides strategic consulting for investors, philanthropies and entrepreneurs.

SUSAN PATRICK

President & CEO, International Association for K–12 Online Learning (iNACOL)

Susan is the President and Chief Executive Officer of the International Association for K–12 Online Learning (iNACOL). iNACOL is the leading voice for the emerging field of online, blended and competency-based learning. iNACOL serves the field through education and advocacy aimed at building the capacity of policy makers, education leaders and online and blended learning professionals, providing policy advocacy, publishing national quality standards, research on new learning models and shaping the direction of the field as a whole. In 2011, she was named to the International Advisory Board for the European Union program for lifelong learning/virtual education. Susan is the former director of the Office of Educational Technology at the U.S. Department of Education.

CARRI SCHNEIDER

Director of Policy and Research, Getting Smart

Carri is the Director of Policy and Research at Getting Smart. With a background in both policy and practice, she has taught in classrooms from elementary schools to college campuses. Carri served as an online educator from 2005–2012 in a fully online master's program in educational leadership and has authored several pieces on the future of education. She co-edited the book *Building a 21st Century U.S. Education System* with Bob Wehling, published by NCTAF. Carri has been actively involved in supporting education policy efforts to advance digital and blended learning opportunities as a consultant to state and national organizations. She holds an M.Ed. in educational administration and an Ed.D. in urban educational leadership.

TOM VANDER ARK

Author and CEO, Getting Smart

Tom Vander Ark is author of *Getting Smart: How Digital Learning is Changing the World* and CEO of Getting Smart, an education advocacy firm. Tom advocates for innovations that customize and motivate learning and extend access. Tom is also a partner in Learn Capital, an education venture capital firm investing in edtech start-ups. Previously he served as president of the X PRIZE Foundation and was the first executive director of education for the Bill & Melinda Gates Foundation. Tom served as a public school superintendent in Washington State and has extensive private sector experience. A prolific writer and speaker, Tom has published thousands of articles. He writes a daily EdWeek blog, Vander Ark on Innovation, and makes regular contributions to GettingSmart.com. Tom is a director of the International Association for K–12 online Learning (iNACOL) and several other nonprofits. Tom received the Distinguished Achievement Medal and graduated from the Colorado School of Mines. He received his M.B.A. in finance from the University of Denver.

ACKNOWLEDGEMENTS

This paper was based on interviews and conversations with dozens of people in the field of education and online learning. The authors and the organizations they represent would like to acknowledge the support and participation of the following individuals and groups who offered feedback, expertise and insight to advance our work. We also appreciate the interaction regarding these topics on our blogs and various social media channels. Research support provided by Winifred Kehl. Layout and design provided by Kelley Tanner.

DISCLOSURES

Digital Learning Now!, Connections, Dreambox, FLVS, and K12 Inc. are Getting Smart Advocacy Partners. Tom Vander Ark is an iNACOL and AdvancePath director.

Digital Learning Now! is an initiative of the Foundation for Excellence in Education, which is supported by generous contributions from private and family foundations. The Foundation's annual summit is sponsored by foundations and leading providers that share a passion for the Foundation's reform agenda to ignite a movement of reform state by state that transforms an education system to maximize every student's potential for learning and prepares all students for success in the 21st century.

ENDNOTES

1. U.S. Department of Education, Office of Educational Technology, *Transforming American Education: Learning Powered by Technology*, Washington, D.C., 2010.
2. Queen, B., Lewis, L., and Coopersmith, J. "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10." National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, November 2011. http://gsehd.gwu.edu/documents/gsehd/resources/gwuohs-onlineresources/reports/ies-nces_distanceeducationcourses-20092010.pdf
3. Ibid; see Table 14
4. Adapted from iNACOL. "A National Primer on K-12 Online Learning, Version 2." October 2010. http://www.inacol.org/cms/wp-content/uploads/2012/11/iNCL_NationalPrimerv22010-web1.pdf
5. For more on conditions and careers, see: Digital Learning Now. "Improving Conditions and Careers: How Blended Learning Can Improve the Teaching Profession." May 2013. <http://www.digitalllearningnow.com/wp-content/uploads/2013/05/Conditions-and-Careers-Final-Paper1.pdf>
6. Evergreen Education Group. "Keeping Pace with K-12 Online & Blended Learning." 2012. <http://kpk12.com/cms/wp-content/uploads/KeepingPace2012.pdf>
7. Ibid.
8. Babson Survey Research Group. "Going the Distance: Online Education in the United States, 2011." November, 2011. <http://www.babson.edu/Academics/centers/blank-center/global-research/Documents/going-the-distance.pdf>
9. iNACOL website: What Does Online and Blended Learning Look Like? <http://www.onlineprogramhowto.org/decisions/what-does-online-and-blended-learning-look-like/the-dimensions-of-online-and-blended-learning/>
10. See for example: Pennsylvania Department of Education. "Secretary of Education Tells Committee Governor Corbett's Digital Learning Proposal Expands Educational Opportunities for Students." PR Newswire. March 20, 2013. <http://news.yahoo.com/secretary-education-tells-committee-governor-corbetts-digital-learning-174700296.html>
11. See for example: Vander Ark, T. "What's Next? A Flex Plus School Model by Connections Education." *Getting Smart*. November 3, 2012.
12. See: Digital Learning Now. "Improving Conditions and Careers: How Blended Learning Can Improve the Teaching Profession." May 2013. <http://www.digitalllearningnow.com/wp-content/uploads/2013/05/Conditions-and-Careers-Final-Paper1.pdf>
13. See: OpportunityCulture.org (www.OpportunityCulture.org)
14. See: Vander Ark, T. "How Online Learning is Saving and Improving Rural Schools." *Getting Smart*. January 26, 2013. <http://gettingsmart.com/2013/01/how-online-learning-is-saving-and-improving-rural-high-schools/>
15. See: Vander Ark, T. "10 Reasons Every District Should Open a Flex School." *Getting Smart*. May 25, 2012. <http://gettingsmart.com/2012/05/10-reasons-every-district-should-open-a-flex-school/>
16. U.S. Department of Education, Office of Educational Technology. "Understanding the Implications of Online Learning for Educational Productivity." <http://www2.ed.gov/about/offices/list/os/technology/implications-online-learning.pdf> January 2012. This report, prepared for the U.S. Department of Education by SRI International, provides guidance to educators creating online learning programs for secondary schools. It suggests that online learning can lower education costs by making better use of teacher and student time, using home or community spaces in addition to traditional school buildings, and through the reuse and large-scale distribution of materials. It also finds that online learning programs may have higher start-up costs associated with equipment and curriculum development compared to traditional instruction. This description comes from the press release: www.sri.com/newsroom/press-releases/sri-international-releasesreport-us-department-education-costs-and-benefits
17. K12 Inc. "2013 K12 Academic Report." 2013. <http://www.k12.com/sites/default/files/pdf/2013-K12-Academic-Report-Feb6-2013.pdf>
18. "Online Classes Target High School Dropouts." *eSchool News*. <http://www.eschoolnews.com/2013/01/07/online-classes-target-high-school-dropouts/>
19. Evergreen Education Group. "Keeping Pace with K-12 Online & Blended Learning." 2012. <http://kpk12.com/cms/wp-content/uploads/KeepingPace2012.pdf>
20. Vander Ark, T. "Online Partnerships for Elementary Success." *Getting Smart*. October 29, 2010. <http://gettingsmart.com/2010/10/online-partnerships-for-elementary-success/>
21. Florida Virtual School website: Proven Results. <http://www.connectionsacademy.com/florida-virtual-school/proven-results.aspx>
22. Khan Academy Stories Webpage <https://www.khanacademy.org/stories> These letters have been edited for length and clarity.
23. U.S. Department of Education. "Evaluating Online Learning: Challenges and Strategies for Success." 2008. <http://www2.ed.gov/admins/lead/academic/evalonline/evalonline.pdf>

24. iNACOL. "Top Ten Myths About Virtual Schools." (No date.) <http://www.inacol.org/cms/wp-content/uploads/2013/04/TenMythsAboutVirtualSchools.pdf>
25. Florida Virtual School. "Policy Brief 2013." 2013. http://www.flvs.net/areas/aboutus/Documents/2013_FLVS_Policy_Brief.pdf
26. Swanson, K. "What Online Students Want." Getting Smart. January 10, 2012. <http://gettingsmart.com/2012/01/what-online-students-want/>
27. See: Connections Academy website: Online School Clubs and Activities <http://www.connectionsacademy.com/curriculum/clubs-activities.aspx>; and Carbajal, C. "5 Cool Things about Online Education." Getting Smart. February 13, 2012. <http://gettingsmart.com/2012/02/5-cool-things-about-online-education/>
28. Vander Ark, T. "Online Partnerships for Elementary Success." Getting Smart. October 29, 2010. <http://gettingsmart.com/2010/10/online-partnerships-for-elementary-success/>
29. Florida Virtual School. "Policy Brief 2013." 2013. http://www.flvs.net/areas/aboutus/Documents/2013_FLVS_Policy_Brief.pdf
30. iNACOL. "Top Ten Myths About Virtual Schools." (No date.) <http://www.inacol.org/cms/wp-content/uploads/2013/04/TenMythsAboutVirtualSchools.pdf>
31. Ibid.
32. Carbajal, C. "5 Cool Things about Online Education." Getting Smart. February 13, 2012. <http://gettingsmart.com/2012/02/5-cool-things-about-online-education/>
33. Vander Ark, T. "Online Partnerships for Elementary Success." Getting Smart. October 29, 2010. <http://gettingsmart.com/2010/10/online-partnerships-for-elementary-success/>
34. Sproull, N. and Patrick, S. "Does the NCAA Allow Online Courses or Competency-based Education?" *Competency Works*. April 1, 2013. <http://www.competencyworks.org/2013/04/does-the-ncaa-allow-online-courses-or-competency-based-education/>
35. Government Printing Office website: National Defense Authorization Act for Fiscal Year 2012. <http://www.gpo.gov/fdsys/pkg/PLAW-112publ81/html/PLAW-112publ81.htm>
36. iNACOL website: Frequently Asked Questions: Is online learning a lot cheaper than face-to-face instruction?. <http://www.inacol.org/resources/faqs/#cheaper>
37. Evergreen Education Group. "Keeping Pace with K–12 Online & Blended Learning." 2012: p 34. <http://kpk12.com/cms/wp-content/uploads/KeepingPace2012.pdf>
38. U.S. Department of Education. "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies." September 2010. <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
39. Ibid.
40. Department of Education Institute of Education Sciences. "Quick Review of the Report 'Access to Algebra I: The Effects of Online Mathematics for Grade 8 Students.'" March 2012. http://ies.ed.gov/ncee/wwc/pdf/quick_reviews/algebra_032712.pdf
41. Ibid.
42. For example, Rocketship Education is the highest-performing elementary school system in California serving predominantly low-income students (via Keeping Pace); a study from SRI International found: "Rocketship students who had greater access to online math instruction, specifically the DreamBox Learning program, achieved significant gains in overall mathematics scores." See: SRI International. "Evaluation of Rocketship Education's Use of DreamBox Learning's Online Mathematics Program." August 2011. http://www-static.dreambox.com/wp-content/uploads/downloads/pdf/DreamBox_Results_from_SRI_Rocketship_Evaluation.pdf
43. Arkansas Virtual Academy. "University Report Finds Positive Academic Results for Arkansas Virtual Academy." PR Newswire. February 23, 2012. <http://www.prnewswire.com/news-releases/university-report-finds-positive-academic-results-for-arkansas-virtual-academy-140145073.html>
44. Florida Virtual School. "Policy Brief 2013." 2013. http://www.flvs.net/areas/aboutus/Documents/2013_FLVS_Policy_Brief
45. Queen, B., and Lewis, L. "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10 (NCES 2012-008)." U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office. 2011. <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012008>
46. Evergreen Education Group. "Keeping Pace with K-12 Online & Blended Learning." 2012. <http://kpk12.com/cms/wp-content/uploads/KeepingPace2012.pdf>
47. Ibid; see pages 14–16.
48. Queen, B., and Lewis, L. "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10 (NCES 2012-008)." U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office. 2011. <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012008>
49. Vander Ark, T. "K12 Report Shows Growth, Calls for Better Measures." Getting Smart. February 10, 2013. <http://gettingsmart.com/2013/02/k12-report-show-growth-calls-for-better-measures/>
50. Information in this section comes from FLVS policy brief: Florida Virtual School. "Policy Brief 2013." 2013. http://www.flvs.net/areas/aboutus/Documents/2013_FLVS_Policy_Brief

51. Vander Ark, T. "iPrep: The Miami Flex." Getting Smart. October 12, 2012. <http://gettingsmart.com/2012/10/iprep-the-miami-flex/>
52. Vander Ark, T. "Blended Learning Lessons from Miami." Getting Smart. December 21, 2011. <http://gettingsmart.com/2011/12/blended-learning-lessons-from-miami/>
53. Digital Learning Now. "Improving Conditions and Careers: How Blended Learning Can Improve the Teaching Profession." May 2013. <http://www.digitalllearningnow.com/wp-content/uploads/2013/05/Conditions-and-Careers-Final-Paper1.pdf>
54. Vander Ark, T. "Online Partnerships for Elementary Success." Getting Smart. October 29, 2010. <http://gettingsmart.com/2010/10/online-partnerships-for-elementary-success/>
55. Blackboard K12 and Project Tomorrow. "Learning in the 21st Century: A 5 Year Retrospective on the Growth in Online Learning." June 2012. http://www.tomorrow.org/speakup/learning21Report_2012_Update.html
56. iNACOL website: Frequently Asked Questions: Is online learning a lot cheaper than face-to-face instruction?. <http://www.inacol.org/resources/faqs/#cheaper>
57. Streitfeld, D. "Teacher Knows If You've Done the E-Reading." New York Times. April 8, 2013. http://www.nytimes.com/2013/04/09/technology/coursesmart-e-textbooks-track-students-progress-for-teachers.html?pagewanted=all&_r=2&
58. Vander Ark, T. Getting Smart: How Digital Learning is Changing the World. Jossey-Bass 2011.
59. Software & Information Industry Association and Wolf, M. "Innovate to Educate: System [Re]Design for Personalized Learning: A Report from the 2010 Symposium." November, 2010. <http://siii.net/pli/presentations/PerLearnPaper.pdf>
60. Digital Learning Now. "Data Backpacks: Portable Records & Learner Profiles." October 2012. <http://digitalllearningnow.com/wp-content/uploads/2012/10/DLN-Smart-Series-Databack-Final1.pdf>
61. Southern Regional Education Board. "Increasing Online Learning Options for K-12 Students: The Role of School Districts." April 2012. http://publications.sreb.org/2012/12/T01_Inc_Online.pdf
62. For examples, see: Vander Ark, T. "A District Guide to Online Learning." Getting Smart. May 4, 2013. <http://gettingsmart.com/2013/05/a-district-guide-to-online-learning/>; Vander Ark, T. "Q&A With a Rural Superintendent." Education Week. February 7, 2013. http://blogs.edweek.org/edweek/on_innovation/2013/02/qa_with_a_rural_superintendent.html; Williams, S. "Oregon School District Shows Success With Individualized Online Learning." Getting Smart. April 9, 2013. <http://gettingsmart.com/2013/04/oregon-school-district-shows-success-with-individualized-online-learning/>; Belcher, E. and Ryan, T. "Limitless: Education the Reynoldsburg Way." May 2013. http://www.edexcellencemedia.net/publications/2013/20130508-Limitless/Reynoldsburg_Limitless_Final%20%28compressed%29.pdf
63. Cavanagh, S. "Large Urban School Districts Creating Their Own Virtual Schools." Education Week. June 4, 2012. <http://www.edweek.org/ew/articles/2013/06/05/33cities.h32.html?tkn=WMLF91CmCibRnwmPDt7cYtOMdee2yh%2F79WLV&cmp=ENL-EU-NEWS2>
64. Ibid.
65. Ibid.
66. Information in this section sourced from personal communication via email.
67. See: Vander Ark, T. "Nexus Lansing: A New High School Experience." Getting Smart. May 2, 2013. <http://gettingsmart.com/2013/05/nexus-lansing-a-new-high-school-experience/>; Getting Smart Staff. "AdvancePath Boosts Utica Grad Rates." Getting Smart. August 4, 2011. <http://gettingsmart.com/2011/08/advancepath-boosts-utica-grad-rates/>; Vander Ark, T. "10 Reasons Every District Should Open a Flex School." Getting Smart. May 25, 2012. <http://gettingsmart.com/2012/05/10-reasons-every-district-should-open-a-flex-school/>; Vander Ark, T. "Flex Schools Personalize, Enhance and Accelerate Learning." Huffington Post. February 9, 2012. http://www.huffingtonpost.com/tom-vander-ark/flex-schools-personalize_b_1264829.html; Vander Ark, T. "iPrep: The Miami Flex." Getting Smart. October 12, 2012. <http://gettingsmart.com/2012/10/iprep-the-miami-flex/>
68. Vander Ark, T. "Ten Reasons Online Learning Matters." Getting Smart. May 27, 2013.
69. Montana Virtual Academy website: Myths About Online Learning. <http://www.k12.com/mtva/lp/myths-about-online-learning#UVzls5Pkvzw>
70. iNACOL. "Measuring Quality From Inputs to Outcomes: Creating Student Learning Performance Metrics and Quality Assurance for Online Schools." October 2012. http://www.inacol.org/cms/wp-content/uploads/2012/11/iNACOL_Quality_Metrics.pdf
71. See: Vander Ark, T. "A Proposal for Better Growth Measures." Getting Smart. June 6, 2013. <http://gettingsmart.com/2013/06/a-proposal-for-better-growth-measures/>
72. Pape, L., Wicks, M., and the iNACOL Quality Standards for Online Programs Committee. "National Standards for Quality Online Programs." October 2009. <http://www.inacol.org/cms/wp-content/uploads/2013/02/NACOL-Standards-Quality-Online-Programs.pdf>
73. Bakia, M., Shear, L., and Lasseter, A. "Understanding the Implications of Online Learning for Educational Productivity." January 2012. <http://www.sri.com/work/publications/understanding-implications-online-learning-educational-productivity>