K–8 Virtual Schools: A Glimpse Into the Future

Mickey Revenaugh

> **States and school districts are finding that virtual public schools can meet the needs of young students.**
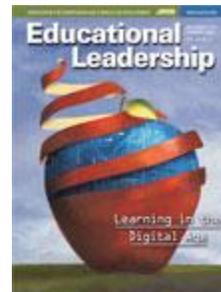
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Rusty is a 5-year-old girl with a weak immune system, vision problems, and physical developmental delays; she's also intellectually advanced. Rusty's Pennsylvania public school has created a learning plan for her that enables her to work at the 1st grade level from home while her peers are making their way through kindergarten. Rusty's mother and teacher converse frequently by phone and even more often by e-mail, comparing notes and sharing strategies for Rusty's success. Rusty regularly does schoolwork in the evenings and on weekends: "She likes school that much," her mother says.

Josh, at age 11, is a champion figure skater. He used to train at 5:00 in the morning and eat his breakfast in the car to fit ice time into his school schedule. But Josh's Arizona public school now lets him focus on schoolwork from 7:00 a.m. to 1:00 p.m., skate uninterrupted all afternoon, and keep up with his classes even when he is on the road competing. Josh's parents and teacher have even decided to let him get up and dance around while he does his lessons, which helps him think. Josh's good grades indicate they're on the right track.

Kati, Kelli, and Kristi are stair-step sisters in 2nd, 4th, and 6th grades, respectively. They all have blonde hair and hazel eyes and are of average intelligence. Each of them learns differently, however: Kati is eager and creative, Kelli is organized and diligent, and Kristi usually needs a push. Because their home is a long bus ride from the closest school, their parents considered homeschooling the girls, but they found the idea of teaching all three overwhelming. This year, the sisters' Wisconsin public school has assigned a certified teacher to each girl and is letting the students learn from home with standards-based curriculums tailored to their individual learning styles.

All of these students are participating in an emerging trend in public education: virtual schooling for grades K–8. Although online university courses have become commonplace and high school students barely bat an eye at the notion of supplementing their schedules with an online calculus or PE class, students in full-time virtual public elementary and middle school programs are still on the frontier.

I know this frontier well, having helped chart it from the earliest days—way back at the turn of the 21st century. Working with Connections Academy, a company that operates virtual public schools under management contracts from charter schools or school districts in 10 states, I have observed firsthand the challenges and opportunities that this groundbreaking form of schooling

presents for U.S. education.

Public Schools Without the Bricks

For many people, the term *virtual school* conjures up visions of a computer-centric program in which students receive their entire curriculum through the Internet. Indeed, some of today's virtual schools offer this model. But more often, schools serving younger learners provide a mixture of online and offline activities, with print textbooks and hands-on materials playing a role equal to that of digital technology. In such schools, the computer functions as a management tool that enables personalization of the program for individual learners and real-time collection and use of student achievement data for deep accountability.

What makes these varied schools *virtual* is the fact that the student and the teacher work in different locations. What makes them *public* is the set of defining characteristics they share with their brick-and-mortar counterparts. Virtual public schools must serve all students who choose to enroll and who are eligible within state guidelines, without regard to ability, previous school performance, or family circumstance. They are available to families at no cost. Like traditional schools, virtual public schools use standards-aligned curriculums, employ certified teachers, and require students to take proctored state standardized tests, often with other students at local school facilities.

As they do in traditional public schools, professional teachers play a central role in K–8 virtual schools, which must meet the same NCLB-defined standards for "highly qualified" teaching staff as any other U.S. public school. That means having the necessary grade-level certifications, as well as subject-area credentials in the upper grades. In virtual middle schools, a student may have separate teachers for math, social studies, science, and language arts as well as a "homeroom" teacher who is the primary point of contact for the family. Homeroom and elementary virtual-school teachers typically have student loads of 40–50 students, but their interactions with students are always one-on-one.

In all K–8 virtual public school programs, a responsible adult, or *learning coach*, works with the certified teacher to implement the student's learning program. Often this learning coach is the student's parent, but grandparents, aunts and uncles, caregivers, and others can also perform this role. Although the teacher creates and grades assignments, modifies lesson plans to meet individual student needs, and determines whether the student is ready to advance to the next unit or grade, the learning coach serves as the student's face-to-face motivator and as the eyes and ears of the school. The learning coach can observe firsthand all the student's interactions with the teacher through e-mail, phone, message board, and mail and has regular conferences with the teacher throughout the year. Teachers new to K–8 virtual schools often remark that their close partnership with families is an unexpected benefit of their new working environment.

Families choose virtual schooling for a wide variety of reasons. Some students are significantly ahead of or behind their peers; others have learning disabilities or physical health issues. Some students were "bully magnets" at their traditional schools; others were the bullies. Families in isolated rural areas may turn to virtual schools because of transportation issues, whereas families in core urban areas may go virtual out of concern for their children's safety. Young actors, athletes, and musicians may choose a virtual school for the scheduling flexibility it offers. Students who simply need more personal attention in their education program often find virtual schools a good fit.

Virtual schooling customizes the school program to meet each student's particular learning needs. Thus, an example of a "typical day" at a virtual school can be rather elusive. One student may concentrate on a single subject for multiple hours, whereas another may change topics frequently and take plenty of breaks. Many students work during typical school hours—Monday through

Friday, early morning through afternoon; others find themselves more productive at night or on weekends. Some learning coaches and students talk to their teachers on the phone several times a day; others communicate purely by e-mail between scheduled phone conferences. "No Such Thing as a Typical Day" suggests the different kinds of schedules that virtual-school students may follow.

No Such Thing as a Typical Day

Emily, Grade 4

Emily starts virtual school at 8:00 a.m. sharp every weekday with an hour of reading/language arts followed by an hour of math. From 10:00 to 11:00, she studies science or state history on alternating days, followed by PE (which could be a bike ride with her dad, who is also her learning coach, or dancing for half an hour to her favorite songs, all logged and reported to her teacher).

After lunch, Emily works on music or art. She ends the day by 1:30 with a half-hour of e-mailing to classmates and posting to the school message boards. Her afternoons are free for her scrap-booking hobby, scout troop meetings, a volunteer visitor gig at the local nursing home, or—best of all, in her opinion—reading the latest chapter book suggested by her teacher for extra credit.

Zack, Grade 8

Zack has never been a morning person, so his virtual-school days—which include Saturdays—rarely start before 10:00 a.m. As Zack's learning coach, his mother uses the early morning weekday hours to take care of such school management tasks as logging the previous day's activities, reviewing Zack's assessment scores, and talking on the phone with Zack's teacher. Once Zack gets rolling, he follows the virtual-school version of block scheduling, with two-hour-plus stints of intensive work on two subjects a day, followed by an hour on an elective, such as Spanish or technology literacy, depending on the day. Friday is a short day, usually just one late-morning math class—but Saturdays are devoted to science because Zack spends his weekends with his father, who happens to be an engineer and shares custody with Zack's mom.

What About Socialization and Diversity?

Some educators worry that virtual schooling will isolate students, sequestering them with their home computers and cutting them off from interaction with their peers and the outside world. High-quality virtual K–8 schools typically address this concern by arranging for frequent school field trips and social activities among families who live near one another. School personnel should also encourage families to continue or expand their children's existing community-based activities—from scouting to youth sports to volunteer programs. For example, by joining a local soccer league, students may receive PE credit for soccer practice and games.

But virtual schools also create communities of a different kind: online communities in which students unite and interact because of common interests rather than mere geography. Statewide

online chess clubs, school newspapers, and Quiz Bowls thrive in virtual schools. Students-only message boards sprout threads about everything from horses to Harry Potter, with posts from all over the United States.

Statistics show that virtual schools attract a cross section of students in terms of ethnicity, home language, socioeconomic status, and special needs. In Connections Academy schools, for example, more than 40 percent of students qualify for free or reduced-price lunch; 20 percent are minorities; 15 percent are special-needs students with individualized education plans; 39 percent live in rural areas; and 14 percent live in the inner city. This diversity creates opportunities to broaden the perspectives of virtual-school students. Young people whose paths might never cross in the traditional school system—for example, the farm boy from southwestern Pennsylvania and the streetwise kid from inner-city Philly—may collaborate on school projects and become online friends.

The Virtual Learning Evolution

In the current school year, full-time virtual schools are among the public school options for grades K–8 in a dozen U.S. states.[1] At least 10 states allow statewide virtual charter schools, which enroll hundreds or even thousands of students and may contract with such providers as Connections Academy for curriculum and technology services; Ohio and Pennsylvania have some of the largest of these "cyber charters." Florida is in its third year of a statewide K–8 virtual pilot program administered directly by the state department of education. In other states, such as Colorado, school districts that develop virtual schools on their own or with the help of a curriculum provider can enroll students statewide.

The total number of virtual schools in the United States is estimated at about 200, up from fewer than a dozen in the 2000–2001 school year. The number is continually growing as states amend their charter school laws to allow virtual charter schools (as Indiana did this year) and open up district-run virtual schools to students across the state (as Washington State has been doing this fall). Individual school districts are also launching small cyber-schools to serve their own students, a move that typically does not require state approval.

In a report issued in fall 2004, *Distance Education Courses for Public Elementary and Secondary School Students*, the National Center for Education Statistics (NCES) estimated that 36 percent of all school districts in the United States had students participating in virtual learning of some kind and that a total of 325,000 students were enrolled in online learning courses and virtual schools. Given that the study focused on data from the 2002–2003 school year, these numbers have certainly grown.

The footprint of K–8 virtual learning in this larger field is still small, however. According to the NCES study, only 3 percent of the enrollments in distance learning courses were by students in elementary and middle school, compared with 68 percent in high school. (The remaining 29 percent are from combined K–12 or ungraded schools.)

As virtual learning evolves, states with significant concentrations of full-time virtual schools struggle to ensure quality and accountability. For example,

- In Ohio this year, lawmakers instituted additional testing requirements for all charter schools but added extra teeth to laws for "e-schools," cutting off funding for students in these schools who fail to make expected gains for multiple years.

- Pennsylvania and Idaho created new state-level approval regulations for statewide virtual charter schools, eliminating the ability of individual districts to create charter schools to serve other districts' students.

- California has created strict budgetary requirements for virtual charter schools, mandating the percentage of per-pupil funds that must be spent on instructional services, teacher salaries, and so on.
- Arizona capped increases in the number of students enrolled at 100 percent annually for each individual virtual public school, although it loosened its requirement that all virtual-school students must have attended public school the previous year. This requirement had blocked homeschoolers and private school students from switching to virtual schools.

Techno-Byte

Seventy-seven percent of U.S. children ages 7–17 lived in households with personal computers in 2003, up from 36 percent in 1994.

—Children's Partnership, 2005

Illuminating the Future

Even the most passionate advocates of virtual schooling readily admit that only a small portion of the K–8 student population will ever partake in this mode of education. Nevertheless, the challenges facing full-time K–8 virtual schooling shed light on some core education issues in the 21st century.

Individualization. Theoretically, each student in a virtual school can have a personalized learning experience that incorporates a unique schedule and curricular mix. If virtual schools can prove that such individualization improves learning, their example could have a profound impact on traditional classrooms, with their ever-increasing computer-to-student ratios. Someday, these computers might be harnessed by the regular classroom teacher to truly differentiate instruction according to each student's needs—for example, by offering five varieties of fast-paced math exercises and another five flavors of step-by-step math tutoring, plus 15 variations on the "main" math activity for the rest of the class, with careful data capture on each student's performance.

Funding. Statewide virtual public schools are currently funded in many different ways. Some of these include full per-pupil funding that follows the student from a brick-and-mortar school to a virtual charter, as in Pennsylvania; fees paid per course by the student's resident district to the district providing the virtual courses, up to a maximum number of courses equaling a full school program, as in Minnesota; or a special flat "virtual-school rate" paid directly by the state, as in Florida. All these funding approaches raise the same question: What should a good education cost when students throughout a state—from the smallest rural community to the toughest urban neighborhood to suburbs of all kinds—enroll in the same school? Meanwhile, advocates of high-quality virtual schooling caution policymakers that virtual learning isn't a bargain route: Good technology, curriculum, and accountability systems require significant investment.

Teaching. Virtual-school teachers create assignments, assess student work, modify the curriculum for individual learners, and even provide direct instruction to students individually or in small groups, but they rarely see their students face-to-face, and they can't look over their students' shoulders as they work. Does this diminish their role as teachers—or actually focus them on the most essential teaching tasks? In regular classrooms as well, although most teachers

will maintain face-to-face interaction with their students, technology may allow a refinement of the teachers' core duties. The experiences of those involved in professional development courses specifically for virtual-school teachers—which are springing up at Boise State University, the University of Maryland, and other institutions—should help shed light on the evolving role of teachers.

During the next decade, as technology enables learning to happen anytime and anywhere, as schools struggle to bring out the best in learners with vastly different backgrounds and abilities, and as parents demand more choices, virtual schools will continue to push the envelope on issues of concern to all schools. As Susan Patrick, former technology chief at the U.S. Department of Education and current CEO of the North American Council for Online Learning, puts it, "Full-time virtual schools show us the future."

Endnote

[1] States that offer full-time K–8 virtual schooling are Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Minnesota, Ohio, Oregon, Pennsylvania, and Wisconsin.

Mickey Revenaugh is Vice President for Partnerships and Outreach at Connections Academy, a provider of services for virtual public schools; 718-294-4495; mrevenaugh@earthlink.net; www.connectionsacademy.com.

School libraries serve an important role; however, elementary students who attend schools online typically do not have a school library. This study followed an online school's inaugural year in... Revenaugh, M. (2005–2006). K-8 virtual schools: A glimpse into the future. Learning in the Digital Age, 63(4), 60–64. Retrieved on 12/11/2014 from http://imoberg.com/files/K-8_Virtual_Schools_--_A_Glimpse_into_the_Future_Revenaugh_M._.pdf. University of Oregon Center on Teaching and Learning. (2011). DIBELS (dynamic indicators of basic early literacy skills).