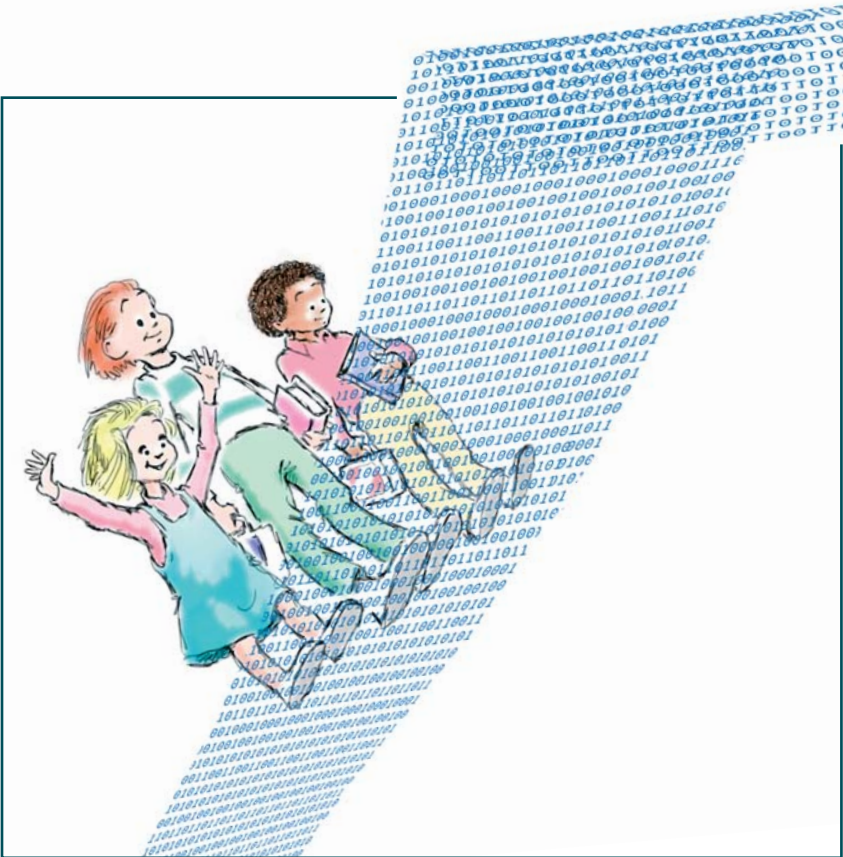


Bit by Bit

Virtual Schools Can Transform Nevada Public Education



by Patrick R. Gibbons

Introduction

Technological innovations rapidly transform the way humans live, work and interact. Computers are not only cheaper today than at any point in history, but also far more powerful. Today we can communicate face-to-face over the Internet almost instantaneously. Social and media networking sites like Facebook, MySpace, YouTube, Skype, Digg and Twitter allow individuals to connect and share information across the globe.

But can the power of technological innovation be harnessed to improve the quality of K-12 learning?

Virtual education . . . most likely will eventually reduce labor, transportation and capital costs for rural and cash-strapped districts.

Today, an estimated 175,000 K-12 students take courses online in over 30 states, including Nevada. Virtual schools target students in need of individualized education, homeschool students, rural students, students who travel because of athletics or students who simply want to catch up or graduate early. Virtual education also serves to supplement courses traditional public schools are unable to offer at a reasonable cost.

Unfortunately, the State of Nevada imposes highly restrictive laws and regulations on charter and virtual schools. In the Silver State, virtual charter schools are prohibited from serving homeschool and private-school students. Not surprisingly these restrictions were pushed through the state legislature at the behest of the Nevada State Education Association (NSEA).

Virtual education may not supplant traditional brick-and-mortar schools in the near future, but it most likely will eventually reduce labor, transportation and capital costs for rural and cash-strapped districts significantly.

Technology and Education

From the beginning of time, technological advancements have improved the human condition. New tools save human labor, making the work we do more productive and causing an increasingly rapid rise in virtually everyone's standard of living.

But can technology improve the quality of public education?

Would-be education reformers have both oversold and underutilized technology, says Larry Cuban, emeritus professor of education at Stanford University and author of *Teachers and Machines: The Classroom Use of Technology Since 1920*. In 1994 just 3 percent of all schools had computer labs. By 2005, 94 percent of American schools had dedicated computer labs.¹ The number of students per computer with Internet access fell as well. In 1998 one computer with Internet access served 12.1 students. By 2005 one such computer served just 3.8 students.²

Unfortunately, this heavy investment in technology did not produce the promised results. Because student achievement across the country has not improved significantly, we can assume either that technology is incapable of improving education or that education authorities improperly sought to employ technology.

The latter position is held by Harvard Business School Professor Clayton M. Christensen and Michael B. Horn, the executive director for education at the Innosight Institute. They believe virtual education is a “disruptive technology,” that is, an innovation that has the potential to completely transform the delivery of education.

Disruptive technologies are innovations that may seem inferior to existing methodologies at first, but nevertheless penetrate the marketplace because they serve needs that the existing technology does not adequately serve. Over time the disruptive technology improves, eventually becoming a superior and cheaper alternative. A classic example of such

disruptive technologies is the transistor, which first was inferior to, but eventually replaced, vacuum-tubes in radios and televisions. Online, the Internet today is replete with disruptive innovations – think, Ebay, Amazon, Netflix and new-media operations – all of which are forcing traditional brick-and-mortar institutions to lose market share.

Consumers almost always benefit from these innovations. We get better service and better products at a lower price. This is happening in education on many different fronts.

Today both public and private colleges offer low-cost distance learning to thousands of students every year across the country. At one end the University of Phoenix offers bachelor and associates degrees to non-traditional students, while some established elite universities like the Massachusetts Institute of Technology and Harvard University simply offer free courses online, but no credits or degrees are awarded. For life-long learners, hundreds of college-level courses are available from the Teaching Company on DVD, CD or audio cassette, with prices starting under \$50. Taught by leading college professors at premier U.S. colleges, the courses generally cover a semester's lectures for dozens of subject areas, spanning the spectrum from history and philosophy to biology, chemistry and cosmology.

At the level of K-12 education, dozens of private firms are creating courses for online distance learning. Companies like Apex Learning, Connections Academies, iQ Academies and K12 offer virtual schooling programs through various state and charter schools across the country. According to Christensen, costs at many online education providers range from \$200 to \$600 per course. Translating into per-student costs ranging from \$2,400 to \$7,200 annually – significantly below the \$10,300 per-pupil national average as of 2007³ – online education is already a significant competitor to today's public schooling model.

In 1965, Intel co-founder Gordon Moore predicted that available computing power – specifically, the number of

transistors on a chip – would double about every two years. For the last 45 years, that prediction has proven amazingly prophetic as the world has received massive technologic performance gains at ever-lower costs, and those gains are almost seamlessly integrated into daily life. Thus, as data sharing and storage become cheaper, swifter, more direct and more interactive, the odds grow ever larger that virtual education will one day replace most traditional public schools.

In the near future, however, how will virtual education fare?

Larry Cuban believes that for the time being, most students in urban school districts will continue to receive their education from brick-and-mortar institutions. He notes, however, that already “cyberschools and distance education have increasingly connected isolated rural students and home-schooled children to resources that were heretofore unavailable to them.”⁴

Terry Moe, political science professor at Stanford, expects most students will soon do “some of their academic course work outside the brick-and-mortar setting” and that “home schooling [will become] a very mainstream activity ... more fully integrated into the larger education system.”⁵ Clayton Christensen predicts that by 2019, 50 percent of courses will be delivered online.⁶

Clayton Christensen predicts that by 2019, 50 percent of courses will be delivered online.

Benefits of Virtual Education

Virtual schools are growing in popularity across America. More than 175,000 students in over 30 states plus the District of Columbia are enrolled in online-learning programs.⁷ Virtual education is rapidly expanding, with many programs growing between 20 and 40 percent each year.⁸ In Utah, for example – a state with a population density similar to that

of Nevada – one-third of students took at least one online course in 2007.

Florida Virtual School is one of the nation’s largest. In 2008-09 the school educated some 84,000 students – about 10 percent of whom were homeschool students.⁹ FLVS is a state-run online school with a unique motto that reflects the flexibility and individualized education that virtual schools can provide: “Any Time, Any Place, Any Path, Any Pace.” Courses take between 16 and 22 weeks to complete and can begin whenever the student wishes.¹⁰ Throughout the work week, teachers are available to students by phone, instant message or e-mail.

April O’Bryan, an English teacher at FLVS, found that when she was at traditional schools she did not have enough time to help students. “A lot of my kids who really, really needed extra help weren’t able to stay after school, and when that bell rang that was it, that’s all the time I had with them,” she told the *St. Petersburg Times*.¹¹ As a virtual-school teacher she makes herself available by phone or e-mail from 6 a.m. to 9 p.m. at night. Not only can she spend more time helping students, she believes the virtual environment enables her to adapt the course to each individual student as well.

FLVS competes directly with traditional public schools for funds but has a performance-based funding model that only pays the school once students successfully complete a course. For the 2008-09 school year FLVS received about \$1,054 per student for each credit completed (courses are in half-credits). Thus, FLVS per-pupil funding in 2009 amounted to about \$6,324 – significantly less than the statewide public school average of \$9,055 per pupil in 2006-07.¹²

Virtual education creates low-cost and personally customizable educational opportunities for students. Many programs allow students to learn at their own pace, on their own schedules, rather than at the pace of classmates or teachers. The online software often is interactive – adding

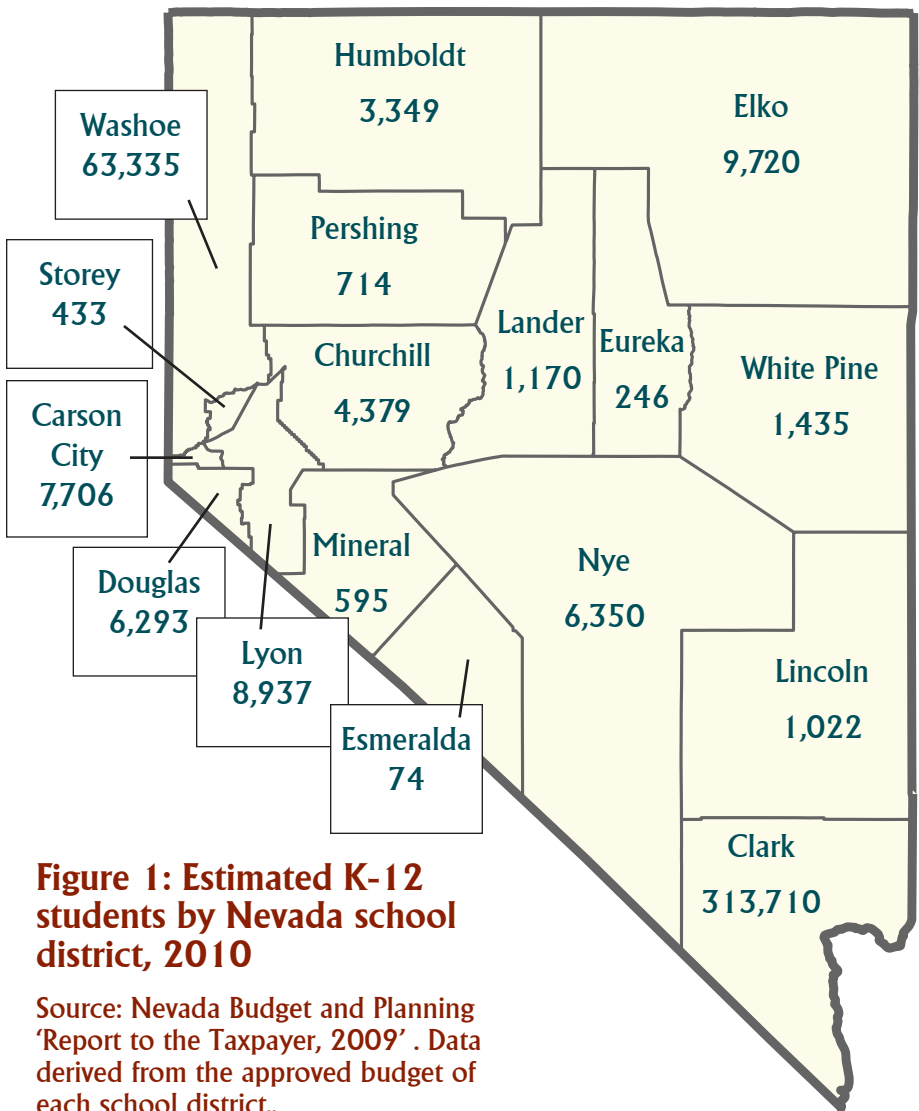


Figure 1: Estimated K-12 students by Nevada school district, 2010

Source: Nevada Budget and Planning 'Report to the Taxpayer, 2009'. Data derived from the approved budget of each school district.

extra educational value as students tackle the prescribed curriculum. Virtual education software is also less expensive to alter and adapt, unlike traditional textbooks, which have high costs for printing, binding and shipping.

For homeschooled or rural-school students, virtual education

brings exceptional value, allowing them access to courses that otherwise would not be available, given the costs of qualified teachers and resource materials. Online distance learning allows students to take college preparatory courses, Advanced Placement and International Baccalaureate honors classes, and highly specialized advanced courses like Mandarin Chinese. This is a powerful benefit, in view of the fact that an estimated 25 percent of public schools today do not offer any advanced courses at all.

Given Nevada’s large but sparsely populated rural school districts, virtual education offers a remarkable prospect of important savings on labor, transportation and capital costs. All

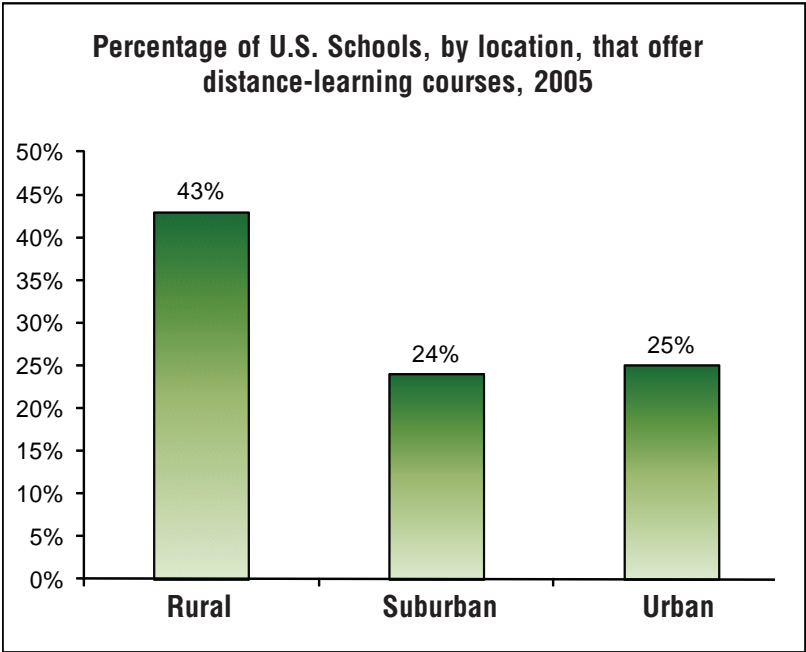


Figure 2: Percentage of U.S. schools, by location, that offer distance learning courses, 2005

Source: National Center for Education Statistics, 2006, “Internet Access in U.S. Public Schools and Classrooms: 1994-2005”

school districts in the state – with the exceptions of Carson City and Douglas and Storey counties – are physically larger than Rhode Island, a state with over a million residents. Elko County is larger than Connecticut and Massachusetts combined, while Nye County, with just 6,350 students, is larger than Rhode Island, Connecticut and Massachusetts combined – three states with a combined population of over 10 million residents.

Rural school districts currently unable to provide broad and diverse course offerings will find distance learning a highly cost-effective alternative to the burdensome pursuit, hiring and retaining of teachers with skills in especially high demand, such as mathematics, science and foreign languages. Essentially, virtual education allows rural schools to provide the same course offerings as larger urban school districts at a fraction of the cost.

Nationwide, rural schools are already more likely to provide online distance learning courses.

Online learning also provides an important alternative or supplement for special-needs students, including even the visually impaired. Educational programs can be written in a way that allows special browsers to literally read to blind students. Although graphics cannot be read aloud, captions fully describing the graphics can provide visually impaired students with much more comprehensive support online than would ever be cost-effective in traditional schools.¹³

Indeed, speaking generally, virtual schooling offers a major level of flexibility. Students may take courses online from home under the supervision of their parents. They may also take courses online at their local school to supplement a limited curriculum. Virtual education may even eventually bring about the return of the locally controlled “one-room school house.” A handful of students of all ages, supervised by an adult, could take courses entirely online from a single building. Parents who cannot stay home to supervise their children would no doubt find this an important benefit.

Student Achievement and Virtual Schools

Virtual education allows students of differing ability to learn on their own time at their own pace. Teaching materials can be tailored quickly to meet the needs and skills of students – unlike textbooks, which carry the high costs associated with printing, binding and shipping.

Technology has already moved well beyond video, now allowing teachers and students to see and interact with each other in real time. Education software is written to continually test and assess the student's ability. For struggling students, the software programs can help the student by directing him to the appropriate pages in his course material, or to additional, amplifying instruction.

Does this individualized, technologically advanced approach to education produce greater student achievement?

Yes, says a 2009 report by SRI International for the U.S. Department of Education. *Evaluation of Evidence-Based Practices in Online Learning* provided a meta-analysis and review of 99 studies comparing online-combined learning (online and offline instruction) and traditional learning (offline instruction). The report concluded that even today there is a statistically modest benefit to receiving instruction online over traditional face-to-face education.

Significant caveats exist, however. Only nine of the 99 studies actually examined students in K-12 online programs. The studies also did not control for variables like curriculum and pedagogy, making it difficult to separate out the impact of online learning from that of other variables.

This means that as of 2009 insufficient evidence existed to assert that K-12 online learning is superior to face-to-face instruction. Given that online learning is a new medium, which is growing and maturing rapidly as education technology develops, this is to be expected. What data exists suggests that virtual schools perform as well as traditional schools, but at significantly less expense.

Challenges to Virtual Education

Technology started making its way into classrooms in the 1980s, but now it is making it possible to take students out of those classrooms. This poses a threat to two frequently opposed groups – teacher unions and certain homeschoolers.

The Home School Legal Defense Fund (HSLDA) has called virtual schools a “Trojan horse” and “an attempt by government to create small public schools in our homes.” Yet many homeschooling parents seem to disagree and like the chance to take advantage of public education curricula that they can supervise at home.¹⁴

Teacher unions have a different reason for opposing virtual schools. As Stanford professor Terry Moe and Edison Schools’ John Chubb point out, unions see virtual schools as a threat. Virtual schools “outsource work to distant locations, allow students and money to leave, substitute capital for labor, and otherwise disrupt the existing job structure.”

Neither Chubb nor Moe believes the unions will succeed in their opposition to virtual schools. “Technology has a far-reaching capacity to transform politics,” they note.¹⁵

Indeed, most union efforts to stop virtual schools through the legal system have so far been unsuccessful. Lawsuits brought by unions against virtual schools have resulted in victory for defendants. State arms of the National Education Association teacher union lost in Pennsylvania in 2003, in Minnesota in 2005 and in Wisconsin in two cases in 2006.¹⁶ However, in late 2007 an appeals court decision threatened to shut down many virtual schools in Wisconsin, ruling that students could not access out-of-district virtual schools via

[M]ost union efforts to stop virtual schools through the legal system have so far been unsuccessful. Lawsuits brought by unions against virtual schools have resulted in victory for defendants.

open enrollment.¹⁷ A politically crafted compromise in 2008 capped the total number of students attending virtual charter schools through Wisconsin’s Open Enrollment Program at 5,250 per year.

Josh Dunn, a professor at the University of Colorado, Colorado Springs, and Martha Derthick, professor emeritus at the University of Virginia, note that union opposition goes far beyond legal arguments about enrollment and funding. Both recognize that virtual schools threaten to upset the lucrative status quo for the teacher unions. “The student-teacher ratio for virtual schools is much higher than the ratio for ‘brick and mortar’ schools, so virtual schools threaten to reduce employment,” they note. Also, because many virtual-school teachers work from home, rather than in a centralized school, the arrangement threatens “to weaken the solidarity of the unionized workforce.”¹⁸

Tellingly, unions are more successful with lawmakers in jurisdictions where union campaign donations can influence policymakers. This may be what happened in Nevada’s 2001 legislative session, when unions sought to prohibit virtual schools from serving students other than those at-risk or with special needs. These severe restrictions failed, but the union did manage to block virtual schools from serving homeschool students.

Virtual Education in Nevada

Virtual charter schools are not allowed to charge any tuition or fees, and must provide the same number of hours of instruction as traditional public schools. They are, however, allowed to set their own calendars to meet that goal.

Because virtual schools are also charter schools, they also must comply with state regulations for charter schools and seek sponsorship from a local school district, college or university, or the Nevada State Board of Education. Sponsors receive a fee from each charter school sponsored, supposedly

to pay the costs of oversight and regulation. Thus the State Board of Education, sponsoring four virtual charter schools, will garner from them an estimated \$269,394 in fees for fiscal year 2010.¹⁹

Virtual schools, under state law, cannot discriminate against students based on race, gender, ethnicity, religion or disability. They must employ state-certified teachers, but instructors and professors from community colleges and universities teaching the same subjects they teach in higher education may also be employed.²⁰ Virtual schools and charter schools are also subjected to the same student testing and assessment requirements as traditional public schools.²¹

Nevada has some of the most oppressive charter school regulations in the nation.

Unfortunately, Nevada has some of the most oppressive charter school regulations in the nation. Silver State charter schools are required to document as many as 32 different reports – some of which must be submitted multiple times. Virtual schools must document a minimum of 216 contacts per student per year, in which teachers must discuss with the student his or her progress. Failure to fully document *each* contact discussion can lose the school the funding for that student for the entire year – a standard far stricter than that to which traditional public schools are held.²² The department of education also takes an overbearing interest in the schools’ yearly budgets, capital expenses, contractual arrangements and teacher résumés. It even requires virtual charter schools to buy a certain minimum number of textbooks and computer software programs each year.

The prohibition preventing Nevada’s virtual charter schools from serving homeschool students was added to the Nevada Revised Statutes in 2001 under SB 399, sponsored by Senator Terry Care (D - Las Vegas), and pushed by the NSEA teacher union.²³ The NSEA wanted to limit distance-learning programs

to students who are “at-risk,” pregnant, self-supporting, with physical or mental handicaps, or who are enrolled in public schools that offer no advanced placement courses. The union also wanted to limit online independent study programs to six credits.²⁴

Vee Wilson from Odyssey Charter School protested, believing the bill would not only limit distance-learning enrollment but even stop students who were credit-deficient from catching up through virtual-education technologies. Lucille Lusk of Nevada Concerned Citizens objected as well. “Limiting distance education to specific risk categories,” she argued, “restricts the potential value of the technology we are developing, and it seems unwise to be this restrictive.”²⁵

The union’s attempts to broadly undercut the fledgling virtual school program most likely stem from the fact that

Per-Pupil Funds, Nevada Virtual/Charter Schools FY 2010

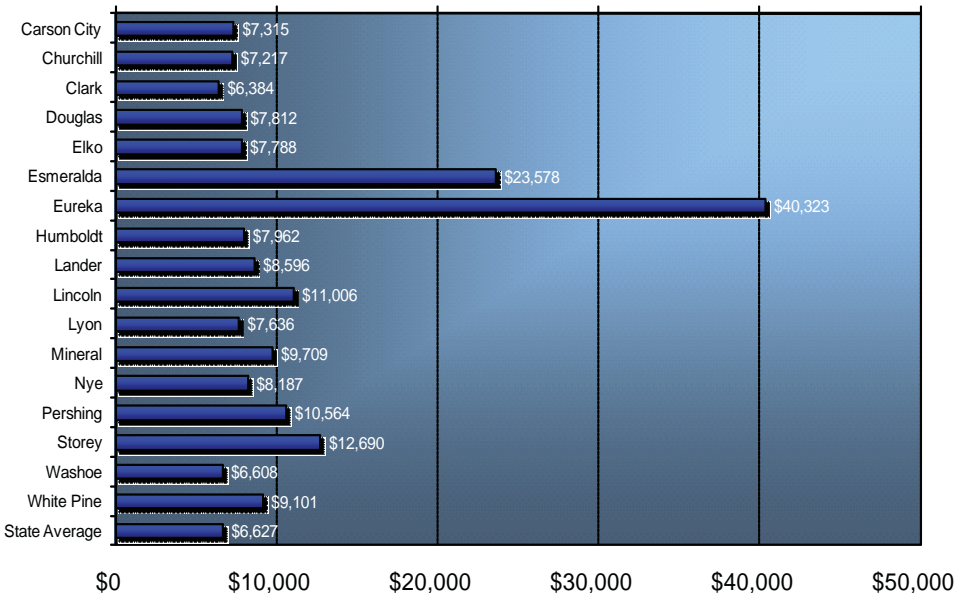


Figure 3: Charter/Virtual School Per-Pupil Funds for FY 2010
Source: Nevada Department of Education DSA-Apportionment Table, FY 2010.

charter schools and virtual schools compete with traditional public schools for students and funds. When a student is enrolled in a virtual school, state and local school-support taxes follow the child to the virtual school, rather than the traditional school.

Those funds, however, do not exhaust all the revenues available to traditional public schools, which include bond revenues and other taxes that support capital projects. For example, although a charter school in Clark County would receive \$6,384 per pupil, the Clark County School District – according to its own account of its operating costs (which do not include capital expenditures and debt repayment) – receives \$7,617 per pupil.²⁶

Perhaps surprisingly, each of Nevada’s 17 counties has at least one student enrolled in a full-time virtual school. A reason for this is Nevada’s funding model, which provides a significant boost in income for virtual schools serving rural students. Each student from Esmeralda, Eureka, Lincoln, Pershing and Storey counties, for example, brings in over \$10,000 to his or her virtual school. Such a high sum may not be necessary, given that virtual schools do not have traditional public schools’ high property and labor costs.

Eureka County, for example, channels so much money for public education that it could provide a virtual school program costing \$7,200 a year for each of the county’s 246 students, buy each student a new computer every year, pay for each student’s Internet access, give each of the county’s 1,600 residents a \$2,000 cash prize – and still the school district would save \$4.5 million a year on K-12 education.

Virtual Schools in Nevada

Nevada has several full-time virtual charter schools, plus several virtual schools operated by various county school districts. For the 2009-10 school year, according to estimates prepared for this report, more than 6,000 children attend virtual schools.²⁷

Full-time virtual charter schools in the state include Beacon Academy, The Delta Academy, Nevada Connections Academy, Nevada Virtual Academy, Odyssey Charter School and Silver State Charter Schools. Online distance-learning programs run by Nevada school districts include Pathways (Nye County School District), Virtual High School (Clark County School District), and Washoe Online Learning for the Future (WOLF), operated by the Washoe County School District.²⁸

Several other school districts – including Churchill, Elko, Lander, Lincoln, Lyon, Pershing and White Pine – offer home-bound and/or alternative schools that utilize online teacher-assisted instruction. These programs are geared for at-risk, pregnant or credit-deficient students, as well as students desiring supplementary curricula unavailable at their local school. Some programs, such as in White Pine County School District, even offer

School District	Students
Carson City	383
Churchill	94
Clark	3,972
Douglas	150
Elko	127
Esmeralda	6
Eureka	5
Humboldt	69
Lander	27
Lincoln	6
Lyon	566
Mineral	1
Nye	321
Pershing	2
Storey	10
Washoe	813
White Pine	26
Statewide	6,578

Figure 4: Estimated student enrollment attending virtual schools fulltime.

Source: Nevada Department of Education, plus reports from individual school districts.

online courses for returning adult students who wish to earn a high school diploma

Each virtual school offers its own unique program and has varying requirements for teacher availability. Some virtual schools, like the Delta Academy, loan computers to low-income families. Beacon Academy, Nevada Connections, Nevada Virtual School, and Silver State High also have loaner computers for students enrolled in their programs. Nevada Connections and Nevada Virtual Academy even offer small subsidies to help families afford an Internet connection.

At several virtual schools – such as Delta Academy, Odyssey Charter and Silver State Charter School – students meet at least once a week with their teacher. Students at Delta and Odyssey meet with teachers between three or four hours each week. Many of the schools arrange for students and teachers to meet face-to-face, even if no regular schedules are required.

Not only do virtual schools provide online education, but resources like reading materials are mailed directly to the students. Nevada Virtual Academy even mails to students bags of rocks and dirt for their science classes.²⁹

Virtual schools also encourage students to network and socialize with each other. Beacon Academy of Nevada operates a program called iQ Academy, featuring iQuad – a social networking site exclusively for Beacon Academy students.³⁰ Virtual schools may also work out voluntary agreements with local public schools so virtual students may enroll in classes like shop, band, theater or even participate on athletic teams.

Nevada Connections Academy, based in Reno, is the largest virtual school in northern Nevada, combining self-paced, or asynchronous, programs with a live virtual classroom

Virtual High School, operated by Clark County School District, educates 156 students full-time and has more than 2,000 students enrolled part-time.

called “LiveLesson” – which allows students and teachers to interact online.³¹ The school even has its own “virtual lab” where students can conduct science labs online – plus its own online clubs for chess, debate, poetry and robotics.

Virtual High School, operated by Clark County School District, educates 156 students full-time and has more than 2,000 students enrolled part-time.³² Washoe On-line Learning for the Future (WOLF), operated by the Washoe County School District, offers more than 100 programs for more than 750 full- and part-time middle and high school students. Teachers at WOLF are available to students by phone, e-mail or instant message every weekday from 4 a.m. to 9 p.m. Technical service and school staff support is available to students and parents 24-7. WOLF offers courses on three schedules – 21 days, 42 days and 63 days. This allows students to complete courses faster than in traditional public schools.³³

Recommendations

Since 1997 Nevada’s virtual school program has rapidly expanded and now serves some 6,000 students in full-time virtual schools. To ensure that full-time and part-time virtual education programs can continue and flourish, the state needs to implement certain reforms:

- Charter schools currently must file up to 32 different reports, many each year and several multiple times a year. This should end. Because parents must choose the charter school and because the school is only funded when students enroll, charter schools are, for all practical purposes, already operating under higher accountability standards than do traditional public schools. Regulators’ only concerns should be that the schools observe generally accepted standards of accounting and fiscal management, how much students learn throughout the year and how many students drop out or graduate. Nevada law should be amended so that good charter

schools are free to operate autonomously without the currently burdensome oversight from the state.³⁴

- Lawmakers should make it easier to create virtual schools by lifting the requirement that the school must have three state-certified teachers on its governing board. This rule is only intended to make it more difficult for prospective virtual schools to form at all. Given the fact that growing research suggests that “paper qualifications have little predictive power in identifying effective teachers,”³⁵ this rule is especially pernicious.
- Charters for charter and virtual schools should be granted on an indefinite basis, only revoked according to the rules set forth in Nevada law (specifically, NRS 386.535). Paperwork compliance with renewal applications is a costly waste of time for school administrators.
- State law requiring that charter and regular schools spend a minimum amount of money each year on textbooks, instructional supplies and computer software should be repealed. This overbearing regulation hurts traditional school finances as much as it does charter schools.
- Virtual charter schools should be allowed to serve homeschool students.
- Currently public school students must get approval of the local school district board of trustees before they can enroll in part-time online distance learning programs. This requirement should be eliminated.
- The Nevada State Board of Education should be directed to continue expanding the list of approved online course vendors eligible to serve Nevada’s virtual school programs.

As online courses are expected to make up some 50 percent of course enrollments by 2020, virtual schools face rapid growth in popularity. The above recommendations can ensure that virtual schools remain a viable, beneficial, cost-

effective education alternative for Silver State parents, children and their communities.

Conclusion

Technological innovations in education already allow the custom-fitting of instructional programs to individuals. Adapting software to the needs of individual students is much less expensive than anything conceivably comparable with traditional print textbooks. Allowing students to learn at their own pace, at any time, and from any place will bring major benefits to Nevada. Slow learners can advance as they are ready, reducing the likelihood they will give up and drop out. Fast learners, on the other hand, can move on quickly to the next subject without becoming bored and without being compelled to move at the pace of the classroom's slowest learners.

Importantly, virtual schools have the potential to make Nevada teachers significantly more productive – allowing them to educate more students, more effectively. Virtual education offers the Silver State the remarkable possibility of reducing labor, capital, debt and transportation costs – while providing quality, personalized instruction for Nevada students.

Virtual schools are a truly 21st Century model for public education.

Appendix

Virtual School Websites

<i>Beacon Academy</i>
www.beaconacademynv.org
<i>The Delta Academy</i>
www.teacherweb.com/NV/DeltaAcademy/ SchoolHomePage/sdhp1.aspx
<i>Elko On-Line</i>
www.elko.k12.nv.us/pages/elko_online.html
<i>Lincoln Academy</i>
www.lincoln.k12.nv.us/LCAHS_revised.pdf
<i>Lyon On-Line</i>
www.lyon.k12.nv.us/html/lyon_on-line.html
<i>Nevada Connections Academy</i>
www.connectionsacademy.com/nevada-school/ free-online-public-school.aspx
<i>Nevada Virtual Academy</i>
www.k12.com/nvva
<i>Odyssey Charter School</i>
www.odysseyk12.org
<i>Pathways</i>
pathways.nye.k12.nv.us/
<i>Silver State Charter School</i>
www.sshs.org
<i>Virtual High School</i>
www.ccsdde.net

Endnotes

- 1 National Center for Education Statistics "Internet Access in U.S. Public School, 2005" p. 4. <http://nces.ed.gov/pubs2007/2007020.pdf>.
- 2 Ibid. p. 7.
- 3 Christensen, Clayton M. and Michael B. Horn "How Do We Transform Our Schools?" Education Next, Summer 2008. http://educationnext.org/files/ednext_20083_12.pdf p. 17. See also the National Center for Education Statistics "Digest for Education Statistics, Table 186" http://nces.ed.gov/programs/digest/d09/tables/dt09_186.asp.
- 4 "Virtual Schools: Will education technology change the nature of learning?" Education Next, Winter 2009. p. 48. http://educationnext.org/files/ednext_20091_42.pdf.
- 5 Ibid, p. 49.
- 6 Christensen, p. 17.
- 7 International Association for K-12 Online Learning, "Fast Facts About Online Learning" http://www.inacol.org/press/docs/nacol_fast_facts.pdf.
- 8 Ibid.
- 9 Tucker, Bill "Florida's Online Option" Education Next, Summer 2009. p. 13. http://educationnext.org/files/ednext_20093_12to18.pdf.
- 10 Ibid. p. 15.
- 11 Kruger, Curtis, "Florida's virtual school thrives" *St. Petersburg Times*, April 7, 2008. <http://www.tampabay.com/news/education/k12/article445689.ece>.
- 12 Tucker, p. 16. See also the National Center for Education Statistics "Digest for Education Statistics, Table 186" http://nces.ed.gov/programs/digest/d09/tables/dt09_186.asp.
- 13 Rose, Raymond and Robert L. Blomeyer. "Access and Equity in Online Classes and Virtual Schools" North American Council for Online Learning.
- 14 Dunn Josh, and Martha Derthick "Virtual Legality" Education Next, Fall 2006. p. 11. http://educationnext.org/files/ednext20064_11.pdf.
- 15 "Virtual Schools: Will education technology change the nature of learning?" p. 52.
- 16 Dunn, p.11.
- 17 Wisconsin Legislative Reference Bureau "Virtual Charter Schools" Legislative Brief 08-6, May 2008. <http://www.legis.state.wi.us/lrb/pubs/Lb/08Lb6.pdf>.
- 18 Ibid.
- 19 Nevada Department of Education's "Distributive Account Apportionment Table."
- 20 See, NRS 388.866-2a <http://leg.state.nv.us/nrs/NRS-388.html#NRS388Sec866>.
- 21 See NRS 389.015 <http://leg.state.nv.us/nrs/NRS-389.html#NRS389Sec015> and NRS 389.550 <http://leg.state.nv.us/nrs/NRS-389.html#NRS389Sec550>. NSEA also intended to limit charter schools to five in Clark County and two in Washoe County, with an unlimited number of charter schools serving at-risk students. These restrictions failed, but NSEA successfully pushed to prohibit existing public schools from applying to become charter schools.
- 22 NRS 387.123(2) requires the state department of education to establish a uniform code for attendance and enrollment, yet the state regulation (NAC 387.193(1)(b)) and the department's non-regulatory guidelines are significantly more demanding, suggesting some level of discrimination against virtual schools. Furthermore, what constitutes "communication" and a discussion of "progress" is unclear in the regulations, leaving interpretation up to state bureaucrats.
- 23 See Senate minutes <http://leg.state.nv.us/71st/Minutes/Senate/HR/Final/768.html>.

Both NRS 386.550 Section 2 and NRS 386.580 Section 5 Subsection C prohibit virtual schools and regular charter schools from serving homeschool students. NRS 386.550 Section 2 also prohibits virtual schools from serving private-school students.

- 24 See Assembly minutes <http://leg.state.nv.us/71st/Minutes/Assembly/ED/Final/1413.html>.
- 25 Ibid.
- 26 See Clark County School District “Fast Facts” <http://www.ccsd.net/news/publications/pdf/CCSDFastFacts.pdf> Note: operating costs do not include capital expenditures and debt repayment.
- 27 Estimations based on the Nevada Department of Education’s “Distributive Account Apportionment Table” using weighted enrollments and interviews with virtual school principals when that data was not available. Pre-K and kindergarten students are counted as .6 students in weighted enrollment. Thus we have an underestimation of the true enrollment in full-time virtual schools. Unfortunately, the state of Nevada does not collect data on students studying online part-time.
- 28 See the Virtual High School website: <http://ccsdde.net/>.
- 29 See Nevada Virtual Academy website: <http://www.k12.com/nvva/>.
- 30 See Beacon Academy of Nevada website: <http://beaconacademynv.org/>.
- 31 See Nevada Connections Academy website: <http://www.connectionsacademy.com/nevada-school/free-online-public-school.aspx>.
- 32 Phone interview with Jami Miller, vice principal of Virtual High School. March 18, 2010.
- 33 See, Washoe On-Line Learning for the Future (WOLF) “FAQ” <http://www.learnwithwolf.com/faq.html#howitworks>.
- 34 See the Charter School Reporting Requirements Manual: <http://nde.doe.nv.gov/SchoolsDistricts/Charter/CharterReportingManual.pdf>. With so many reporting requirements it is no wonder all but one eligible charter sponsor has issued a moratorium on charter school applications. Charter schools are being strangled by unnecessary bureaucratic red tape. Chapters 386, 387 and 388 of the Nevada Revised Statutes thus require revision, as do chapters 386 and 387 of the Nevada Administrative Code.
- 35 Gordon, Robert, Thomas J. Kane and Douglas O. Staiger, Identifying Effective Teachers Using Performance on the Job, Brookings Institution, http://www.brookings.edu/papers/2006/-/media/Files/rc/papers/2006/04education_gordon/200604hamilton_1.pdf.

Patrick R. Gibbons is an education policy analyst at the Nevada Policy Research Institute and the author of *Funding Fantasies: Nevada K-12 education spends more than you think* and, with Matthew Ladner, *Failure Is No Longer an Option: Florida’s Decade of Education Improvement Proves Reform Works*.

The Nevada Policy Research Institute

is an independent research and educational organization dedicated to improving the quality of life for all residents of the Silver State through sound, free-market solutions to state and local policy questions. The Institute assists policy makers, scholars, business people, the media and the public by providing non-partisan analysis of Nevada issues and by broadening the debate on questions that for many years have been dominated by the belief that government intervention should be the default solution.

We Welcome Your Support

The Nevada Policy Research Institute, committed to its independence, neither seeks nor accepts any government funding. A nonprofit, tax-exempt organization established under Section 501(c)(3) of the Internal Revenue Code, the Institute relies solely on the generous support of individuals, foundations and businesses who share a concern for Nevada's future.

For more information, or to make a tax-deductible contribution, please contact:

*The Nevada Policy Research Institute
3155 E. Patrick Lane
Suite 10
Las Vegas, Nevada 89120-3481*

*(702) 222-0642 ♦ Fax (702) 227-0927
www.npri.org ♦ office@npri.org*



May 2010