

Virtual Education and the Liberal Arts

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John Holdren and Bror Saxberg

Holdren is Senior Vice President of Content and Curriculum, and Saxberg is Chief Learning Officer for K12 Inc.

To begin, consider the following two scenarios:

Scenario One: Bekah, a high school junior, plays midfield on the varsity soccer team. The team practices daily, two hours after school—which means that Bekah has to miss drama, because rehearsals conflict with soccer practice. But she loves anything to do with theater, so she’s taking a course in “The American Musical from Cohan to Sondheim.” She can hardly wait to get home and log on—the course is virtual, but her school allows credit for it. Tonight’s lesson consists of some online reading about the revolutionary influence of *Show Boat*, and watching excerpts of the 1951 movie musical on digital video (although Bekah will watch it all—again—for the fourth time), then posting to an online discussion board where other students respond to teacher-assigned prompts about the show’s themes, and occasionally digress on whether Howard Keel is “wonderful!” (as Bekah insists) or “corny” (as Brian complains).

Scenario Two: Ms. Wilson is a fourth-grade public school teacher. Fourth-grade social studies covers state history, but the material in the textbook is neither gripping nor challenging. Before the school year is even half over, she has pretty much covered of all of the subject matter and then some. So she’s teaching her kids some real history—a six-week unit on the Middle Ages and the Renaissance in Europe. (Next six weeks she’ll take them to Feudal Japan and Medieval Africa.) Ms. Wilson, like most teachers, has little time to prepare specialized materials. But her school has subscribed to an online service that offers comprehensive world history lessons geared to the elementary grades. She downloads and prints her teacher guide and some blackline masters of student activity sheets. In class, she connects her laptop to a projector. She logs on and pulls up the lesson on Gutenberg and the invention of the printing press. The text reads like a good story, keeping the students’ interest. Even better, with a single click she can activate animations that show the students how Gutenberg used movable type to print pages—if a picture is worth a thousand words, then moving pictures can be invaluable, especially when available at the click of a mouse.

These scenarios—both based on current fact, not an imagined future—depict two uses of virtual education to enhance liberal arts instruction. Two examples do not seal a case. But they open a window.

What Is Virtual Education?

We'll take for granted the case for the liberal arts in education—that argument has, we hope, been persuasively made by our colleagues throughout this volume. Here, we'll focus on the role of virtual education in enhancing instruction in the liberal arts.

First, what is virtual education? The answer embraces a range of options, evolving even as we write. The common element is the use of technology, particularly the Internet and computers. Technology performs a range of tasks, from delivering content and instruction, to providing tools to track and organize progress through lessons, to giving access to communities of fellow teachers and learners. Many current “virtual schools”—for example, the Florida Virtual School (<http://www.flvs.net/>), which as of 2007 serves more than 30,000 students; the veteran Virtual High School (<http://www.govhs.org/>); or virtual charter schools, such as California Virtual Academy (<http://www.caliva.org/>) or the Agora Cyber Charter School in Pennsylvania (<http://www.agora.org/>)—are, in effect, the high-tech equivalent of correspondence courses, delivering classroom education without the classroom. Students in these virtual schools work in various locations—at home, in libraries, at tutoring centers—and interact with teachers by e-mail, online messaging services, interactive Web-based classes, fax, telephone, face to face at school-sponsored events, and occasionally even through a quaint system called the U.S. Postal Service.

Most virtual education, primarily delivered now at the high school level, occurs in traditional school settings—for example, students might meet during a regular class period during which they log on to the Internet and take an online course, taught by a distant teacher, with a local teacher in the building acting as monitor and providing “tech support” as needed. In other cases, such as the second scenario above, virtual education is a component of instruction within a traditional brick-and-mortar classroom setting—the classroom teacher uses the online content as a resource. A growing number of K–12 students are choosing to pursue their education through full-time public virtual schools, a good fit for many who seek a customized learning program outside the traditional classroom setting.

What Needs Are Met by Virtual Education?

Our educational utopia is *not* the replacement of high-quality instruction in brick-and-mortar classrooms with students staring at three-dimensional simulators hard-wired to their visual cortexes. Virtual education exists to fill specific needs, not to displace or replace the traditional classroom.

Meeting Individual Needs Outside the Classroom. Virtual education provides flexible solutions that can meet the needs of various students. These include students in highly mobile families, such as some military families; students who are distracted in a classroom setting; students who seek more challenging material or an accelerated pace; students who need to slow down the pace to achieve mastery; and students who have trouble “fitting in” at school.

The flexible scheduling offered by most virtual education programs especially benefits students who need more flexible hours and locations. These include, for example, students with complex commitments in athletic or dramatic programs, or home-bound or hospital-bound students.

Access to More Content. With regard to the liberal arts, virtual education can increase access to courses not provided by the local school. Many U.S. high schools, mostly in rural areas, do not offer Advanced Placement (AP) courses. If no regular classroom teacher is available, then virtual classes can help prepare students for AP exams in art history, European history, French literature, German language, human geography, Italian language and culture, Latin literature, psychology, Spanish literature, and Japanese language and culture—to name just some of the College Board’s AP subjects in the liberal arts.

Of course, virtual classes in these and other subjects can be offered at many levels, not just for AP. Virtual education providers already offer a wide range of complete courses, including virtual teacher contact, for courses that don’t have local support or that need to maximize scheduling flexibility. In the liberal arts, such courses include, for example, world history and art programs for elementary schools, or high school courses in the history of photography, Caribbean art history, film and literature, and eastern and western thought, to name just a few.

How Can Virtual Education Enhance Liberal Arts Instruction?

Although virtual education can provide the flexibility to meet individual needs and increase access to a wide range of courses outside the regular classroom, it can also enhance and strengthen liberal arts instruction inside the regular classroom. With the success of e-Rate and other financing mechanisms to bring Internet access and

technology into schools, virtual education can help ensure that all children have access to a rich, varied, and high-quality liberal arts curriculum, regardless of school size or location. And many students, even in impoverished circumstances, now have access to computers and the Internet outside of school.

Meeting the Teacher's Needs. Standardized testing drives teachers in many schools to focus on reading and math. Many of these teachers would welcome a broadening of the curriculum to include more history and the arts. But teachers may not be familiar enough with the liberal arts disciplines to know the key concepts of the subjects. During a typically busy week—especially with a focus on math, reading, and science—they probably have little time to do research and prepare to teach subjects outside their range of expertise.

A practicing teacher needs to know what works and what the most effective approaches are. She needs to have reliable, accurate, and developmentally appropriate materials. Responsibly developed virtual courses (see below) can fulfill these needs by providing on-demand background materials, ready-made lessons and activities, and online communities for teachers whose own training might have been focused more on pedagogical methods than on the liberal arts. Even if only the teacher has online access, she can tap into high-quality, engaging approaches that she may not have the time or background knowledge to develop.

Virtual education providers are already offering or developing the following resources of potential use to classroom teachers who seek to strengthen instruction in the liberal arts:

- Full courses and units for classroom use by teachers, designed to create a flow of activities and understanding that optimizes engagement and mastery, with minimal extra preparation time on the teacher's part.
- Libraries of specific activities and Web-based media keyed to major learning objectives across different grade levels, as well as specific content topics, available "a la carte" online.
- Online materials to complement and extend classroom activities, designed to be accessed from various locations—for example, the library, computer lab, home, or gym—with tools that allow teachers and students to find topics and materials specifically relevant to current class studies.
- Online discussion sessions with experts in specific liberal arts disciplines, using a multiple-chatroom format monitored by teachers to control the flow of questions and respond to needs for information.

- Web-based galleries and literary journals, including monitored commentary by visitors, for different levels and subjects.
- Virtual classroom simulations to be used as training vehicles for weaving liberal arts topics into other studies and to demonstrate effective techniques to increase student interest.
- Online editorial feedback on student essays in progress, provided through centralized, trained graders with systematic controls on quality and marking standards based on a rubric of specific objectives for each assignment.

Media. As bandwidth steadily increases, virtual education can readily deliver media tools that give teachers new ways to engage students in liberal arts content.

A streaming video feed can take students to pyramids in the deserts of Egypt, or inside the halls of the Louvre, or to the steps of the Lincoln Memorial to hear the Reverend Martin Luther King, Jr. deliver his stirring “I have a dream” speech. An online interactive map projected onto a classroom whiteboard can help students understand shifting borders in Europe at the end of World War I. An animation can show how Gutenberg’s printing press worked or can help students see patterns of design in Van Gogh’s “Starry Night.” Online audio can deliver music, poetry, dramatic readings, or editorial commentaries. Online bulletin boards bridge vast gaps of distance and time and allow students to communicate and interact: they can discuss *The Scarlet Letter* or *The Lord of the Rings*, share ideas for producing a play, or collaboratively compose a piece of music.

With sufficient technology—high-speed connections and Webcams at a minimum—classrooms can be connected across schools. Imagine, for example, Mr. Mason’s sophomore English class in Pocatello, Idaho, connecting to Ms. Johnson’s corresponding classroom in the South Bronx, as students in both classes watch students thousands of miles away perform scenes from *Macbeth*, followed by a virtual discussion of their interpretations of the play.

Virtual Professional Development. Media can enhance virtual education, but as Clark and Mayer point out in *E-Learning and the Science of Instruction*,¹ “What we have learned from all the media comparison research is that it’s not the medium, but rather the instructional methods that cause learning.” For this reason, it’s important to apply the power of virtual education to communicate the best instructional methods to teachers by developing virtual professional development in the liberal arts.

Although there are benefits to signing up for an online course in art history or romantic poetry, virtual professional development in the liberal arts for teachers should, ideally, go further. It should provide not only a growing stock of compelling,

engaging content for teachers to enrich their own understanding (and lives), but also training in effective approaches and key concepts in the discipline.

Online professional development can use video and audio to convey inspiring examples of effective liberal arts instruction in a variety of settings. Imagine, for example, clips of “Shakespeare in the inner city” or “Gilbert and Sullivan take on Topeka.” Over time, technological resources can promote online distribution of shared materials and experiences, and as a result give shape and consistency to the work of a growing network of teachers and schools dedicated to implementing creative approaches to effective liberal arts instruction in the classroom.

How Can We Ensure Quality of Content?

As we have learned in our own work in building online courses and content, it is imperative to make sufficient investment to ensure high-quality of content. Some early attempts at virtual education amounted to little more than an individual teacher posting his regular classroom syllabus online, with students doing the reading and occasionally sending papers to the teacher. The quality of such courses varied depending on the teacher’s expertise, and those early courses didn’t take advantage of the online tools and resources that have rapidly developed in the past few years.

Our experience building content suggests a number of steps must be in place to ensure course quality (whether in the liberal arts or other content areas):

- Careful development of scope-and-sequence documents for each course, based on analyses of state standards, reports of national curricular commissions, and relevant international frameworks.
- Articulation of learning objectives as specific knowledge and skills, the mastery of which can be demonstrated or observed in specific ways.
- Academic review of course content to ensure accuracy.
- Expert instructional design to make effective use of media and online tools (including tools for adaptive learning responsive to individual student needs) and to harmonize online and offline learning experiences.
- Careful research in instructional methods, with special care to sift the trendy, subjective *du jour* from the solid, peer-reviewed cognitive science.
- Training and support for teachers delivering online instruction to help them succeed in the online environment—which is not the same as the regular classroom.
- Tools to allow a teacher in a classroom to customize content to meet specific local or individual needs.

- Virtual education, if done responsibly, involves a lot more than a teacher posting his or her syllabus online and waiting for student e-mails.

Public Policy Considerations

Public policy can promote virtual education in general, not only in the liberal arts. We will consider how the federal government, the states, local districts, and philanthropies can help.

The Federal Role. We hear many reports about how ill-prepared students are as voters and citizens, especially in their knowledge of history, geography, economics, and the arts.² The federal government can fund or publicize research to examine how and whether a liberal arts education practically assists the overall mission of creating good citizens.

Because most policies affecting public education are created and implemented at the state and local level, the federal government can help by enacting policies that encourage—or at least do not discourage—states and local districts to implement innovative, high-quality virtual education programs. This effort is partially underway, although more needs to be done. The most recent National Technology Plan, released by the U.S. Department of Education in January 2005,³ calls for the support of e-learning and virtual schools as one of the seven major action steps for states and school districts. The report's recommendations for states, districts, and schools include the following:

- Provide every student with access to e-learning.
- Enable every teacher to participate in e-learning training.
- Encourage the use of e-learning options to meet No Child Left Behind (NCLB) requirements for highly qualified teachers, supplemental services, and parental choice.
- Explore creative ways to fund e-learning opportunities.
- Develop quality measures and accreditation standards for e-learning that mirror those required for course credit.

In 2004, the U.S. Department of Education issued non-regulatory guidance on the public school choice provisions of the NCLB Act.⁴ The Department concluded that virtual schools are a viable alternative for students who are eligible for public school choice opportunities. The Department encouraged school districts seeking education alternatives to consider developing distance learning programs or enter into cooperative agreements with existing virtual schools.⁵

The federal government can continue to play an important role by encouraging states and local governments to increase virtual learning opportunities for K–12 students, and by taking practical steps to champion innovative, high-quality academic outcomes and greater access to virtual education options for all students.

The Role of the States. States should first recognize the growing need and demand for virtual education options among the K–12 student population. U.S. Department of Education statistics report that in 2002–03, there were 328,000 distance education enrollments in K–12 public schools. A report by the Peak Group estimates 500,000 students were enrolled in public online school programs in 2005 and projects enrollments up to 1 million in 2006.⁶

To meet this growing need, states should adopt policies that allow school districts and charter schools to offer online education to students. Policies should enable, and provide equitable funding for, a variety of high-quality public virtual education options, including online course programs that supplement traditional schools, “hybrid schools” in which students receive a mixture of virtual and classroom instruction, and full-time public virtual schools.

States should revise old regulations that do not adequately address the newer world of online learning. Such outdated regulations often frustrate innovation and freeze the state’s education system in obsolete practices, such as outdated attendance policies that require “seat time” in a classroom instead of mastery-based learning documented through the frequent assessments built into quality asynchronous Web-based instructional programs.

States need to recognize the realistic costs involved in operating high-quality public virtual services. Just as states don’t expect merely to pay printing costs for textbooks, states can’t expect to get high-quality, full-time, full-service virtual schools just for the costs of transmitting megabytes. Although public virtual schools do not incur the same costs as traditional schools, there are many common costs (teachers, administrators, books, and supplies). There are also upfront costs unique to virtual education, including computers, technology capabilities, and significant development costs for technology-based curriculum.⁷

Local and Philanthropic Roles. According to the National Technology Plan, local districts need to be willing to undertake a mix of carefully monitored experiments in virtual education, not only in the liberal arts but also across the spectrum—including education at home, in computer lab settings, in the classroom, and in other locations. Local districts should develop efficient ways for families and

teachers to change from one educational environment to another, without being bound by red tape.

Philanthropies can help fund innovative programs. They can provide support to private sector innovators by underwriting initial capital costs and evaluation studies. They can help schools set up virtual programs. Corporate philanthropic organizations founded to help public schools should provide grants that will help enable schools to “go virtual.”

What Are the Major Obstacles?

Certain obstacles must be overcome for virtual education in the liberal arts to thrive and spread. These obstacles are technological, political, and cultural.

Technological Obstacles. Day by day, more and more schools are acquiring the latest generation of high-powered computers and getting access to high-speed Internet service. But there’s still a long way to go.

It’s not just a matter of “going broadband,” although many schools do face bandwidth issues, nor is it a simple issue of replacing technology over time. Basic infrastructure can be a problem. For example, we recently worked with an inner-city school that received federal funding to purchase computers, projectors, “Smartboards” (interactive whiteboards), and high-speed Internet access. But the building’s old electrical wiring could not bear the load—plug it all in, and watch the fuses blow.

Political Obstacles. In one of the oddest examples of “strange bedfellows” in recent memory, teachers unions and organizations representing private homeschoolers have both opposed the growth of virtual education.⁸

Some homeschool organizations have argued that the government will use public virtual schools to take away the right of parents to homeschool their children. But parents have the freedom to choose private homeschooling or public virtual schools, and the existence of public virtual school options has only strengthened the support for choice in education.

Teachers unions have filed a number of lawsuits in different states attempting to shut down public virtual schools. So far, these suits have failed. The courts continue to recognize virtual education as a valid and valuable option for many students.

Cultural Obstacles. Innovation in schools is celebrated more than implemented. Many senior teachers either resist or are befuddled by new technologies. Their students are often more adept in everything from logging on to coding HTML (hypertext markup language). Such teachers need low-pressure training to make

them both comfortable with and competent in the use of tools that their students would eagerly use, given the opportunity.

The testing mandates in NCLB focus on reading, math, and science. As the old saying goes, “What gets tested gets taught.” So the liberal arts get put on the back burner. “We don’t have time,” especially in elementary schools, where teachers typically must “teach it all” rather than specialize in a subject matter. After all, they say, “We have to keep up the test scores.”

True. But reading scores—especially after fourth grade, when reading skills go beyond mechanical decoding to include more comprehension and interpretation—depend in part on the student having a broad range of assumed background knowledge. Reading comprehension passages on standardized tests often assume background knowledge in the liberal arts. For example, when a test confronts a student with a passage comparing two generals, Grant and Lee, and then poses questions to check the student’s comprehension, the student who brings to the test a store of background knowledge about the Civil War is better prepared to answer those questions than the student who is reading about Grant and Lee for the first time.⁹

A Powerful Combination

In *How People Learn*, John Bransford observes that “technology can help to create an active environment in which students not only solve problems, but also find their own problems.”¹⁰ We think the technology of virtual education, in its various manifestations, combined with the rich content of the liberal arts, will give students, families, educators, and administrators compelling ways to define and solve problems, and thus help educate “productive citizens for a free society.”¹¹

Endnotes

- ¹ Ruth Clark and Richard E. Mayer, *e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning* (San Francisco: Pfeiffer, 2002).
- ² See, for example, Diane Ravitch and Chester E. Finn, Jr., *What Do Our Seventeen-Year-Olds Know? A Report on the First National Assessment of History and Literature* (New York: Harper and Row, 1987).
- ³ Available at http://www.ed.gov/about/offices/list/os/technology/plan/2004/site/docs_and_pdf/National_Education_Technology_Plan_2004.pdf (accessed 12-1-06).
- ⁴ Available at <http://www.ed.gov/policy/elsec/guid/schoolchoiceguid.pdf> (accessed 12-1-06).
- ⁵ The U.S. Department of Education’s conclusion was reinforced in a 2004 report on the relationship between virtual schools and NCLB. The authors conclude the following: “Virtual schools

are an acceptable, legal option for districts and states seeking to increase their capacity to meet the choice requirements of the No Child Left Behind Act. Research demonstrates that they can offer high-quality instruction to K-12 learners regardless of location, family income, background, or learning differences.” Hassel, Bryan C.; Terrell, Michelle Godard, “How Can Virtual Schools Be a Vibrant Part of Meeting the Choice Provisions of the No Child Left Behind Act?”, 2004, in U.S. Department of Education Secretary’s No Child Left Behind Leadership Summit, “Increasing Options Through e-Learning.”

- ⁶ Cited in “NACOL Fast Facts,” available at http://www.nacol.org/media/nacol_fast_facts.pdf (accessed 12-1-06).
- ⁷ A 2006 report prepared for the Bell South Foundation by Augenblich, Palaich, & Associates, titled, “Costs and Funding of Virtual Schools,” notes that “operating costs of an online program are about the same as costs of operating brick-and-mortar schools.” Available at <http://nacol.org/docs/Costs&Funding.pdf>.
- ⁸ See Josh Dunn and Martha Derthick, “Virtual Legality: Unions and Home Schoolers Attack Internet Education,” *Education Next* no. 4 (2006), available at <http://www.hoover.org/publications/ednext/3854252.html>.
- ⁹ For an explanation of the research linking broad background knowledge to advanced literacy, see E. D. Hirsch, Jr. *The Knowledge Deficit: Closing the Shocking Education Gap for American Children* (Boston: Houghton Mifflin, 2006).
- ¹⁰ National Research Council (U.S.) Committee on Learning Research and Educational Practice, eds. John Bransford, Ann L. Brown, and Rodney R. Cocking, *How People Learn: Brain, Mind, Experience, and School: Expanded Edition* (Washington D.C.: National Academies Press, 2000).
- ¹¹ Dana Gioia, chair, National Endowment for the Arts, from a presentation made at the “Beyond the Basics” conference sponsored by the Thomas B. Fordham Foundation, Washington D.C., December 12, 2006.