SPOTLIGHT ARTICLE

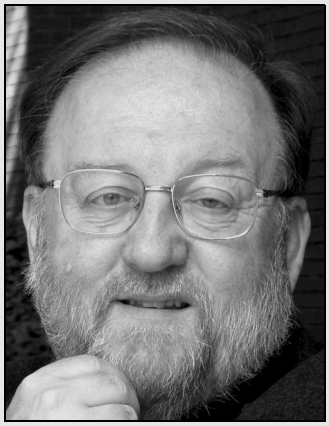
Virtual Schools

What Every Superintendent Needs to Know

Zane Berge and Tom Clark

In the future, the issues will be centered on how to use the innovation of online learning to solve the bigger problems in K–12 education: how to offer a world-class education for every student, how to improve teaching and course quality, how to move to performance- and competency-based models of learning, how to ensure every student is college-ready, and how to scale the delivery model for all students. (Patrick, 2008, p. 28)

Over the past decade, the number of virtual schools has increased dramatically. Additionally, access to full-time, online, and K-12 online learning opportunities have expanded, especially for elementary and middle grades. Watson (2008) found that 44 of the 50 states reported online learning opportunities for K-12 students, and more than half of these 44 reported K-8 options. As little as 5 years ago, supplemental high school courses were the primary type of K-12 online learning, in terms of course enrollments. In 2008, a total of 21 states reported full-time, public virtual schools, usually charter schools. Enrollments have grown rapidly as well. Picciano and Seaman (2009) esti-



Zane L. Berge,
University of Maryland Baltimore County.
E-mail: berge@umbc.edu

Tom Clark,
President, TA Consulting.
Web: taconsulting@yahoo.com

mated over one million enrollments in K-12 online courses in 2008. Watson (2008) estimated 450,000 course enrollments in K-8 virtual schools alone, based on full-time enrollment numbers.

A *virtual school* refers to any K-12, online learning program offered by an educational organization in which students can earn credit toward graduation or toward promotion to the next grade. *Online learning* here means educational courses delivered through the Internet or using Web-based methods either in real-time (synchronously) or asynchronously. The terms *virtual school* and *K-12 online learning program* are used synonymously in this article.

Characteristics and Purposes of Virtual Schools

Virtual schools have various characteristics, all of which have implications for funding, policymaking, and practice. For instance, virtual schools may offer full-time or supplemental learning opportunities, or both. They may be set up to serve students within a school or district, a region, statewide, or nationally. They may use rolling enrollment or fixed calendar schedules. Virtual schools may use synchronous or asynchronous instructional methods, or a combination of these delivery systems. Online learning programs can also be classified based on operational control, such as state-led, university, charter, consortia, private, or district programs. Virtual schools can be developed locally or outsourced to various vendors.

Newman, Stein, and Trask (2003) propose four broad components of a virtual school: technology, curriculum, instruction, and administration. Essential aspects of these components include an online learning management system (LMS), course content and instructional services delivered via this LMS, and administrative functions such as supervision and evaluation.

Purposes of Virtual Schools

Virtual schools may serve many different purposes. According to Watson (2008), a virtual school can:

- Increase the range of courses/programs that any single school can offer students, including international baccalaureate (IB) and advanced placement (AP), and college courses. This is especially true for small and rural schools;
- Offer flexibility and improved use of time to students who have scheduling conflicts, are at-risk, are home schooled, have dropped out of school, are homebound, or others with unique circumstances, such as athletes;
- Help meet the goal of teaching twenty-first century technology literacy skills across the curriculum; and
- Provide qualified teachers in subject areas where highly qualified teachers are lacking.

Another key reason for offering a virtual school is to expand school choice. Under No Child Left Behind, K-12 online learning may be offered as a Supplemental Educational Services option or as an alternative public school option. States also promote virtual schools as a choice. A total of 40 states and the District of Columbia permit charter schools (U. S. Department of Education, 2007), and many of these states permit virtual charter schools as an option. Many of these characteristics vary by state. In Florida, HB 2067 mandated in-district provision of a K through 12 online learning program by all public school districts as an option.

Still, parents, educators, and policymakers often ask serious questions such as why should we consider a virtual school? What is the demand for such offerings? Are virtual schools worth the effort and costs involved? What impact does K–12 online learning programs have on student achievement? Should online educational programs be used as a supplement to in-

person classes, or for full programs of study? What are the effective models of virtual schools and how can they be sustained? While these are valid issues worthy of discussion, the public dialogue tends to focus on preconceptions that people have about the nature of K-12 online learning. Watson (2008) identifies three common misunderstandings:

- *Online learning is "teacher-less."* In reality, online learners in a public school program must be taught by a certified teacher. Good online teachers have regular interaction with their students, provide constructive feedback, and stay in touch with parents. Effective virtual schools provide training, mentoring, and monitoring to encourage such practices.
- *Online courses are easy.* Many students and schools expect online course to be easy, which contributes to high initial dropout rates and mis-assignment to courses. Online public school courses must be aligned to state standards, and many have challenging content. The sheer volume of work, if not performed at a steady pace, can overwhelm students who lack the necessary time management skills. Many students do better with external pacing and encouragement.
- *Online students are shortchanged on socialization.* This is especially a concern expressed about those studying at home in a full-time, online program. However, these students often participate in extracurricular activities sponsored by their district of residence. The virtual school arranges field trips and social events, and parents form their own networks. It is impossible to conclusively prove or disprove such socialization concerns.

As the title of this article suggests, our focus here is on what superintendents need to know. Since the superintendent is the chief administrative officer of a K-12 school district, the thrust of this article involves *district-level, virtual schools*. It is concerned both with policy issues and the practical issues involved with teaching and learning within their jurisdiction. Parents, students, and teachers have important questions when contemplating virtual schools. However, the scope of this article is limited to discussions of selected issues from the perspective of district-level administrators and managers of virtual schools.

Financing the Local Virtual School—Costs and Funding

It is typical for a school district to use multiple online learning course providers, such as state-led virtual schools, postsecondary institutions, and the district itself (Picciano & Seaman, 2009). Course providers differ in their costs. Generally speaking, funding for virtual schools varies from state to state. There has been some money from grants and foundations, but mostly funding depends upon who is providing the courses. States have five primary options for funding virtual schools: (1) state appropriation, (2) a funding formula tied to full-time equivalent (FTE) public school funding, (3) course fees, (4) no state role, or (5) a combination approach. Charter virtual schools are usually funded like any other charter school in the state. Similarly, district-level online virtual schools are usually funded by the public school financing provided to the district, often based on the number of students attending the district schools. Despite the perceptions of policymakers that virtual schools are less costly, the costs of different types of virtual schools vary, and overall are similar to those of brick-and-mortar schools. However, full-time virtual schools are more costly (Augenblick, Palich, & Associates, 2006).

Watson (2008) points out that two important aspects of funding virtual schools in a state have to do with whether

state law allows students to choose online courses or not, and whether the state funding for virtual school students is at a level similar to traditional schools. The virtual schools showing the most growth in full-time programs are in states where the money follows the student, and the student has a choice of a school in any district in the state. So, essentially, state legislatures determine through their policies the funding, the growth rate, and what choices students and parents have within the state's virtual schools.

For any group of district-level administrators considering virtual programs, a big set of financial issues surround the question of *where* virtual schooling will take place. For example, who will pay for computers and supporting technologies? Who will maintain that technology? Who will supervise online students, especially if virtual schooling takes place in the brick and mortar school?

Standards and Quality within the Virtual School

As virtual schools and online learning in K-12 have expanded, efforts have begun to develop standards for the field in the areas of online courses and teaching. Over the past 3-4 years, several organizations have distributed sets of standards based on best practices in K-12 online education. These standards can be used by districts to examine the quality of online courses and instruction whether the component is provided by a vendor or by the district itself.

Quality Online Courses

Several well-known organizations have published standards to help local educational agencies judge the quality of virtual schools. For example, in 2006, the National Educational Association (NEA, 2006) published the *Guide to Online High School Courses,* which addressed important issues when developing, managing, and participating in virtual schools.

The Southern Regional Education Board (SREB, 2006) published the *Standards for Quality Online Courses* to examine what a quality online course consists of and to specific standards for course content, instructional design, student assessment, technology, and course evaluation and management stating:

> Several issues should be factored into setting appropriate standards for quality online courses. The courses must include rigorous content that is aligned with the state's academic standards and that enables teachers to adjust the scope and sequence of instruction to meet students' academic and learning needs. Ease of use is also important so students can focus on the content of the course and not be unnecessarily distracted by extraneous information or graphic displays. In keeping with what is known about the importance of interaction between students and their teacher and among students, the courses should provide as many options as possible to facilitate interaction. Assessments—both student self-assessments and teacher assessments of student progress—should be built into each course. (p. 2)

Subsequently, the North American Council for Online Learning (NACOL, 2008) published the *National Standards of Quality for Online Courses.* After conducting a comprehensive review of course standards, NACOL used the SREB *Standards for Quality Online Courses* (SREB, 2006), added a standard for twenty-first century skills, and adapted these as the national standards.

Without reproducing the NACOL *Standards* here, the following are selected items to give the reader an idea of the scope of the standards:

Content

- The course goals and objectives are measurable and clearly state what the participants will know or be able to do at the end of the course.
- Information literacy and communication skills are incorporated and taught as an integral part of the curriculum.

Instructional Design

- Course design reflects a clear understanding of student needs, and incorporates varied ways to learn and multiple levels of mastery of the curriculum.
- The course provides opportunities for students to engage in higher-order thinking, critical-reasoning activities and thinking in increasingly complex ways.

Student Assessment

- Student evaluation strategies are consistent with course goals and objectives, representative of the scope of the course and clearly stated.
- Assessment strategies and tools make the student continuously aware of his/her progress in class and mastery of the content beyond letter grades.

Technology

- The course makes maximum use of the capabilities of the online medium and makes resources available by alternative means; e.g., video, CDs and podcasts.
- The course meets universal design principles, Section 508 standards and World Wide Web Consortium (W3C) guidelines to ensure access for all students.

Course Evaluation and Management

- The results of peer review and student evaluations of courses are available.
- The teacher meets the professional teaching standard established by a state licensing agency or the teacher has academic credentials in the field in which he or she is teaching and has been trained to teach online and to use the course.

Twenty-First Century Skills

- The course intentionally emphasizes twenty-first century skills in the course, including using twenty-first century skills in the core subjects, twenty-first century content, learning and thinking skills, information and communication technology (ICT) literacy, self-directed learning, global awareness, and includes twenty-first century assessments, as identified by the Partnership for 21st Century Skills.

Quality Teaching

There are some unique aspects of teaching online. The most unique may be that teachers and students may rarely or never see one another. This requires teaching and learning to be technologically mediated, and heavy reliance on written communication. Another aspect is that courses are often delivered asynchronously—that is, with students and teachers in the course at different times from one another. There are certainly conveniences afforded by anytime and any-place teaching and learning, but it can lead to problems for some students, especially those with poor time-management skills or who procrastinate. Also, students learn at differing rates and need different levels of instructional support at different times throughout their competency-based learning (Patrick, 2008). Online learning is an option for providing such self-paced, student-centered instruction. It can also be used to support group-focused instruction that is not whole-class instruction, such as online collaboration and team-based learning activities. Teach-

ers and students need strategies to help ensure active participation in a timely manner from each student (Rice & Dawley, 2007; Rice, Dawley, Gasell, & Florez, 2008; SREB, 2003).

As they did with the national standards for online courses, the North American Council for Online Learning conducted a comprehensive literature review for standards involving online teaching. The NACOL *National Standards for Quality Online Teaching* were published in 2008, which used the SREB *Standards for Quality Online Teaching*, (SREB, 2006), with minor revisions. As noted in the NACOL publication, NACOL also added two standards from the Ohio Department of Education's *Ohio Standards for the Teaching Profession* and the Electronic Classroom of Tomorrow's *Teacher Evaluation Rubric* based on the results of the review.

This set of standards uses a rubric with a rating scale as follows:

- 0 Absent—component is missing
- 1 Unsatisfactory—needs significant improvement
- 2 Somewhat satisfactory—needs targeted improvements
- 3 Satisfactory—discretionary improvement needed
- 4 Very satisfactory—no improvement needed

The 13 categories below have several items in each to score using the rubric above.

1. The teacher meets the professional teaching standards established by a state-licensing agency or the teacher has academic credentials in the field in which he or she is teaching.
2. The teacher has the prerequisite technology skills to teach online.
3. The teacher meets the professional teaching standards established by a state-licensing agency or the teacher has academic credentials in the field in which he or she is teaching. The teacher has the prerequisite technology skills to teach online.
4. The teacher provides online leadership in a manner that promotes student success through regular feedback, prompt response and clear expectations.
5. The teacher models, guides and encourages legal, ethical, safe and healthy behavior related to technology use.
6. The teacher has experienced online learning from the perspective of a student.
7. The teacher understands and is responsive to students with special needs in the online classroom.
8. The teacher demonstrates competencies in creating and implementing assessments in online learning environments in ways that assure validity and reliability of instruments and procedures.
9. The teacher develops and delivers assessments, projects, and assignments that meet standards-based learning goals and assesses learning progress by measuring student achievement of learning goals.
10. The teacher demonstrates competencies in using data and findings from assessments and other data sources to modify instructional methods and content and to guide student learning.
11. The teacher demonstrates frequent and effective strategies that enable both teacher and students to complete self- and preassessments.
12. The teacher collaborates with colleagues.
13. The teacher arranges media and content to help students and teachers transfer knowledge most effectively in the online environment.

Building a District Virtual School

For-profit and non-profit vendors provide the full range of solutions regarding virtual schools. District-level administrators making "build or buy" decisions can often buy the services needed while supplying internally those components of the virtual school they are capable of at a given time—a learning management system (LMS), content, instruction, or management. LMS providers provide the online learning platform on which courses are housed. Content providers sell online learning objects or complete courses for those who do not want to build their own course content for their virtual schools. They also offer trained teachers, both trained to teach online and certified in their content area. Educational management providers provide instructional supervision and other administrative functions.

A series of questions must often be addressed when deciding whether to build a component for a district virtual school or to outsource it to a vendor. For example, should we have a vendor provide the teachers, or should we provide them? If we provide them, should we have existing teachers add an online course or two to their workload, hire new online teachers, or both? What union and contract issues do these decisions raise, and who needs to be involved in decisions? If we provide the teachers, how will they be trained?

Planning the Program

In *Virtual Schools: Planning for Success* (Berge & Clark, 2005), we presented a brief road map for decisions a local school would need to make in establishing a local online learning program. These steps also apply at the district level. In some cases, a decision must be made about whether or not to offer a virtual school; in other cases, the decision has already been made at some level and the question is how to best implement the virtual program. In either case, proactive districts will seek to determine how a K-12 online learning program can best be aligned with school improvement needs, desired outcomes, audiences, and curricula.

Before determining what to build and what to buy from vendors, we suggest that school district administrators create a school district planning group. This group should:

- identify school district improvement needs. For example, a higher graduation rate, or improved test scores;
- consider overall equity goals. For instance, are there student subgroups that are underserved or underperforming that might benefit from a virtual school option;
- identify desired student outcomes, and target student audiences, such as students seeking to make up courses or to graduate early;
- identify appropriate curricula to meet needs. Examples include core curriculum, Advanced Placement, and summer school courses; and
- prioritize needs related to a virtual school.

Many school districts already have much of this information on hand from school improvement processes. After looking at needs, the planning group must consider virtual school options in more depth. It needs to:

- build organizational knowledge of virtual schools;
- assess readiness of key stakeholders for a virtual school option; and
- determine cost/benefit of various options.

Implementing the Program

Once the school is poised for implementation, the district needs to:

- set virtual learning program goals and objectives;
- develop a communication plan and begin building a positive image and stakeholder support;
- establish development teams as needed in key areas, consider appropriate curriculum and instruction models, and create development timelines.

At the same time, the district must consider partners and outsourcing arrangements for all or some virtual school components, including:

- consider the district's capacity and willingness in terms of resources (funding, staffing, equipment, etc.) to build the components of a virtual school program;
- consider and select virtual learning providers and external partnerships to provide components the district will not be building initially; and
- build district technology, curricular, instructional, and administrative capacity as needed, based on build or buy decisions.

Evaluating the Program

Determining "what is good" or "what works" about a program is what evaluation is all about. Evaluators start with a set of clear questions, the answers to which are what stakeholders often claim to base their decisions about policy, practice and legislation. Unfortunately, different stakeholders may have different definitions of what it means for a program to be "good" or "to work."

In general, evaluation of online programs or courses follows the same principles as evaluation of other educational programs (U. S. Department of Education, 2008). Districts should consider early on how they will know if they are meeting their mission and purposes, which will help them avoid surprises in the future that could derail the program's success. To help ensure success, school districts need to

- institute performance assessment measures at the beginning of the online learning program.
- continually evaluate the program for improvement and accountability purposes.
- demonstrate and communicate the success of the program to district stakeholders.

Summary

Virtual schools continue to grow in numbers across the country and in the scope of offerings. They may be full-time or supplemental in nature and serve all or some grade ranges. Virtual schools are operated by a variety of organizations. The focus here is on the district-level virtual school.

Depending upon the local school district's purposes for the virtual school, there are implications for finance, policy, and practice. Decisions about online programs need to be aligned with standards and quality. In the past few years, several organizations have published standards to help school districts judge the quality of virtual school courses and teaching. It is the responsibility of the local school district to serve the educational needs of their students. Sometimes the most effective and efficient way to serve those student needs is though the opportunities afforded by virtual schools.

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On May 29 the Fischler School of Education and Human Resources held an online meeting dealing with virtual schools. The title of this summit meeting is: Virtual School Summit

The seven hour long sessions presented during the summit are still available online at: virtualschoolsummit.com There is no charge to register and view the summit sessions.

Session titles include:

- Keynote-Virtual Schools in Florida and the USA
- Selecting a Virtual Schools Vendor
- Legal and Ethical Issues and Virtual Schools
- Funding the Virtual School
- The Online Teacher
- The Virtual School—Administrator's Experiences
- Virtual Schools; What Administrators Need to Know