iNACOL
International Association for K-12 Online Learning

Management and Operations of Online Programs

PROMISING PRACTICES
IN ONLINE LEARNING

Management and Operations of Online Programs: Ensuring Quality and Accountability

Written by

John Watson and Butch Gemin
Evergreen Consulting Associates

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About *Promising Practices in Online Learning*

Online learning within K-12 education is increasing access and equity by making high quality courses and highly qualified teachers available to students. Online learning programs offer courses, academic credits and support toward a diploma. They vary in structure, and may be managed by a state, district, university, charter school, not-for-profit, for-profit, or other institution. Thirty states and more than half of the school districts in the United States offer online courses and services, and online learning is growing rapidly, at 30% annually. This growth is meeting demand among students, as more than 40% of high school and middle school students have expressed interest in taking an online course.

The most well established K-12 online learning programs are more than ten years old, and many programs have between five and ten years of operating experience. The newest programs are building on the expertise of those early adopters, as well as the experience of online learning in postsecondary institutions and the corporate world. A body of knowledge, skills and practices has been developed by individual programs, in collaboration with practitioners, researchers, and policymakers. Because there are so many types of online programs (full-time, supplemental, state-led, district-level, consortium), there are also many different approaches to teaching, student support, professional development, and other issues.

This series, *Promising Practices in Online Learning*, explores some of the approaches being taken by practitioners and policymakers in response to key issues in online learning in six papers being released throughout 2008 and 2009:

- Blended Learning: The Convergence of Online and Face-To-Face Education
- Using Online Learning for Credit Recovery and At-Risk Students
- Management and Operations of Online Programs: Ensuring Quality and Accountability
- Socialization in Online Programs
- Funding and Legislation for Online Education
- A Parents' Guide to Choosing the Right Online Program

The title, *Promising Practices*, deliberately avoids the term "best practices." There are too many approaches to online learning, and too many innovative teaching and learning strategies in the 21st century, for one method to be labeled "best." Instead, this series aims to discuss the issues and explore examples from some of the many online programs across the country, with a goal of illuminating some of the methods showing the most promise.

Online learning offers the advantage of personalization, allowing individualized attention and support when students need it most. It provides the very best educational opportunities to all students, regardless of their zip code, with highly qualified teachers delivering instruction using the Internet and a vast array of digital resources and content. Through this series of white papers, we are pleased to share the promising practices in K-12 online learning that are already under way.

Management and Operations of Online Programs: Ensuring Quality and Accountability

Online learning is growing rapidly as states and districts are creating new online schools, and existing programs are adding new courses and students. The growth reflects the spreading understanding that online courses and programs can serve a wide variety of students and needs. These include:

- Creating opportunities for small and rural school districts to offer varied course subjects and highly qualified teachers to their students
- Allowing students to blend high school and post-secondary learning options
- Reducing class size
- Helping students recover credits in an alternative learning environment
- Providing individualized instruction and unique learning options
- Allowing students the opportunity to interact with students far beyond their school or town boundaries
- Meeting the needs and expectations of today's millennial students[1]

Many school leaders are excited about the possibilities of online learning. When they start an online school, however, they quickly confront all the challenges of managing a high-quality, successful online program: creating online courses; finding, hiring, and managing teachers; supporting students; managing technology; and evaluating their programs to determine if they are successful. Fortunately, many online schools have years of operating experience, have developed and revised formal operations and management structures, and provide examples of successful management. This paper explores emerging practices in online program management and operations that can be used by many people working with an online learning program, from executive-level school leaders to department managers to teachers trying to find ways to improve their effectiveness with online students. Although it does not address state or district policy issues, legislators and policymakers will find it useful to understand the varied approaches that online schools are embracing to ensure quality as they determine the best ways to create oversight while allowing innovation to meet the needs of students and schools.

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[1] A longer list of the opportunities that online learning can provide, from which the above list is taken, has been developed by consultant David Glick and is provided in Appendix A.

The first step: determining online program type and goals

The practices that online programs put into place vary according to their program type and goals. Two of the basic parameters are whether the program is full-time or supplemental, and its geographic reach. The full-time/supplemental parameter distinguishes whether the online program is responsible for students' state assessment scores, Adequate Yearly Progress, and other measures that are common to all public schools. The geographic reach determines whether the program has to operate fully at a distance or whether it can easily have a face-to-face component, and also determines the jurisdictional issues that a program faces (for example a multi-state program has to address content standards and teacher licensure across numerous states). Many management issues are dependent on one or both of these two parameters.

In addition to the top-level program characteristics listed above, there are many other attributes that each program must determine for itself as it considers how best to manage its operations, including the types of students, whether teachers will be full-time or part-time, and whether curriculum will be licensed, home-grown or both. Determining these factors is a key component for a new program that is in its early planning stages, but understanding them can be useful as well for existing programs that are undergoing strategic planning and may ask themselves, "What are our characteristics now, and what do we want them to be in the future?" Figure 1 provides a list of attributes for consideration.
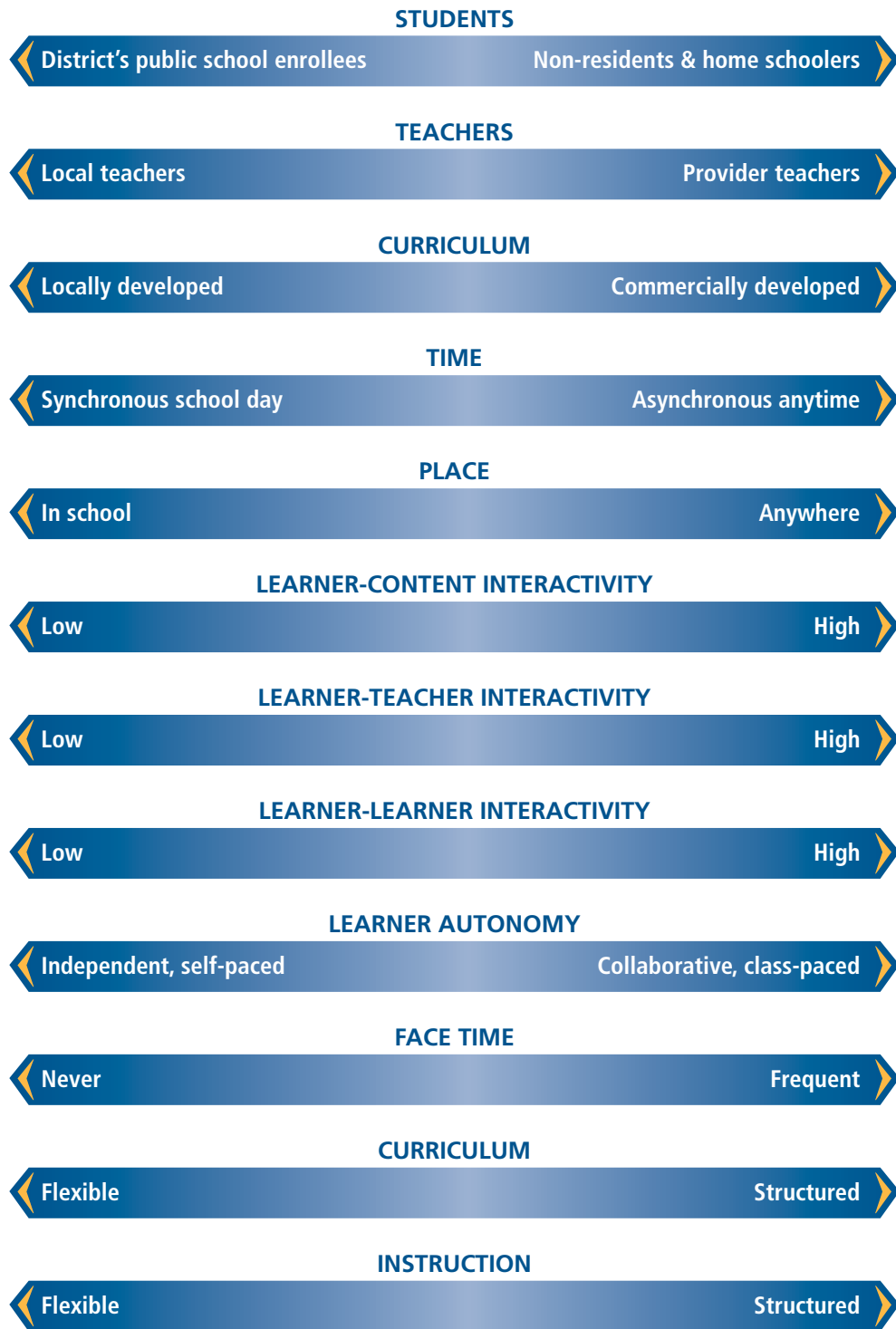
Many of these elements operate along a continuum instead of being an either/or proposition. In addition, as programs grow and evolve over time, scalability is one of the major challenges that they face. Growth impacts every aspect of the organization, placing even greater importance on oversight and management.

With the above characteristics in mind, the following sections review promising practices in the management and operations of online learning programs in the following areas:

- Curriculum development and course quality;
- Teacher management;
- Student support;
- Technology; and
- Program evaluation.

For each topic, key issues and variables are identified, and examples of successful management are explored.

FIGURE 1: ATTRIBUTES OF ONLINE PROGRAMS

STUDENTS

District's public school enrollees — Non-residents & home schoolers

TEACHERS

Local teachers — Provider teachers

CURRICULUM

Locally developed — Commercially developed

TIME

Synchronous school day — Asynchronous anytime

PLACE

In school — Anywhere

LEARNER-CONTENT INTERACTIVITY

Low — High

LEARNER-TEACHER INTERACTIVITY

Low — High

LEARNER-LEARNER INTERACTIVITY

Low — High

LEARNER AUTONOMY

Independent, self-paced — Collaborative, class-paced

FACE TIME

Never — Frequent

CURRICULUM

Flexible — Structured

INSTRUCTION

Flexible — Structured

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Curriculum development and course quality

Issue	Variables
How can your program develop online courses and content that are of high quality, improve educational outcomes, and meet state standards?	How many courses does your program have now?
	How many courses are you adding each year and how are those decisions made?
	Do you mostly purchase courses, develop your own, or mix and match? What information informs build or purchase decisions?
	What is your course review process and schedule (i.e., how often do you evaluate existing courses and plan new ones)?
	What is your course development and review budget and staffing?

A key building block in overall program quality is the quality of the individual online courses. Online programs are evolving in their practices in this area, as the development and maintenance of online courses, which was once the domain of individual teachers, has evolved in many schools that now use teams of teachers, content experts and instructional designers to ensure high-quality courses. As the technology behind online courses and learning management systems becomes more robust, the need for specialized skills becomes more acute. The potential for interaction and the use of multimedia, simulations, and gaming to increase student engagement increases the range of knowledge and expertise necessary to create online content.

The makeup of course development teams varies, but most teams consist of a project manager, course/content writers, instructional and information designers, multimedia developers, and copyeditors and proofreaders. When looking at an online school's course development process, "A good rule of thumb is to ask 'What are the qualifications of the curriculum team?'" says Bror Saxberg, Chief Learning Officer at K[12], a provider of curriculum, technology and school services for online programs, and the largest operator of full-time online schools in the country. "Look for a mix of teachers, instructional designers, information designers, a solid base of research of learning theory, multimedia experts and technologists."

A consistent theme among online course developers is the huge difference between an online class and a face-to-face class, in both teaching and course development. "There is a significant difference in writing prose [narrative] and writing with an *online voice*," notes Jonathan Schmalzbach, Director of Content Development at Apex Learning. "Crafting a script that complements a multimedia presentation of a concept is a new skill for most teachers and a difficult one to find. It's a real coup and pleasure to find a great classroom teacher that can translate that experience to online content presentation, someone who understands how visuals, audio, text and other content elements combine in a storyboarding process."

Many online schools recognize that the act of teaching a class is quite different from the process by which an online course is created. In a physical classroom, a teacher may divide the learning experience into categories that include the textbook, the class lectures and activities, and additional instructional materials. The online environment mixes and matches these components. A physical textbook may no longer be used, increasing the importance of the way in which educational materials and the teacher's instruction work together. While online teachers benefit from professional development in teaching online, creating an online course requires an additional set

of skills. The Virtual High School Global Consortium (VHS), which offers extensive professional development options to both online and classroom teachers, separates teacher professional development in its member schools into two parts: Netcourse Instructional Methodologies for those who are teaching an existing VHS course, and Teachers Learning Conference, which prepares face-to-face classroom teachers to become online course developers and instructors with VHS. KC Distance Learning takes a similar approach, with a professional development course for course writers that includes how to incorporate student learning skills, how to develop higher order thinking skills, and how to create a course to align with state standards.

The fact that courses are now commonly built by a team that often no longer includes the course's teacher creates a new set of challenges. "The course development team can build a wonderful exercise, with excellent rubrics and teaching notes, but if the instructional department does not respond with adequate training, the implementation of the exercise will likely go wrong and instructional value can easily be lost," notes education consultant John Adsit. "It may be as simple as telling instructors not to judge student performance in threaded discussion on the number of entries, but rather to focus on the contribution of meaningful substance, or requiring students to define individual roles in a group exercise so that each student's work and participation can be evaluated separately."

Build versus buy

Online curriculum may be developed internally by the online program, may be licensed from an outside source, or may consist of some combination of both. Data reported by *Keeping Pace with K-12 Online Learning* in 2007 based on a survey of 60 online schools suggest that the percentage of courses that are licensed or built in-house is highly variable among online programs. Programs license anywhere from none to all of their courses from outside providers. Indeed, the symmetry among the percentages of courses being licensed versus being developed in-house was remarkable: 23% of online schools had licensed all of their courses, and 23% of programs had developed all of their courses; 53% had licensed half or more of their courses, while 55% had licensed half or less of their courses.

Reasons for using curriculum licensed from an outside source include:

- The expertise of vendor development teams, including writers, instructional designers, multimedia developers, and technologists, often exceeds the expertise within the online program.

- A wide variety of curriculum and specialty courses is difficult to produce in-house.

- A program may lack staffing, funding, and/or expertise to develop and update high production-value content.

- Organizations that are focused on curriculum development often have the resources to incorporate more extensive user testing and feedback than individual schools. They also may be more equipped to provide regular updates, including maintenance of multimedia-based content over generations of versions and changing technology.

Outside content ranges from individual learning objects that are incorporated into existing courses, to full courses that are not meant to be edited, with a range of options in between. In either case,

licensing content from an outside provider does not free the online school from the responsibility of evaluating the course content, and integrating it with successful teaching strategies.

Reasons to develop content internally include:

- The need to adhere to state and district standards and greater confidence that home grown courses will do so.
- Linking content creation to teaching online in a way that involves teachers at a greater level than licensed content may allow.
- The expense of licensed curriculum, especially compared to using teachers or other staff who are full-time.
- Support for specific instructional philosophies not supported by course vendors, such as project- or inquiry-based learning.

Course standards, quality, and revisions

Online courses are typically designed to meet national and/or state content standards. Courses and course content licensed from outside sources are usually modified as necessary to meet state and possibly district standards. Advanced Placement courses must meet the requirements of the College Board. However, these standards are only a beginning.

A process of evaluation, feedback (from both students and teachers), and revision leads to accountability and improved quality. Initial development of courses is only a start, as they should be revised regularly to keep them current in terms of both content and technology, which includes everything from including the latest events in a history course to making sure that links are still live (and going to the intended information). Course revisions can take two approaches, continuous modification or revisions on a set schedule—or a combination of both. Some programs make small ongoing changes based on student and teacher evaluations, course failure rates, service ticket data from support desks, or changes in external standards, and use regularly scheduled revisions to ensure that larger changes to instructional design and multimedia content are done.

Feedback from students and teachers helps schools determine what changes need to be made to existing courses, and provides ideas for new courses. "We create a student survey each spring and ask students what courses they want to see created," says Tracy Quarnstrom, Director, TRIO Wolf Creek Distance Learning Charter School. "We also use a survey at the end of each existing course to see what needs to be improved. With changing standards in Minnesota some classes are no longer needed as they do not align to the [state] standards, while other topics are in growing demand."

iNACOL's *National Standards for Online Course Quality* addresses many of these issues, and others as well. The comprehensive standards allow online programs to assure quality internally, and demonstrate quality to outside stakeholders.

iNACOL's National Standards for Quality of Online Courses

iNACOL's standards provide guidance in several key areas of course development and delivery. The following list is representative of the standards, but is not comprehensive.[2]

Course 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.
- The course content and assignments are aligned with the state's content standards or nationally accepted content standards set for Advanced Placement courses, technology, computer science, or other courses whose content is not included in state standards.
- Issues associated with the use of copyrighted materials are addressed.

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 unit overview describes the objectives, activities and resources that frame the unit. It includes a description of the activities and assignments that are central to the unit.
- Each lesson includes a lesson overview, content and activities, assignments, and assessments to provide multiple learning opportunities for students to master the content.

Technology

- The course architecture permits the online teacher to add content, activities and assessments to extend learning opportunities.
- The course accommodates multiple school calendars.
- Hardware, web browser and software requirements are specified.

Student assessment

- Student evaluation strategies are consistent with course goals and objectives.
- The course structure includes adequate and appropriate methods and procedures to assess students' mastery of content.
- Assessment strategies and tools make the student continuously aware of his/her progress in class and mastery of the content beyond letter grades.
- Assessment materials provide the flexibility to assess students in a variety of ways.

Course evaluation and management

- The results of peer review and student evaluations of courses are available.
- The course is evaluated regularly for effectiveness, and the findings are used as a basis for improvement.
- The course is updated periodically to ensure timeliness.

21st century skills

- The course intentionally emphasizes 21st century skills in the course, including using 21st century skills in the core subjects, 21st century content, learning and thinking skills, self-directed learning, global awareness, and includes 21st century assessments.

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[2] For the full list of standards please see http://www.iNACOL.org/resources/nationalstandards/index.php

Teacher management

Issue	Variables
How can your program ensure that it has the best teachers, with the skills and experience necessary to successfully teach online?	How many teachers does your program have, and are they primarily full-time or part-time?
	How does your program recruit new teachers?
	Are your teacher orientation and professional development programs meeting the needs of your faculty and goals of the program?
	What mentoring, support, and accountability processes are used in your teacher management operations?
	Does your program have teacher-student communication requirements and how is the effectiveness of the requirements measured?

Teaching is just as important in the online classroom as it is in the physical classroom. Successful online programs use many of the following practices to ensure the highest quality faculty for their students.

Recruiting

Because few pre-service teachers receive much training in online instruction in colleges of education, the recruiting and initial training of highly qualified teachers to make the move to online teaching is a critical component of success. Most programs have a clear strategy for online teacher recruiting and training, but the criteria and techniques used vary significantly from program to program. Most programs agree that new online teachers must 1) put their role as a facilitator of student learning above other aspects of teaching, 2) have the ability to adapt and manage change, 3) have a high level of content mastery, and 4) be ready to make the shift to online instruction. However, the philosophies and techniques used to evaluate prospective online teachers vary from program to program. Several online schools and companies, including Illinois Virtual High School, conduct the entire recruiting process electronically, narrowing the field of candidates to those comfortable with the use of online technology and able to demonstrate a capacity for online communication. Other schools feel that the technology aspects are fairly easily taught, so they don't feel the need to vet the teachers' technology skills as an initial step. "I'm looking for teachers with superior teaching and communication skills, those that love to help students learn," says Jack Babani, Director of Instruction at Apex Learning. "We feel most any qualified teacher can be trained on the technology components, but not content knowledge and the ability to relate to students." Apex's recruiting is done through conversation and face-to-face meetings, putting the teacher behind the student desk using role-playing and other interaction to the point where teachers often self-screen. Some programs start the recruiting process with commercially available tests designed to gauge a teacher's strength in focusing on the student, rather than on curriculum or policy. Florida Virtual School (FLVS), for example, first identifies teachers that are student-centric. Jeff Murphy, one of the Directors of Instruction at FLVS, notes "Teachers moving to online learning must be comfortable with the amount of change. The technology, tools and instructional methods change constantly, so we are always probing to make sure our teachers embrace change."

Most educators tasked with hiring teachers agree that training begins with the first recruiting phone call or interview between the prospective teacher and the program. Several programs

stress the importance of making teachers aware of the challenges of online teaching in this first interaction. "Teachers should have no illusions of the difficulty of teaching online," notes Bror Saxberg, Chief Learning Officer at K[12]. "Most think it is as tough as the first year of teaching in a physical classroom." Interview techniques that help recruiters avoid potential teachers who are more interested in the lifestyle of working from home than on tackling a new teaching challenge are important because the desire to work from home, or the misguided belief that online teaching requires less time than teaching in a physical school, are poor reasons to move to online teaching.

Scalability is one of the major challenges faced by rapidly growing online learning programs. K[12] is facing unprecedented growth in the teaching staff at schools across the country, growing from 1,200 virtual teachers last year to 1,600 for the 2008-2009 school year. Teresa Scavulli, Senior Director, Teacher Effectiveness at K[12], believes "One of our most pressing issues is scalability. We have to be able to move quickly to deliver educational services, almost on an as-needed basis."

Professional development

Professional development for online teachers begins with orientation and extends throughout the teacher's online career. Establishing a standard training program at the point of teacher induction gives the instructional staff a common starting point and a baseline from which to evaluate performance. For example, the Virtual High School Global Consortium requires all new online teachers within its nationwide network of schools to complete the Netcourse Instructional Methodology course before they are certified to teach. This intensive 10-week graduate course covers the skills necessary to ensure a successful start to online teaching, including the pedagogy of online teaching, course management system basics, and online classroom management techniques that the teacher needs to be successful.

Continued growth through professional development is critical, in particular because online learning technology and pedagogy is changing quickly. Topics that are often part of continued professional development include:[3]

- Helping teachers understand how to motivate individual learners
- Enhancing student interaction and understanding without visual cues
- Tailoring instruction to particular learning styles
- Developing Web 2.0 and 21st century skills
- Modifying interactive lessons to meet individual student needs, including the needs of disabled students
- Developing heightened communication skills to enhance email correspondence and discussion board postings, and to recognize the tone of writing and the nuances of word usage
- Improving the time management skills critical for online teachers

Many online programs are now implementing extended professional development opportunities that grow as teachers' skills and techniques grow. For example, the VHS Global Consortium has introduced a new five-course series, *21st Century Teaching Best Practices*, that is designed for all

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[3] This list is from *A National Primer on K-12 Online Learning*, published by iNACOL, and was based on *Essential Principles of Online Teaching: Guidelines for Evaluating K-12 Online Teachers*, Southern Regional Education Board, April 2003

levels—from classroom teachers who want to add an online component to their face-to-face class, to experienced online teachers looking for the latest pedagogy and online methodology. These courses explore the technology literacy and Information and Communication Technology (ICT) skills needed for effective teaching and learning, including how face-to-face teachers can incorporate online resources and tools into their classroom instruction, including Web 2.0 tools, WebQuests, blogging, wikis and open educational resources (OER).

K[12] professional development trainers are all top-performing, master teachers with extensive online teaching experience. This level of expertise brings credibility with new teachers and allows them to work as mentors and role models. Professional development is organized into four national regions, providing greater opportunities for face-to-face training that supplements national training efforts. K[12] offers weekly online sessions for teachers grades K-8, and once a month sessions for 9-12 teachers; topics include state testing, intervention for one-to-one instruction, peer counseling, and introducing teachers to a new student-parent community website.

Some online programs are tapping into partnerships with outside educational institutions to enhance their internal professional development. Connections Academy, for example, has partnered with Boise State University to tap into the university's expertise in teacher training (along with curriculum development and evaluation). As an increasing number of universities offer programs for existing and pre-service online teachers, the opportunities for such partnerships will improve.

Teaching practices and evaluation

Successful online learning often is based on consistent communication between students and teachers, and clear feedback from teachers to students. To ensure that such communication and feedback is occurring, many online programs—and some state policies—have established communication requirements. Examples of such guidelines include:

- Student email is answered within 24 hours
- The teacher initiates phone calls to each student at least monthly
- A weekly progress check is recorded for each student
- Student discussions are actively facilitated
- Parent calls are held monthly
- Weekly or monthly face-to-face meetings are held with a mentor or supervisor

Clear guidelines and expectations ease the evaluation process, helping teachers know what is expected of them. Online teaching practice, however, is still in its early stages, with limited research to help teachers and supervisors understand what works best. The lack of commonly accepted best teaching practices combined with the distance at which many teachers work creates a challenge for managers. "We don't yet have a good sense of what is required work time and what is preparation time that all teachers put in as an addition to their typical work day," notes Tracy Quarnstrom, Director, TRIO Wolf Creek Distance Learning Charter School. Other practitioners note that many online teaching practices are still just being established and that there is little definitive research on the specific approaches that work best for students.

Although research into effective online teaching is not yet extensive, iNACOL has published a set of online teaching standards that provide an excellent starting point. In addition to professional development and communications standards similar to those listed above, other standards include requiring that the teacher:

- Plans, designs and incorporates strategies to encourage active learning, interaction, participation and collaboration in the online environment

- Provides online leadership in a manner that promotes student success through regular feedback, prompt response and clear expectations

- Models, guides and encourages legal, ethical, safe and healthy behavior related to technology use

- Understands and is responsive to students with special needs in the online classroom

- Demonstrates competencies in creating and implementing assessments in online learning environments in ways that assure validity and reliability of instruments and procedures

- Develops and delivers assessments, projects, and assignments that meet standards-based learning goals and assesses learning progress by measuring student achievement of learning goals

- Demonstrates competencies in using data and findings from assessments and other data sources to modify instructional methods and content and to guide student learning

- Demonstrates frequent and effective strategies that enable both teacher and students to complete self- and pre-assessments

Mentoring and monitoring online teachers

Successful online programs often prioritize a culture of teacher collaboration and mentoring. Although establishing clear and consistent procedures is critical to establishing accountability, creating a sense of collaboration and mentoring fosters a collegial work environment that encourages teachers to contribute innovative ideas. For example:

- FLVS uses a co-teaching approach that mimics some of the techniques being successfully employed in brick and mortar institutions to provide better one-to-one instruction and teacher availability, and a team-teaching approach largely defined by the FLVS teachers themselves. Each teacher team decides how they prefer implementing shared instructional tasks, from monthly student phone calls to being on call for student questions, or sharing the tasks of lesson planning and grading duties. All teachers are supported by a team of educators including trainers, content buddies, mentors, instructional coaches, instructional managers and instructional leaders.

- K[12] has established a Founder's Club to recognize outstanding teaching efforts within its community of teachers, and to gather and use feedback from this group to identify and address teacher issues from across the country. Teachers are recognized based on a set of quantitative and qualitative standards. Selected Founder's Club teachers attend an annual conference and work year-round to help with student retention, socialization and community building, student achievement, parent training and student motivational issues. Feedback from this group and other teachers led K[12] to launch a study of high performing teachers.

New teachers also need to understand, as most program directors already know, that they must be able to demonstrate accountability on a class-by-class and student-by-student basis. In the traditional brick and mortar institution, once the classroom door is closed there is very little oversight of the instruction and learning taking place in the room. Online learning is far more transparent and is accessible by design, making it easy to monitor most aspects of student and course progress on a daily basis.

Academic integrity

Online teachers and managers must also devote some of their time and practice to ensuring the academic integrity of their classes and program. Questions and concerns regarding academic integrity have been raised since the early days of distance learning and have continued with the growth and acceptance of online learning. Most questions about the authenticity of student work come from those outside the community of online learners, while most teachers and administrators feel the issue is addressed by a number of established and proven assessment methods. Violations of student academic integrity are not unique to the online environment, but it is still perceived to be a challenge and a continuing important issue in online education.

Academic integrity has been defined as a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility.[4] Some of the threats to academic integrity include ignorance, pressure, stress, and time management issues.

Online programs address academic integrity issues in several ways: having staff members dedicated to the issue, ensuring consistent communication between teachers and students, requiring at least some assessments to be proctored, and using software to check for plagiarism.

Florida Virtual School, for example, has used all of these approaches. A full-time Academic Integrity Specialist is employed to establish and revise academic integrity policy and programs, and to work with teachers via monthly synchronous training sessions and one-on-one when necessary. Teachers have phone calls with students at least monthly, engaging students in a one-on-one conversation about the content, asking probing questions that generate topical discussions. If there is an incongruity between the student's daily work online and the level of comprehension demonstrated during the phone instruction, the teacher can identify potential abuses and work to correct them. Finally, random proctored testing provides an institutionalized approach to ensure student integrity while avoiding any perception of persecution when proctored testing is requested by a teacher.

[4] *The Fundamentals of Academic Integrity.* The Center for Academic Integrity, Duke University. October 1999.
http://www.academicintegrity.org/fundamental.asp

Student support

Issue	Variables
How can your program ensure that your students have the orientation, technical support and academic counseling they need to be successful?	Is your program full-time, supplemental, or both?
	Do most students access courses from school, home, or some other location?
	Is your student orientation process sufficient and well-executed?
	How are student progress and activity tracked, and who has access to that information?
	Do your students receive robust technical support regardless of how they access their online courses?
	How are you supporting students with physical or learning disabilities?

Student support is an integral part of online school success. Support includes technical help (i.e., accessing the course, computer hardware and software, communication tools), academic issues (course content and instruction, tutoring, counseling) and administrative support (enrollment, personal information). Successful online programs have adopted a variety of practices to ensure top-quality student support, including the practices described below.

Student support structures

The ways in which student support is provided varies greatly depending on whether the online program is supplemental—meaning the student has access to support in a local physical school—or full-time—in which case the student may be helped by a parent or other learning coach in addition to virtual support provided by the online program.

Many supplemental online programs require that physical schools provide on-site coordinators who assist students, while also helping adapt the school's procedures to accommodate online learning. IDEAL-NM, one of the newer state-led online programs, imported the philosophy and strategy of on-site coordinators at local school partner sites from other successful online learning programs. Site coordinators provide on-site support for students, teachers and parents, explaining the advantages of IDEAL-NM to students, helping with student registration, monitoring academic progress, intervening if any problems occur and in some cases working with students to provide instruction in computer labs. "The first step in establishing a partnership with a school is to identify the site coordinator," says Tim Snyder, Executive Director of IDEAL-NM. "A good site coordinator is like gold to our program. They become our knowledgeable and passionate ambassadors and set the tone for how well the school implements the online program." Dawn Nordine, Executive Director of Wisconsin Virtual School—the Wisconsin Web Academy—agrees. "The support of the local mentor, or Local Education Guide, is critical to the success of most students taking supplemental courses online. We have increased our opportunities for face-to-face training for these folks who support the students daily on a range of activities: placing the student, choosing the appropriate courses, registration, teacher communication, and policy development." The Idaho Digital Learning Academy (IDLA) has taken the need for strong local support a step further, by reducing the course fees for districts that have had a site coordinator go through an IDLA professional development course.

Enrollment and orientation

The first contact between a prospective online student and the online school is an important step in ensuring a successful transition to online learning. Established procedures help guide online learning staff in how to mentor the student through the process of enrolling and participating in online courses, covering issues such as:

- An initial checklist of points to cover with students and parents during the initial period
- A pre-enrollment survey to challenge students' preconceptions of online learning and to determine their level of readiness for this new modality
- A student orientation course before the first academic course to set performance expectations, familiarize the student with the learning management system and identify any technical support issues
- A review of online learning policies to cover grading requirements, student discipline, and warning and probation policies

Technical support

Student access to robust technical support relieves one of the key barriers to student success in online learning while taking a significant burden off teachers. To reduce initial technical support calls, many programs use automated checks of bandwidth, versions of Flash, Acrobat, and Java, and other plug-ins required of students. Tutorials and online orientation sessions familiarize students with the learning management system to assist in a smoother transition to the online environment. Many programs make help desk support available 24/7 both by phone and virtually, and many have or are instituting service ticket systems to track more carefully student support communication and results.

In some cases, students are taking support into their own hands. SHOCK (Students Helping Others Collect Knowledge) is an innovative new student support program at Florida Virtual School that was envisioned and executed by past students to provide peer-to-peer support to help students with everything from how to navigate and use the learning management system, to how to study for a math exam.

Academic support

Technical support is just one component of helping students learn online; the other key component is academic support. This may include, but is certainly not limited to, the following set of tools and techniques to ensure a smooth transition to online learning. In some programs, these are handled by teachers, while others have features for such support built into their learning management systems. In other programs, these are functions performed by either face-to-face or virtual non-teaching staff.

- Assessments of student progress at regular intervals
- Support materials like student handbooks
- Guidelines for conduct (both students and teachers)
- Organization of students into groups/cohorts
- Tutoring services
- Pre-course tests that measure a student's readiness for the online learning experience

- Required amount of course access time and how that differs from time on task
- Expectation of the parent and family roles in the student's experience; parents' role in monitoring course progress, conference calls with teachers, face-to-face opportunities for students and parents

Communication is the key element of student support. Students should never feel that they don't know where to turn with a question or problem, and should be able to easily reach their online teacher, school facilitator, learning coach, or other source of assistance.

Counseling and mentoring

Physical schools provide counseling and mentoring to students. Online schools are moving in this direction as well, either by instituting online counseling support for students, or extending the training for on-site coordinators who often perform many of the tasks of a traditional school counselor.

School-based counseling comes with a heavy load of administrative duties (credit analysis, senior credits for graduation, community service hours) that limit personal contact with students and provide little opportunity to be proactive. In supplemental online learning situations, the online program may be supporting the district's counseling efforts, so the online counselor is freed to focus on students: establishing regular communications, leading students to online resources published by the online program, answering general questions, or encouraging the student to look for resources outside the school system when necessary. The site facilitator in a supplemental program may or may not have roles defined in tandem with the physical school counselor—in some cases the two roles may be taken on by the same person.

Working with local school districts

Most schools are excited by the possibilities of online learning, but concerns arise once the reality of implementing online instruction sets in; how do we make this happen? The Hamilton County Virtual School (TN) and IDEAL-NM distribute a handbook to districts ready to have their students take supplemental online courses. The handbook gives school administrators and on-site coordinators the procedures, application documents and policies necessary to get the program off the ground. The IDEAL-NM handbook, for example, outlines a step-by-step process including:

- Defining the roles and responsibilities of on-site people with "getting started tips" for each position
- Explaining the costs and funding of the program
- Describing the learning management system and other technology
- Providing program policies, from acceptable use and attendance policies, to how the program and partners should handle conduct and discipline problems and withdrawals.

This handbook, and the procedures and policies it outlines, eases concerns for school administrators, demonstrates the level of support IDEAL-NM provides, and makes program implementation easier by providing a blueprint to success.

Some supplemental online programs, and most full-time online schools, have full-time online counselors. At FLVS, the counselor's role begins with student recruitment and orientation and includes responsibilities ranging from monitoring student progress to collaborating with online teachers to mediate performance and behavioral issues. Students are often more expressive with their online counselor, comforted by the relative anonymity of email and phone communication as compared to face-to-face meetings that can be intimidating for students. "The online environment allows for more one-on-one connection than I had as a counselor in a physical school," according to Patty Cordones, Online Counselor for Florida Virtual School. "Student needs range from those as casual as a complaint about a course being too rigorous to something as profound as a suicide intervention. As counselors, we're trained to follow defined procedures when serious problems arise; call the parent, the teacher and district, and find help for that student."

Technology management

Issue	Variables/Elements
How can your program develop a technology strategy and systems to improve student and teacher learning, and provide data for the daily management and oversight of staff, while anticipating change and the need for innovation?	Does your program have a clear set of functional criteria and operational objectives for the learning management system (LMS) application?
	Does the LMS integrate with the program's student information system (SIS), and is the right student data being captured and used effectively?
	Does your program have an annual evaluation of its technology needs and performance to keep pace with the rapid rate of technological change?
	Can existing technology be scaled to accommodate program growth and adapted to new instructional technology tools?

While online educators often point out that teachers, and not computers, are at the heart of online learning, technology systems are clearly an important component of an online school. Computer hardware and software are essentially the facilities of an online school, much as classrooms and buildings are the facilities of a physical school. These tools not only provide information and data to manage the program, but also help teachers become more innovative and effective at their jobs.

Following are some of the practices successful online programs employ to ensure that their technology systems contribute to overall program quality.

The role of LMS and SIS technology

Online education is first and foremost based on the interaction between the student and the teacher, but technology plays a significant supporting role in delivering instruction and an integral role in providing accountability and management tools. The technology at the heart of an online school is the learning management system (LMS)—the set of tools that houses course content and provides the framework for communication between students, teachers, and parents. The student information system (SIS), which manages student data, is the other main software component. Teaching online through an LMS presents several advantages compared to a physical classroom, including:

- Monitoring student performance, including observing individual student trends quickly using real-time online data; also tracking of attendance to meet state requirements for funding; and to meet regulatory demands

- Organizing student learning by age groups; younger students may have difficulty sitting at a computer for hours, while older students can make better use of video, animations, and simulations

- Allowing for quick updating of curriculum

- Scheduling and tracking for families of full-time students, allowing easy monitoring of assignments and tasks completed

- Adapting instruction to adjust to the student based on the difficulties being encountered

Keeping up with improvements in technology infrastructure

Experienced online programs commonly make a point to "know your core competency and outsource the rest," noting that they should not get too caught up in technological change and lose their focus on education. "VHS Global Consortium stays focused on our core competency and mission, to educate students," says Liz Pape, CEO. "We are not a data support center or an LMS developer, but it's critical that we maintain strategic management staff to closely monitor our vendors and ensure the technology we employ from outside the organization provides the information and data we need to manage the program and manage the entire organization."

Programs must evaluate new technology and recognize when the tools are largely "bells and whistles" and when they truly advance instructional practice and value. It is far too easy to get caught up in the possibilities of an instructional technology before it is reviewed and tested by those with the daily experience to judge its merits.

Equity and privacy issues impact technology oversight decisions and processes. Technology departments must establish policies to protect student data and information, as well as meet standards for access by all students regardless of connectivity or disabilities.

Regardless of the learning management system and administrative software in place, programs must plan for future flexibility and growth, not just daily operations of the existing systems. "Be prepared for change in the world of technology, meet regularly as a team and build in professional development and training for the entire technology staff," says Jonathan Beckham, FLVS Senior Manager Information Services.

Program evaluation

Issue	Variables
Is your program meeting its mission and goals as well as the expectations of the stakeholders and the community?	What is your program's mission; does the mission include specific student populations?
	Are student outcomes meeting program and state expectations? Can improved student outcomes be demonstrated?
	Does your organization conduct an annual program evaluation?
	How satisfied are stakeholders, including students, schools, and parents, with their experience with the program?

Because online learning is still relatively new, online schools sometimes have to demonstrate quality and results in ways that go beyond the requirements that physical schools meet. Supplemental programs, in particular, face the challenge of not being evaluated in the same way as public schools, because they are not responsible for their students' state assessment scores (in most cases). One way that online schools address quality and performance concerns is by commissioning regular program evaluations.

Internal and external evaluations

Program evaluations fall into two categories: internal (conducted by the program staff) or external (conducted by someone outside the organization). Internal evaluations have the advantage of timeliness, as they can generally be scheduled conveniently at any time during the year, and staff that have a thorough knowledge of the program being evaluated.

External evaluations bring a fresh look at a program from someone removed from the pressure of stakeholders or program staff. There are no personal relationships to cloud the examination of the program, and an outside perspective may bring flaws to light that go unseen by staff too close to the situation to recognize the problems. Also, external evaluations often carry greater validity with stakeholders. However, the cost of external evaluations can be high and the process takes additional time to bring the evaluator up to speed on the processes and metrics of the program being evaluated.[5]

Pieces of the evaluation puzzle

Although the specifics of an evaluation vary significantly, an evaluation usually starts with an examination of the program's mission to determine whether it is meeting its organizational goals. If the goal of an online program is to give students more opportunities for recovering course credits in order to graduate, then two evaluation measures could be the number of credit recovery courses being offered, and the graduation rate for students in those courses. If the mission of the online program is to increase 21st century learning opportunities for a district's students, possible evaluation criteria include 1) the number of new courses available to students; 2) the increase in student proficiency in use of Web 2.0 tools; and 3) the increase in teachers' use of Web 2.0 tools in classroom and online instruction.

[5] Evaluation in Online Learning, L. Pape, M. Wicks, C. Brown, and W. P. Dickson, in *Keeping Pace with K-12 Online Learning*, 2008, www.kpk12.com; further examples are from this source as well

Evolving Models for Performance Data Systems: Florida Virtual School's Virtual School Administrator

Florida Virtual School (FLVS) is not only the largest online program in the country, but it is also the only program whose funding is based primarily on student achievement instead of measures such as seat time, which are common across K-12 education. With funding based on student achievement, consistent tracking of course progress based on competency becomes critically important not just for students and teachers, but for administrators as well. The FLVS Virtual School Administrator (VSA), a custom program integrated with the program's course management system, has been instrumental in helping FLVS meet this challenge. VSA provides sophisticated functionality to measure ongoing competency throughout each course and performance levels for each student, and consolidates data from the LMS for use by teachers and administrators. The technology staff works closely with instructional and course development personnel to track data and create reports that meet the needs of each department. Dashboards have been created to provide at-a-glance insight into a student's course progress, grade status, a teacher's monthly phone call log, and responsiveness to email, among other data points. All of the operational departments of FLVS participate in defining the data and applications they need to improve their effectiveness and provide a competency-based learning experience for students. The FLVS technology group is working to add predictive analysis capability to the existing system, using historical data and patterns to predict and improve student performance.

Although in-house software development is sometimes the best strategic path, FLVS wants to spend its time educating students—not responding to technology-related help tickets from students and teachers. While the development of VSA has been handled in-house to accommodate the needs of the stakeholders, FLVS made the strategic decision to outsource student help desk and first-line teacher technology support. With the large volume of help tickets encountered by FLVS, a software tool was selected that routes questions and problems to the appropriate technical staff for quick response and generates metrics on the instances of help tickets, the types of problems, how quickly the problems were resolved and who had to be involved in the solutions. Jonathan Beckham, Senior Manager Information Services at FLVS, stresses, "You are not done with the decision on which vendor to use and which software package to buy. With all outsourcing, it is critical for the organization to maintain technical staff to manage and monitor the work of the vendor. Use outsourcing when available and reliable, but be vigilant and establish internal oversight of and management of vendors."

Evaluations are commonly based on one or more of stakeholder surveys, outcomes data, and reviews of internal processes.

- Surveys may be done of students, parents, teachers, educators in school districts using supplemental online courses, and other stakeholders. They may be done at multiple times of year; for example, students may be surveyed every semester while parents are contacted once per year.

- Outcomes data vary based on program type. Supplemental programs often rely on course completion rates and results of Advanced Placement exams, while full-time programs can report data of state assessments and other measures common to all public schools in a state.

- Internal processes such as course development may be benchmarked against other programs, or standards such as those published by iNACOL. In addition, the evaluation may report financial information, staffing levels, and similar organizational metrics.

Conclusion

Online learning promises cost-effective solutions to the challenges education leaders face in many areas, particularly in difficult economic times. States and districts are increasingly turning to online programs to expand educational opportunity, equity, and access while individualizing learning options for students. This growth in online learning requires that school managers be able to effectively operate and assess their programs.

While most online programs deliver quality curriculum, effective teaching, and improved student outcomes, such positive outcomes are not assured. They are instead a result of forethought and diligent management, starting with defining and planning the online program, and extending through all aspects of management and operations.

The growth of online learning programs, the demands of expanding course offerings, and the need to service different types of students and deliver learning in a variety of formats are just a few elements that illustrate the complexity of running a quality online learning program. Although many existing online learning programs started as an individual vision, created and fostered by a small, dedicated team of teachers and administrators, most programs now recognize the need for processes and procedures that ensure program quality and accountability.

Managing growth, and keeping up-to-date, are two of the issues that online programs commonly face. "One of the next challenges in program management is staying current: currency in teaching skills, currency in course design standards, and currency in technology strategies as broadband access and new online tools bring new instructional opportunities to bear," says Liz Pape, CEO, VHS Global Consortium. "Ubiquitous computing will be demanded by students and improve teaching and learning, but it will require constant evaluation and integration into existing programs."

Online learning is already improving student outcomes, and holds the potential to be a truly transformative element of education in the years ahead. Clayton Christensen, Harvard Business School Professor and one of the authors of *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*, predicts that in about a decade, half of all high school courses will be online. But previous trends do not guarantee future growth, and online educators recognize that their programs face far greater scrutiny than physical schools.

Regulators and policymakers at the state and federal level often grapple to find the appropriate balance between mandating quality and accountability on the one hand, and allowing room for innovation on the other. Programs that can demonstrate a sensible approach to ensuring quality content in their courses, highly qualified and well-trained teachers, comprehensive student support

services and forward-looking technology systems can help guide constructive policy and regulatory oversight.

"Ensuring quality in a fast-growing enterprise like online learning is like upgrading the engine on a jetliner while it is in flight," says Mickey Revenaugh, Vice President for State Relations at Connections Academy. "It's an enormous challenge—but one that virtual program managers must embrace wholeheartedly. If we as online educators don't do all we can voluntarily to ensure that we have every possible quality system in place, we can be certain that policy-makers and regulators will attempt to do the job for us."

Appendix A

ONLINE LEARNING:
THE OPPORTUNITIES IT CAN PROVIDE; THE PROBLEMS IT CAN SOLVE

Below is a list of opportunities that online learning can help provide for your teachers and students and problems that online learning can help solve. Please prioritize them by circling the appropriate number.

	Very high priority	High priority	Low priority	Very low priority
1. Provide methods for differentiating instruction for groups and individuals at all grade levels.	4	3	2	1
2. Bring more Advanced Placement courses to more students.	4	3	2	1
3. Effectively meet the needs of homebound & hospital bound students.	4	3	2	1
4. Increase the number of electives available to students.	4	3	2	1
5. Help alternative learning and credit-make up students complete necessary coursework.	4	3	2	1
6. Engage unengaged students through technology and independence.	4	3	2	1
7. Allow students who are socially uncomfortable to focus on academics.	4	3	2	1
8. Reduce class sizes by providing more options for students.	4	3	2	1
9. Allow students to more easily blend high school and post-secondary options.	4	3	2	1
10. Allow students to communicate with a wide range of people, potentially from around the world.	4	3	2	1
11. Bring world-class resources and timely information to coursework.	4	3	2	1
12. Allow students to more easily blend school with duties at home or work.	4	3	2	1
13. Provide individualized instruction and unique learning opportunities.	4	3	2	1
14. Increase teachers' familiarity with instructional technologies and how to use them in the classroom.	4	3	2	1
15. Help students use technology as an essential tool for learning.	4	3	2	1
16. Allow students who don't like school to succeed academically.	4	3	2	1
17. Fill curriculum gaps for any grade or ability level.	4	3	2	1
18. Help to fill in areas where available teaching staff is minimal or requires additional instructional support.	4	3	2	1
19. Provide a cost-effective way of providing low-enrollment courses.	4	3	2	1
20. Allow school-day and calendar flexibility for students.	4	3	2	1
21. Allow school-day and calendar flexibility for teachers.	4	3	2	1
22. Concretely demonstrate how technology enhances education to develop support for technology initiatives.	4	3	2	1
23. Archive classroom experiences for students, parents or accountability.	4	3	2	1
24. Modernize curriculum and save money by replacing some or all textbook purchases.	4	3	2	1
25. Other _____	4	3	2	1
26. Other _____	4	3	2	1
27. Other _____	4	3	2	1

Appendix B: Resources

The International Association for K-12 Online Learning (iNACOL) released two important volumes to aid online programs in establishing guidelines for online teaching and course quality. The National Standards for Quality Online Teaching is a publication that provides states, districts, online programs, and other organizations with a set of quality guidelines for online teaching. National Standards of Quality for Online Courses provides standards selected on the basis of a research review and survey of online course quality criteria. These quality standards were evaluated and assembled into an easy to use document for evaluating online courses with common benchmarks. Both documents can be downloaded at the iNACOL web site, http://www.iNACOL.org/nationalstandards/index.php#teaching.

Colorado Online Learning posts a number of helpful resources under their Quality Assurance Program (QAP), including the full text of the QAP document, http://www.col.k12.co.us/aboutus/qualityassurance.html.

The VHS Global Consortium program evaluations are available through its website at http://www.govhs.org/Pages/WhyVHS-Home.

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