School systems today are increasingly incorporating elements of online learning into their educational mix. Whether they’re tapping online resources for teacher development, conducting virtual classes and meetings, or looking to enrich the learning opportunities for their students with class websites, wikis, blogs and other web-based activities, forward-thinking school systems are embracing the technology that lets them connect. To power the real-time interactions that are becoming so vital to the K-12 learning community, a wide array of technology options are available. All these options are not created equal, however. In this paper, after touching on the growing demand for online learning, Blackboard lays out the elements that educators should take into consideration when assessing potential solutions. We describe the generic features that cover the basics of meeting online, and, more importantly, discuss the capabilities and attributes specific to an educational setting that may not be present in a web conferencing system designed to meet general-purpose corporate needs.
Blackboard, through its work with thousands of educational institutions and school systems over the years, and the “in-house” knowledge that comes from staff members who are experienced educators, has identified five critical elements of an online learning and collaboration solution that’s used in an educational setting. In our experience, such as solution must:

- Be designed for education (by educators)
- Meet the accessibility imperative
- Provide seamless access to learning
- Engage the audience
- Ensure that strategic goals are met

With these five elements in place, a solution is well positioned to meet the requirements of K-12 online learning.

The explosion of online learning for student achievement and teacher professional development

Virtual, blended, real-time, self-paced, collaborative: schools are increasingly bringing learning online. iNACOL, the International Association for K-12 Online Learning, aggregates many sources of relevant information that it publishes in Fast Facts About Online Learning. Their data illustrates the extent of learning online. In February 2012, Fast Facts noted that:

- Supplemental or full-time online learning opportunities are available statewide to at least some students in 48 of the 50 states plus Washington, DC.
- 75% of school districts had one or more students enrolled in an online or blended learning course.
- In 2000, there were 40,000-50,000 enrollments in K-12 online education. In 2010, over 4 million K-12 students participated in a formal online learning program. This includes 217,000 students in cyber charter schools. Online learning enrollments are growing by 46% a year and the growth rate is accelerating.

IS ONLINE LEARNING FOR K-12 EFFECTIVE?

South Carolina has an average student success rate (the percentage of students passing their courses) of 65%. With an 88.8% success rate, the South Carolina Virtual School Program (SCVSP) greatly exceeds the state average, which SCVSP credits in large part to a full curriculum that supports engagement and collaboration with audio, video, and application-sharing powered by Blackboard Collaborate.

We have seen astounding results in student achievement as a direct result of using Blackboard Collaborate. The first principals’ online conference was a ‘Eureka’ experience as all participants experienced being able to meet and exchange what they were doing and learning without leaving their buildings!

Bryan Setser
North Carolina Virtual Public School
Online learning meets many very specific K-12 needs. It enables school districts to offer more classes in specialized subjects that have only a few interested students in any one school, such as language classes and Advanced Placement courses. It lets them better meet the needs of students learning from home, and can help students recover lost credit. It helps them offer tutoring, support for displaced and incarcerated students, mentoring, and extended-day learning. And schools can expand their students’ horizons with virtual field trips, guest speakers, and pen-pals they actually get to see and speak with.

While online learning is gaining momentum with students, it’s also an important factor in professional development for teachers and is proving to be effective. A June 2010 inTASC Report, e-Learning for Educators: Effects of On-Line Professional Development on Teachers and their Students presented the results of a study on the impact of online professional development workshops on teachers’ instructional practices and content knowledge. In each of four trials conducted, online professional development yielded a positive impact. And, for budget-constrained schools, online professional development offers a clear cost and time advantage over traditional methods.

Against the backdrop of more online learning and teaching, two key shifts stand out:

1. The emerging importance of synchronous learning:
   Today, self-paced, asynchronous modes can be augmented by capabilities that allow students and teachers to interact in real time, and let teachers include more web-based content in their curriculum.

2. The natural tendency of today’s students to collaborate online on team assignments and projects: Teachers are following suit, connecting online with peers to share ideas and best practices, to provide assignment clarification and tutoring, and to meet with parents.
Covering the Basics

There are a number of core components that are part of any good synchronous collaboration system - fundamental, largely generic capabilities that make online learning and collaboration possible. They include:

- **Multiple-communications mechanisms**: Voice over IP, teleconference, multi-point video, instant messaging and chat
- **The ability to incorporate multi-way audio and video**
- **Rich content use**, including Office applications, multi-media, such as video clips, and web-based “tours”
- **Application and desktop sharing**
- **Web touring**
- **Tools for interactivity**, such as whiteboards, surveys, and polling
- **Participant awareness**, i.e., knowledge of who’s there and how they’re doing
- **Controlled access**, restricted to legitimate participants only
- **The ability to record and save sessions**

These are the basics. While full collaboration systems will have all of these capabilities, not all products built for conferencing, meetings, and webinars will. Conferencing systems were typically built for corporate tasks, and attempts to retro-fit them for the unique demands of online learning may result in systems that don’t feel organic, are cumbersome to use and don’t provide teachers the robust teaching aids and moderation controls required. Those evaluating collaboration systems must always keep in mind that the function of a general-purpose meeting system is informational; the function of an online learning and collaboration system is educational.

**Designed for education (by educators)**

The educational mission calls for those charged with implementing online learning to pay close attention to education-specific capabilities when evaluating collaboration systems.

In K-12, maintaining a safe environment for young students is critical. An online learning and collaboration solution should have supervised and archived text chat, so that teachers can gain a better understanding of what their students are thinking, and can intervene if bullying
occurs. Another requirement among educators is the desire to have an online learning environment that replicates the control, spontaneity, and interaction enjoyed in face-to-face learning that keeps teachers and students engaged. One capability that helps with this is the ability to easily set up robust student breakout sessions. This lets teachers:

- Assign students to different groups
- Save and move content across rooms and back to the main classroom
- Drop in and out of breakout sessions to see how groups are progressing with assignments
- Broadcast a message to all groups
- Display a timer

Teachers need to be in charge of their classes whether they’re in physical or virtual classrooms. A system built for educators will offer teachers the ability to assign specific permissions to individual students, allowing them to chat, write on the whiteboard, or roam among breakout sessions. The solution should enable teachers to “see” what students are doing – writing on the whiteboard, speaking, chatting, laughing, raising a hand, stepping out – and when they’re falling behind. Another feature that educators prize is the ability to conduct voice discussion in their classes and to post voice feedback to student assignments. An ideal student-oriented feature is the ability for students to take personalized notes, synchronized to the recording of the session, simplifying their reviewing process.

Course content with interactive activities should be designed so that instructors can easily navigate among different elements of their delivery, letting them focus on teaching, not on technology. For example, a teacher should be able to move from a whiteboard to application sharing without having to hunt for icons to make the switch. Pre-packaged courses allow for consistency in course content and delivery across teachers. While this is important, teachers also need to have the flexibility to be able to make a “mid-course correction” based on class interest and teachable moments.

**Meeting the accessibility imperative**

It’s estimated that nearly 20% of the U.S. population have some type of disability, experiencing visual, aural, mobility or cognitive challenges. Most schools have a commitment to those with disabilities, and technology is making a major difference for them. Carin Headrick is an independent accessibility consult who herself has a visual disability. As she has said, “Ten years ago, we couldn’t have dreamed of the potential. New technology makes things amazingly easier—as long as it’s made accessible.”

Online learning and collaboration is one area that holds particular promise for those with disabilities, and there are a number of ways in which it can be superior to face-to-face classroom-style learning.

Educators evaluating collaboration solutions need to make sure that the vendors they are working with are as committed to answering the accessibility imperative as they themselves are, and are working to tear down any accessibility barriers. There are a number of ways in which an online learning solution must meet the needs of those with disabilities, and eliminate barriers to use. These include:

- Screen reader support: text-to-speech output for menus, dialog boxes, slides, participant information and chat
- Ability to resize the user interface to focus on the content areas

* For more on online learning for those with disabilities, see the Blackboard white paper No User Left Behind: Blackboard Collaborate and the Accessibility Imperative.
In 2009, Blackboard Collaborate created a task force composed of those involved with accessibility support in education, many of them disabled themselves. Independent accessibility consultant Carin Headrick has this to say about that effort. “Because we live our disability, we know how we can give feedback about what works and what doesn’t. It’s all well and good to design something with the best of intentions, but sometimes that results in a partial solution that’s not really a solution at all. I really appreciate that Blackboard Collaborate initiated their process for hearing from people with disabilities, not just relying on their version of what they think should be a workable solution.”

Provide seamless access to learning

Many teachers use a Learning or Course Management System (LMS/CMS) to support tasks like class scheduling, roster management, grading, assignments, and course creation. Teachers and administrators need a tightly integrated environment in which to operate among the various systems they rely on. For starters, they must be able to seamlessly navigate between real-time capabilities provided through an online learning and collaboration system, and the asynchronous capabilities of an LMS and other systems. An educator-oriented collaboration solution will provide teachers streamlined access to all the asynchronous course content they’ve built, and allow them to automatically

Scaling of content areas
Inheritance of or the ability to set color and contrast settings
Ability to hide non-essential features
Closed captioning support (saved in recordings)
Keyboard navigation and accelerator keys for menus, navigation, and common functions
Indexed recordings for replay
Unlimited number of breakout rooms
Private chat
Synchronized notes

Having integration between Collaborate and Learn allows us to supplement our asynchronous courses with synchronous etutoring sessions, guest lectures, and timely review sessions. By integrating the two platforms we are able to create a high quality online learning experience that can meet the needs of students with all learning styles.

Jeff Simmons
Idaho Digital Learning Academy
populate class rosters from their LMS/CMS. Close integration lets teachers save time (and prevents the aggravation of having to deal with multiple logins).

An online learning system must “support the supporters” – those charged with deploying and managing learning technology. With out-of-the-box connectors to popular asynchronous systems, online learning administrators can seamlessly take care of behind-the-scenes tasks like setting up accounts, managing IDs, and scheduling events, and won’t have to devote their scarce resources to customization.

Overall, integration among different systems also means that an institution will be able to derive more use, and greater return on investment (ROI), from their learning platforms, as adding synchronous collaboration capabilities to an LMS or CMS expands usage. (Another area where ROI can be enhanced through integration with online learning is with the use of whiteboards, like those from Promethean, that a school has already invested in.)

Engaging the audience

Online learning requires engaging the student, or you risk losing them. Incorporating new and engaging media into the learning process can improve educational outcomes in both virtual learning environments and in a traditional classroom setting.

To provide effective learning, an online learning and collaboration system must support not just a rich array of media, like audio and video, but should also provide opportunities for heightened interactivity, with students allowed to go “hands-on”. Teachers in early grades may want to break up the day by incorporating games, play activities, and even virtual recess on rainy days. Older students, so comfortable with being online in their after-school lives, also benefit when interactivity is used alongside traditional modes of learning. The potential for engagement, and for reaching students with different needs and learning styles, is tremendous when you include different forms of interactive content in the curriculum.

“I am happy to say all of my students are going to be promoted this year. Increased assignment submission, increased students who stay with our school, increased grades, all of these things are possible when the teacher is delivering quality online lessons. The key to the high quality lessons is truly the effective use of Blackboard Collaborate. It makes me feel like I am a teacher again.”

Tara Park
Pennsylvania Virtual Charter School
Whiteboards provide a good opportunity for interactivity. Just as pupils were once called to the blackboard, today’s students should be able to be called to the virtual whiteboard to make their points and illustrate their ideas. Shared workspaces with access to a toolset are also important for experiential learning. Documents should not be static, but must be able to be revised in real-time. Today’s students communicate through text. Built-in support for texting within an online learning and collaboration system is rapidly becoming an essential feature.

Voice technology is emerging as a key element for online learning. From within their online learning system, teachers should be able to offer voice-annotation, such as feedback on a term paper or on foreign language assignments and record homework assignments.

“The one thing our faculty indicate is that interactions within Blackboard Collaborate are the most valuable part of their online professional development experience.” David McGeary, a district instructional technologist in Harris County (Texas), which has implemented a successful professional development program with Blackboard Collaborate.

Students need a vibrant, engaging, and flexible environment in which to learn. This same environment makes administrative meetings and teacher collaboration not just possible, but effective, as well.

**Ensuring that strategic goals are met**

Before any system is implemented, it’s essential to have thought through the goals for it. Surprisingly, in their determination to satisfy a checklist item and get something done, some organizations take shortcuts here. With so many in K-12 making online learning and collaboration a key element in their strategic portfolio, it’s important that the online learning and collaboration system being deployed is closely aligned with a school system’s overall goals.
These will differ from one school or school district to the next. For one, it may be achieving its Adequate Yearly Progress (AYP) goals, improving student outcomes by extending the school day, or allowing students to collaborate with their peers. For another, it may be cutting costs associated with professional development, summer school, or substitute teachers. Some schools use online learning and collaboration to keep at-risk students in school, help them recover lost credits, and increase graduation rates. Some schools are trying to forge stronger ties with the community with mentoring programs and school-business partnerships. Parent engagement is heightened if busy parents can take advantage of virtual parent-student conferences. And in today’s economy, practically all schools and school systems are looking to contain costs without sacrificing on the quality of education.

Vendors offering online learning solutions should have professional services staff who can help define how synchronous online learning fits in with their strategy, identify the needs and desired outcomes for a system, and help ensure that those needs are met.

The core functions a professional services team can assist with include:

- Working with school leaders to determine educational and administrative needs
- Developing pathways to meet these needs
- Identifying, alongside administrative and support staff, real-world use cases that are aligned to goals and have measurable objectives
- Tailoring deployment and training to meet specific requirements
- Establishing processes that will help schools measure outcomes against metrics that are meaningful to them

Getting Results with Online Learning and Collaboration

For an increasing number of schools, online learning is mission critical for both student success and teacher professional development. Implementing the right solution for your school or district can help you achieve results like the ones that these schools have experienced with Blackboard Collaborate:

- IDEAL-New Mexico is a statewide eLearning initiative that uses web conferencing for online training seminars, annually saving $1.5 million on hotel expenses, gas, and other travel-related expenses.
- Clay County, West Virginia, has a Home Connections program to meet the needs of sick children who are homebound or in the hospital. With Blackboard Collaborate, they’re able to meet the needs of 250 students, across a wide geography, with only four teachers. In 2011, 80% of these students were able to return to their schools with passing grades – and the district saved on gas and travel reimbursements for teachers who had previously met one-on-one with the students, on a far less frequent basis than the online program enables.
- North Carolina schools have had “astounding results” in student achievement with Blackboard Collaborate’s innovative capabilities. For example, to cite one “astounding result”: over a one year period, science students went from being 20% proficient to over 80% proficient, due largely to replacing almost all multiple choice testing with more authentic projects and writing assessments, offering highly engaging lessons, and involving students in diagnosing their own learning progress.
BEYOND THE VIRTUAL CLASSROOM

With Blackboard Collaborate, schools go well beyond the virtual classroom walls. They’re using web-conferencing for:

- Teacher professional development
- Professional learning communities
- Curriculum mapping and sharing
- Administrative meetings
- Parent-teacher meetings
- School-community connections
- Expanded course offerings (shared among schools across a district)
- One-to-one or group tutoring
- Mentoring and extended day support
- Extended learning
- Credit recovery
- Virtual field trips
- Student team projects
- Private and charter school recruitment seminars
- School services
- Working with displaced students

For K-12 students and teachers, more and more of today’s learning is happening online. It’s real-time, collaborative, and richly engaging, and schools are taking advantage of it to improve outcomes and stretch their budgets. Blackboard Collaborate was built for education, and can help you meet these important goals.

About Blackboard, Inc.

Blackboard Inc. is a global leader in enterprise technology and innovative solutions that improve the experience of millions of students and learners around the world every day. Blackboard’s solutions allow thousands of higher education, K-12, professional, corporate, and government organizations to extend teaching and learning online, facilitate campus commerce and security, and communicate more effectively with their communities. Founded in 1997, Blackboard is headquartered in Washington, D.C., with offices in North America, Europe, Asia and Australia.

Built for education, Blackboard Collaborate delivers web conferencing, enterprise instant messaging, and voice authoring capabilities that facilitate effective and efficient instruction, meetings, and help—anywhere, anytime. To learn more about how you can reach your academic, administrative, and financial goals through more interactive and cost-effective collaboration, visit blackboardcollaborate.com, contact us at collaboratesales@blackboard.com, or try our solution free for 30 days at bbcollaborate.com/try.