Expanding Learning Opportunities:
Ensuring Student Success in the 21st Century
EXPANDING LEARNING OPPORTUNITIES:
PRIORITY ONE FOR 21ST CENTURY STUDENT SUCCESS

TODAY’S STUDENTS COME TO SCHOOL WITH BIG DREAMS AND AMBITIOUS PLANS. THERE ARE STUDENTS WHO DREAM OF WORKING IN INTERNATIONAL BUSINESS, BUT THEIR SCHOOLS SIMPLY DON’T OFFER COURSES IN LANGUAGES OTHER THAN ENGLISH AND SPANISH. THERE ARE STUDENTS WHO ARE MAKING REMARKABLE STRIDES IN MIDDLE SCHOOL MATH AND SCIENCE, BUT THEIR HIGH SCHOOLS DON’T OFFER ADVANCED COURSES IN CALCULUS AND CHEMISTRY. THERE ARE STUDENTS WHO HAVE FALLEN BEHIND FOR A VARIETY OF REASONS AND THEIR SCHOOL DOES NOT OFFER FLEXIBLE WAYS TO CATCH UP. AND THERE ARE THOUSANDS OF STUDENTS WHO COME TO SCHOOL EVERY DAY HUNGRY TO LEARN IN PERSONAL AND ENGAGING WAYS BUT ARE CONFRONTED WITH TRADITIONAL, STAND-AND-DELIVER TEACHING PRACTICES.

IN SCHOOL DISTRICTS OF ALL SIZES, IN LOCATIONS FROM THE LARGEST URBAN AREAS TO THE MOST REMOTE RURAL SETTINGS, ONE FACT IS INCREASINGLY CLEAR; A “ONE SIZE FITS ALL” MODEL FOR K-12 EDUCATION SIMPLY DOES NOT FIT 21ST CENTURY DEMANDS OR DREAMS. EDUCATION PUNDITS AND PLANNERS ALIKE SEE THIS REALITY EVERY DAY STUDENTS ENTER OUR SCHOOLS WITH COMPLEX AND DIVERSE NEEDS. TO ADDRESS THIS CHALLENGE, PROVIDING A CONNECTED, PERSONALIZED LEARNING ENVIRONMENT IS RAPIDLY BECOMING MISSION CRITICAL IN CLASSROOMS ACROSS AMERICA.

WILL AMERICA’S SCHOOLS LIVE UP TO STUDENTS’ NEEDS AND POTENTIAL?
THE CHALLENGE

District leaders are facing mounting pressures every day to improve programs, policies, and infrastructure to ensure that high school graduation rates improve dramatically, and that the students they graduate are adequately prepared for workforce and college-level challenges. It’s a tricky proposition because it requires educators to meet highly individualized student needs and simultaneously meet the needs of all students.

DIVERSE STUDENT NEEDS

Teachers, curriculum developers, administrators, and parents alike have long recognized that students learn differently from one another in terms of learning style, pace, and preference. Developing and delivering instruction that taps into students’ individual learning styles requires more responsive and flexible instructional strategies, environments, and materials. And 21st century students themselves, thanks to 24/7 media and Internet access, see a world of opportunity and choice in front of them. They are expecting their schools and teachers to prepare them for their future—not the dreams of generations past. Students expect rigor and relevance and they expect learning opportunities that will help them compete in the global economy they’re preparing to enter. It’s a different world for students and educators alike.

Boredom: A Growing Epidemic

The 2004 National Education Technology Plan reports that two-thirds of our high school students will be bored in at least one class. And according to the “Silent Epidemic” study from the Bill and Melinda Gates Foundation, 47% of the dropouts surveyed said that they quit school because their “…classes were not interesting” and they were bored. The study goes on to report that 88% of the dropouts actually had passing grades; what they didn’t have was a learning environment that kept them adequately engaged.

Educators are faced with closing the gap between the way students live in our digital world and the way they learn in our off-line schools. This is critical to keep students in school, engaged, and eager to participate.

“Do you offer Mandarin as a Foreign Language?”

More and more students may well be asking their schools this question and hundreds of others in a similar vein. According to a U.S. Department of Education report, only 44% of U.S. high school students studied a foreign language in 2002. That puts American students at a distinct disadvantage when viewed from a competitive global perspective. Why? In many countries, students are required to take not just one, but often two foreign languages. In the U.S. today, only 11 states require credits in foreign language for high school graduation. Fluency in more than one language is critical when students begin to compete for 21st century jobs, in which they’ll be expected to communicate effectively with people around the world and to work responsively and strategically in a multicultural professional environment.

In its 2006 report, Answering the Challenge of a Changing World: Strengthening Education for the 21st Century, the U.S. Department of Education notes that other developed countries whose students learn multiple languages will gain an edge. The report notes that while more than 200 million Chinese students study English, in comparison, only about 24,000 American elementary and secondary school students study Chinese.
And the competitive pressure certainly does not stop at the need for multi-lingual students. In order to compete in the global marketplace, our educational institutions will need to offer broader and deeper learning opportunities, encompassing subjects that support STEM (Science, Technology, Engineering, and Mathematics) initiatives and courses that give students rigorous academic challenges and content, such as those offered in Advanced Placement® and International Baccalaureate programs.

Currently, more than 40% of our nation’s high schools do not make Advanced Placement® (AP) or International Baccalaureate (IB) courses available. The good news? A growing number of virtual schools and supplemental course programs can now offer AP and IB courses in an online learning environment that would otherwise not be available. Effectively, online learning is helping to provide all students, no matter which school they attend, the opportunities to obtain a challenging and personalized educational experience.

HELPING TEACHERS KEEP PACE

Another stark reality for districts is ensuring their teachers’ have sufficient content knowledge and expertise in specific mathematics and science subjects. A recent U.S. Department of Education Staffing Report notes that 52% of middle school and 15% of high school mathematics teachers as well as 40% of middle school and 11% of high school science teachers did not have a major or minor in math or science, respectively. This directly impacts students’ ability to achieve at an accelerated pace in these critical disciplines. Again, online learning can certainly play an important role in helping educators reach highly qualified status in their specific content areas.

Here, just-in-time professional development models and the ability for districts to provide training without associated travel and facility costs help expand learning opportunities for teachers and that helps students achieve at higher levels and at a more rapid pace.

DIGITAL NATIVES= DIGITAL EXPECTATIONS. ANOTHER 21ST CENTURY REALITY

Today’s students, often tagged the “Digital Native” generation, come to school with a far different set of expectations and needs than their Gen X and Gen Y predecessors. This highly capable crop of students expects to construct and collaborate on the direction and depth of their learning paths—and this expectation is often in direct contrast to the current educational system’s approach and the comfort level of their “Digital Immigrant” teachers.

Much has been written about Digital Natives’ “always on” way of learning, socializing, and living. They multitask with stunning ease and they’re remarkably productive. Their teachers have discovered that these students are fast, agile learners, and they are quite capable of managing and taking responsibility for their own learning. Because they’re always online, they’ve developed the ability to communicate in a variety of ways—through text, images, symbols, and multimedia. They are quite adept at learning new communication skills and they’re perfecting the art of just-in-time learning—all supported by universally available digital tools and resources.

As educators look for ways to engage these digital natives, a connected learning environment is required to enable and expand their learning styles and educational opportunities.
GRADUATION REQUIREMENTS AND COLLEGE/WORKFORCE READINESS

A connected, personalized learning environment is also an essential component in college and workforce readiness. Again, statistics spotlight the challenges:

• According to the Manhattan Institute, 70% of all students in public high schools graduate, but only 32% of them leave high school qualified to attend four-year colleges. And in urban areas, the drop-out rate is a staggering 50%.

• The National Center for Education Statistics (NCES) reports that the use of computers and the Internet may actually improve students’ prospects when they enter the labor market. These technologies improve access to information, so employees can get tasks accomplished quickly and more effectively with improved communications. In that regard, today’s students certainly have an advantage over their older colleagues.

• ACT’s College Readiness Benchmarks (2008) are scores on the four individual subject tests (English, mathematics, reading, and science) that indicate whether students are ready to succeed (highly likely to earn a “C” or higher) in specific first-year, credit-bearing college courses in those subject areas. Overall, 22% of high school graduates met or surpassed ACT’s College Readiness Benchmarks in all four subject areas. The area of most difficulty was science with only 28% of the students meeting or surpassing ACT’s College Readiness Benchmarks, compared to 68% who met the benchmarks in English, 53% in reading, and 43% in mathematics.

It is clear that expanded learning opportunities have the potential to prepare more students more effectively to succeed in their early college careers and entrance into the workforce.

MAKING THE CONNECTION

EVERY STUDENT, AN INDIVIDUAL

What makes a connected, personalized environment work for students, educational institutions, and our 21st century society as a whole? First, when schools create this kind of environment, they have the ability to impact learning at the point of instruction. And connected learning is scalable learning, giving educators the resources and systems they need to individualize and personalize instruction for all students more effectively and efficiently. Connected learning also offers distinct advantages for individualizing instruction for student needs, such as English Language Learners, because online learning options can make it possible for teachers to customize content and curriculum specifically to address their needs while keeping all students on track with curricular scope and sequence.

LEVERAGE DISTRICT RESOURCES

Within a connected learning environment, districts have better opportunities to take advantage of innovations as they are introduced. And once the infrastructure for this kind of educational model is in place, it becomes more cost-effective in the long run. Equally important, these initiatives make it possible to better meet diverse student needs and expand professional development for teachers and program coordination for administrators.
TEACHERS AS LEARNERS

Teachers stand to benefit from this kind of learning environment as well, because just as students have access to rich resources and collaborative tools, so too will teachers. This gives them the opportunity to personalize instruction for their students and to address some of their own professional development needs as well. And of course, this kind of learning environment gives administrators and elected officials enhanced ability to address the needs of all students and meet overarching achievement goals.

FROM VISION TO REALITY

Expanding students’ opportunities to learn, achieve, and succeed first requires vision and commitment. Then it requires practical strategies to move forward from vision to reality. Forward-thinking educators are seeking ways to close the gap between the way our students live and the way they learn by building a connected, personalized learning environment.

THE TIDE IS TURNING

In 2006, Michigan became the first state to require an online learning experience for high school graduation. This requirement recognizes the importance of helping students to be ‘future-ready.’ Beginning with the class of 2011, Michigan students will need to have an online learning experience through taking an online course, participating in an online experience defined as “…a combination of structured, sustained, integrated online experiences accessed via a telecommunications network utilizing teacher led, blended, teacher-facilitated, or self-paced courses”, or in an integrated experience which combines online learning into the required credits of the Michigan Merit Curriculum.

Michigan’s documents state, “A student that has been successful in this type of experience should develop competency for being able to learn in a virtual environment. They will become lifelong learners and will develop and embrace online skills through accessing, analyzing, and evaluating information resources; incorporating communication skills; and practicing problem-solving, interpersonal and self-directional skills.”

Clearly, Michigan has recognized that providing students with a connected, personalized learning environment expands their learning opportunities.

The North American Council on Online Learning’s web site reports that today, 42 states in the U.S. have significant supplemental online learning programs, or significant full-time programs (in which students take most or all of their courses online), or both. Only eight states do not offer either option and several of these states have recently begun planning for online learning development.

More recently, the state of New Mexico announced a landmark initiative to deploy a single, statewide e-learning platform that will be the first of its kind to connect teaching, learning, and training for the state’s K-20, adult education, and government communities. This is significant in a number of ways, particularly in the initiative’s comprehensive approach to supporting lifelong learning through technology, opening a wealth of opportunities that can help increase the percentage of students who graduate from high school and have the opportunity to attend college and participate in post-secondary learning opportunities.
21ST CENTURY SKILLS

The Partnership for 21st Century Skills has identified an integrated portfolio of skills that can be used as a framework for preparing young people for a global economy. In brief, these skills can be summarized as:

- Mastery of core subjects including English/Languages Arts, World Languages, Arts, Mathematics, Economics, Science, Geography, History, and Government and Civics
- Collaboration—the ability to work as part of a team
- Critical thinking—the ability to tackle complex problems and concepts
- Oral communications—the ability to present ideas
- Written communications—the ability to present ideas in writing
- Technology—the skills to use technology tools, resources, and communications
- Citizenship—the ability to engage in and understand civic and global issues, and the experience of service learning
- Career learning—the opportunity to investigate careers through internships and other experiential learning
- Content—the skills to conduct research, evaluate and develop content to support all of the above skills

These are the skills that have been identified by the business community, education leaders, and policy makers as vital to every child’s success as a citizen and 21st century worker. Individualized learning environments, supported by technology, give students support in mastering core content and at the same time, build students’ capacity in collaboration, communications, research skills, content development, and critical thinking.

INCREASING GRADUATION RATES

A connected, personalized learning environment can indeed work to support improved graduation rates. Examples include the use of online learning to address academic deficiencies on a just-in-time basis and for credit recovery to support students who may have completed a course but were academically unsuccessful. While the student earned “seat time,” s/he did not earn academic credit. Putting that student back in the same course, with the same materials, and the same teacher may not be the best or most effective instructional strategy. For these students, a customized learning path that enables them to build skills and knowledge they missed in their first attempt can make a significant difference. Online learning provides the opportunity for students to gain additional help and to repeat courses, so they can address needs during a summer session, outside the traditional school day or schedule, or as an additional resource extending their class work.

“We have saved kids with this program, kids who would not have graduated from high school. They would have dropped out or gotten a GED.”

Shawn Morris
Wichita School District,
Wichita, Kansas

Credit recovery is an ideal use of online learning tools and resources, thanks to flexible pacing and scheduling, the ability to provide extra practice, frequent assessment, and robust monitoring and reporting on participation and practice. In fact, according to the 2008 America’s Digital Schools research summary, credit recovery ranks as the most widespread use of learning management systems.
At the Wichita eSchool in Wichita, Kansas, online learning is giving students the opportunity to overcome some challenging life situations. The eSchool gives them the opportunity to attend classes on their own time, learning at their own pace. All of the Wichita eSchool’s courses are developed by the district’s teachers and they utilize interactive multimedia, online textbooks and more. Shawn Morris, one of the school’s leaders notes, “We have saved kids with this program, kids who would not have graduated from high school. They would have dropped out or gotten a GED.”

**OFFER A RANGE OF ADVANCED COURSES**

According to the North American Council on Online Learning (NACOL), in addition to the 42 states that offer significant supplemental or full-time online learning programs, there are also 26 state-wide or state-led virtual schools in the United States. These online courses typically offer full academic credit, are delivered over the Internet with distance between teachers, and combine synchronous and asynchronous components. These online courses have a set of student curriculum materials and an online teacher who provides student feedback and answers student questions. Online AP and IB courses meet the same rigorous requirements of their face-to-face counterparts, and for many schools these courses would not be available if the online option did not exist.

Here, it is important to point out that only 7 percent of all International Baccalaureate students are located in the United States, another indication of our challenge in global competitiveness. And in 2007, only 24.9 percent of U.S. high school graduates took an Advanced Placement exam during high school. While more students are participating in advanced courses, a recent report from the National Council of Education...
Statistics noted that for more than 25 percent of U.S. high school students, advanced courses were simply not available in their schools. And only 22 percent attended schools that offered four or more advanced courses. Students in schools with fewer than 150 students and rural students find themselves at the most profound disadvantage because they have the least opportunity to take one or more advanced course in math, science, English, or a foreign language.

MEETING THE NEEDS OF ALL DIGITAL NATIVES

A connected, personalized learning environment addresses the needs, preferences, and mindset of 21st century digital natives who multitask, learn visually, search for and process information fluidly, and communicate voraciously.

At the same time, this approach gives educational institutions new answers in the drive to individualize instruction. Online learning provides several notable paths to individual instruction, including:

• Supplemental learning opportunities:
  - For students with scheduling conflicts;
  - To provide courses that students need or want when qualified teachers are not available;
  - To provide hard to staff and unique courses, such as foreign languages or AP classes.
• Full-Time opportunities for students who are unable to attend school
• Blended learning opportunities that combine online delivery of educational content with classroom interaction and live instruction. This approach can be particularly valuable to students who have difficulties with specific concepts or who may need extra practice or review. Interestingly, the 2008 Speak Up Survey reports that 20% of districts responding to the survey have implemented blended learning models.

Online learning also helps students take better advantage of class time, as they use online resources to prepare for discussions and presentations, conduct research, and develop their thoughts and ideas. They can then interact more fully and productively with peers and teachers, taking advantage of the live learning environment in new and more engaging ways.

Kyle Dunbar, Technology Integration Specialist with the Alexandria Public School District in Virginia, has been instrumental in helping to provide high school students with a digitally rich learning environment. It’s a dynamic example of online learning and face-to-face instruction working synergistically to provide digital natives with “their” kind of learning experience. In Alexandria, all teachers are required to host course web sites on the district’s learning management platform that include, at a minimum, a course syllabus, announcements, staff information, and student performance expectations. Students participate in online discussion boards, contribute to blogs and wikis as part of their class work, upload their assignments and complete assessments online. Said Dunbar, “I’m really interested in encouraging students to gain more control of their own learning—and having students be accountable for learning.”
COLLEGE/WORKFORCE READINESS

Connected learning environments can provide students with dual credit opportunities, giving those who want additional challenges the chance to earn high school and college credits simultaneously. In fact, many online courses are accepted by both a student’s local high school and on a college transcript for freshman placement.

It’s a model that’s already working well as seen in the Kentucky Virtual School’s agreement with Jefferson Community College, Jefferson County Public Schools, and the Kentucky Community and Technical College System. Through this arrangement, Kentucky high school students can earn dual credits through a program called College NOW! When students complete selected courses, they receive a college credit transcript. This helps them prepare for further academic pursuits and for job opportunities following their high school and/or college careers.

OPPORTUNITIES FOR EDUCATORS

For teachers and administrators to meet the diverse and individual needs of students, connected learning environments expand learning opportunities as well. Through professional learning communities, online professional development, collaborative curriculum development, forums to support common planning times, and the ability to share resources, educators find the resources, support, and growth opportunities they need to improve practice, collaborate, and share best practices and effective resources. This has a direct link to student achievement, because as educators improve instructional practice, students benefit and school districts are better able to address current accountability requirements.

Several districts use the resources and capacity within their connected learning environments to support school board relationships, planning and strategy development, budgeting, and to support collection and evaluation of student data. This works to save time and money and builds an environment of open communications and continuous improvement, all of which have the potential to impact student performance positively over the longer term.

EXPAND THE OPPORTUNITY, EXPAND THE LEARNING

Every district is experiencing the challenges of meeting individual student needs and addressing students’ and communities’ heightened expectations. And districts in every setting are looking for bold innovative ways to bridge the gap between the way our students live and the way they learn. The answers will come from multiple sources and multiple approaches, and that it why so many visionary education leaders and districts are making strides now to create connected, personalized learning environments. Expanding learning opportunities can give every student and every educator the opportunity to achieve more. And that sets the stage for progress all along the learning continuum for achieving our national goal for 21st century global competitiveness.
REFERENCES


8 National Center for Education Statistics

9 ACT College Readiness Benchmarks, 2008

10 Michigan Educational Technology Standards and Expectations for Grades 9-12; http://www.mi.gov/mde/0,1607,7-140-28753_33232_37328---,00.html

11 North American Council for Online Learning; www.nacol.org

12 New Mexico State Department of Education; http://www.sde.state.nm.us

13 The Partnership for 21st Century Skills; http://www.21stcenturyskills.org

14 America’s Digital Schools 2008 Report; www.americasdigitalschools.net

15 North American Council for Online Learning; www.nacol.org

16 International Baccalaureate Program, 2008 Action Kit for Policy Makers; www.ibo.org/ibna/actionkits/

17 AP Report to the Nation; The College Board, 2008; http://professionals.collegeboard.com/data-reports-research/ap/nation


19 Project Tomorrow, 2008 Speak Up Survey; http://www.tomorrow.org/speakup/speakup_news.html

20 High school student quotes from focus group sessions, held in the Summer of 2008 during the Blackboard annual users’ group conference.