LEADING
In a list of nearly impossible questions that all principals face, right near the top—next to: Where is the money going to come from to pay for everything?—is this urgent question: What do our students need to learn now to be successful in school, work, family, and community life?

In the blur of minute-to-minute crises, issues, meetings, staffing challenges, policy changes, funding shortfalls, flu epidemics, upset parents, state accountability requirements, and all the rest, there is little time left to grapple with such a big, weighty question. But as the leader of your school’s learning community, it is now more important than ever to be very clear about what you believe your school must do to nurture successful 21st century learners, workers, parents, and community members.

The good news is that there is a growing worldwide consensus as to what 21st century learners need for success. The more challenging news is that it will likely mean you and your teachers must shift what goes on in your classrooms each day so that students will have more of the learning experiences they need for future success.

Make way for age-old skills with a 21st century twist.

Bernie Trilling
Envisioning the Future

In order to align teaching and learning to the skills students will need to be successful in the 21st century, it helps to first picture what the world might look like 20 years from now. Begin by imagining (if it’s not already the case) that you have a child or grandchild who is just starting preschool or kindergarten this year. Next, consider the following questions:

What will the world be like 20 or so years from now when your child has left school and is out in the world? Remember what life was like just 20 years ago and imagine the changes coming in the next 20.

Responses to this question often paint a picture of a future world that is:

- “Smaller” and much more connected by technology and communications;
- Overflowing with waves of digital information and media;
- Straining to provide basic resources—water, food, and energy—and more dependent on green technologies;
- One giant global economic and financial network, where big trouble in one place affects jobs and incomes anywhere;
- Much more globally competitive for jobs, with work being done by diverse teams scattered around the world;
- More dependent on education to “learn how to learn” for a lifetime of multiple careers;
- Challenged by the diverse mixing of cultural, traditional, and modern lifestyles; and
- More dependent on international, multilingual collaboration to solve problems.

One excellent example of a concerted effort to bring 21st century approaches to learning is the current work going on in West Virginia to bring engaging, relevant, and rigorous projects into the classroom.

In 2007, fifth-grade teacher Deb Austin Brown of St. Albans Elementary School joined 80 educators from around the world to learn how to design and lead learning projects that build 21st century skills and deepen understanding of school subjects. She learned how to lead and support all the phases of a learning project—define, plan, enact, review, and manage through the project cycle—in the Oracle Education Foundation’s Project Learning Institute.

With the help of other teachers from around the world and an online project environment called ThinkQuest Projects, which provided tools and digital space to hold all the project work, Brown designed what she calls The Success Project. Students chose a successful historical or contemporary leader, researched what helped make that leader a success, and created Web pages that captured and published their findings. They received feedback and comments on their Web pages from other students around the world, and then presented their findings to other students, teachers, parents, and community leaders at an all-school exhibition.

Ryan, one of Brown’s highly engaged and ambitious fifth-graders, continued developing his success skills by interviewing a prominent high-tech business leader in the community, and even the governor of West Virginia. The Success Project not only empowered Ryan to be a more successful 21st century learner and future leader, but Brown’s example is helping other teachers across West Virginia and the U.S. to see what 21st century learning can look like in the classroom.

What skills will your child need to be successful in this world you have imagined 20 years from now? Think hard about what it will take to meet the many challenges in the future world we’ve just imagined.

Answers to this question invariably produce most of the skills identified by a number of business, education, and governmental groups as being essential for our times such as:

- Critical thinking and problem-solving;
- Communications and collaboration;
- Creativity and innovation;
- Information, media, and technology literacy;
- Flexibility and adaptability;
- Initiative and self-direction;
- Social and cross-cultural interaction; and
- Leadership and responsibility.
What were the conditions that made your peak learning experiences so powerful? Consider the kinds of support and help you received during those deep learning experiences.

There are typically common themes among the responses to this question such as high levels of challenge or difficult but meaningful learning goals to achieve. Successful learning experiences often come from an internal personal passion to learn a particular subject and equally high levels of external caring and personal support—a demanding but loving teacher, a tough but caring coach, or an inspirational learning guide. A final theme is full permission to fail—safely, and with encouragement to apply the hard lessons learned from failure to continuing the struggle with the challenge at hand.

What would learning be like in your school if it were designed around your answers to the first three questions about envisioning the future?

This question consistently spotlights the distance between what we all seem to know learning needs to be now and what schools end up doing each day.

For example, the world of work is increasingly made up of diverse teams working together to solve problems and create something new, so why do students mostly work alone and compete with others for approval?

Technology is more a part of children’s lives each day, so why should they have to check their technology at the classroom door and compete for limited school computer time?

The world is full of compelling, real world challenges, problems, and questions, so why spend so much time on disconnected questions at the end of a textbook chapter?

Doing projects on something a person cares about comes naturally to all learners; why do so few classrooms include learning projects?

Innovation and creativity are integral to the future success of our economy; why do schools spend so little time on developing creative skills?

Over the Rainbow to 21st Century Learning

From a number of books such as Thomas Friedman’s *The Earth is Flat: A Brief History of the 21st Century* to reports such as *Time* magazine’s “How to Build a Student for the 21st Century” and such surveys as “Are They Really Ready to Work?” where 400 business executives were asked if the U.S. education system is graduating work-ready students (their answer: “Not really”), there is a growing worldwide consensus about what schools should pay attention to.

First, the world is in the midst of a change as big as the shift from an agricultural to an industrial society more than 350 years ago. This time the shift is from an industrial society to an information and knowledge society, where knowledge, expertise, and innovation are increasingly the main engines of our economy. Therefore, our education system, well-tuned for the Industrial Age, now needs to sync up with the demands of our times and focus on building the knowledge, skills, and expertise most needed for our knowledge age.

The Partnership for 21st Century Skills, a powerful U.S. coalition of education, business, government, and nonprofit organizations, has collectively developed a compelling model of what learning needs to look like in the 21st century.

There are two parts to this model: the “rainbow” above and the “pools” below. The rainbow represents the essential skills and knowledge all students now need, and the pools below represent the key components our education system needs to deliver and support the 21st century learning goals above.

Reading, writing, arithmetic, and all the other basic school subjects we studied when we were in school are still at the center of the model. These core subjects are joined by today’s pressing, cross-subject themes like global awareness, health and environmental sustainability, basic financial and business literacy, and civic responsibility. Where this model differs from 20th century Industrial Age learning is in the emphasis on three sets of skills our flatter and interconnected world is especially looking for. These 21st century skills are grouped into three categories:

- Learning and innovation skills (creativity and innovation, critical thinking and problem-solving, and communication and collaboration);
- Information, media, and technology skills (information literacy, media literacy, and information and communications technology literacy); and
- Life and career skills (flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility).
Many of these skills are not new to this century; they are timeless skills that have been important for successful careers, professions, and civic life through the ages. What is new, though, is how these skills are now being acquired—through the use of modern technologies and digital literacy skills that support the learning of all the other skills. This is what gives these age-old skills their 21st century twist.

Among most high school and college graduates, only a few of the essential skills listed above (such as the information, media, and technology skills) commonly reach the proficiency bar. The rest of these skills are in short supply.

So how should a principal, as the schools’ instructional leader, make sure that students are developing essential learning, innovation, life, and career skills?

**Minding Your P’s and Q’s—Problems and Questions**

Important tools that schools need to support a 21st century approach to teaching and learning include the usual suspects: the Internet, pen and paper, cell phones, educational games, tests and quizzes, good teachers, caring communities, educational funding, and loving parents. All of these items and more contribute to a 21st century education, but two key tools not on this list may be the most powerful learning tools ever devised: questions and the process to uncover their answers, and problems and the inventing of their possible solutions.

Questions have long been the motivation for discovering new knowledge in science, and problems have been the inspiration for inventing new ways to live and work through engineering and technology.

In our rush to cover the growing tidal wave of information in each subject area, we might have overlooked the power of questions and problems. Two proven learning methods that put powerful questions and problems at the heart of learning experiences in all subjects are inquiry (question-based) and design (problem-based) learning approaches.

Inquiry- and design-based projects rooted in driving questions and real-world problems can be the key to unlocking increased student motivation and engagement, deeper understanding and effective use of knowledge, and the mastery of 21st century skills.

Professor Linda Darling-Hammond of Stanford University’s School of Education recently published a review of the research on the learning power of inquiry, design, and collaborative learning methods called *Powerful Learning: What We Know about Teaching for Understanding*. She concluded that students learn more deeply when they apply classroom-gathered knowledge to real-world problems, and when they take part in projects that require sustained engagement and collaboration. In addition, active and collaborative learning practices have a more significant impact on student performance than any other variable, including student background and prior achievement. Darling-Hammond also found that students are most successful when they are taught how to learn as well as what to learn.

**The Future Is Already Here**

As science fiction author William Gibson remarked, “The future is already here—it’s just not very evenly distributed.” There are thousands of classrooms and entire networks of schools in the U.S. already on the move to a new learning balance that combines direct instruction and 21st century project learning (see sidebar, “The Success Project”). Thirteen states have signed a commitment with the Partnership for 21st Century skills to embed the essential knowledge and skills for our time in their states’ standards, assessments, curriculum and instruction, professional development, and learning environments.

Countries like Singapore, Australia, Finland, and the United Kingdom are making substantial progress in building a 21st century learning environment for all students.

There is no better time to join the global movement for 21st century learning to ensure that all your students acquire the skills and expertise needed for a successful work life, a happy family life, an active community life, and a lifetime of enjoyable learning.

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**WEB RESOURCES**

The mission of the Partnership for 21st Century Skills is “to serve as a catalyst to position 21st century skills at the center of U.S. K-12 education by building collaborative partnerships among education, business, community and government leaders.”

[www.21stcenturyskills.org](http://www.21stcenturyskills.org)

Watch a video highlighting The Success Project, one of many efforts to bring 21st century approaches to learning, at [www.oraclefoundation.org/single_player.html?v=5](http://www.oraclefoundation.org/single_player.html?v=5).
Featured Presenters:
Douglas B. Reeves
Bonnie Bishop
Cathy Lassiter
Angela Peery
Jay Trujillo
Laura Besser
Linda Gregg
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David Nagel
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March 1-2, 2010  San Diego, California

Power Strategies for Response to Intervention
March 1-2, 2010  San Diego, California

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