

# REAL PROJECTS

# in a Digital World

By Suzie Boss and Jane Krauss

Long before she became the administrator of one of the most forward-looking secondary schools in the United States, Monica Tipton taught high school English in a more traditional setting. Even then, she naturally looked for connections that would make learning more meaningful. When she gave writing assignments, she always asked students about their choice of topic. Why had they picked a particular book to read and write about? How did it connect to their interests? "Those things are worth knowing," said Tipton. "You can't teach in isolation from students' lives."

These days, as the principal of the innovative New Technology High in Napa, CA, Tipton encourages teachers to make that same connection between what students care about and what they are taught. Instead of writing theme papers, students are apt to be investigating the ethics and science of stem cell research or designing a multimedia campaign to raise the visibility of a non-profit organization. In schools where the entire curriculum is project-based, students naturally turn to digital tools—which they have grown up using—to investigate, analyze, communicate, and connect. The context may have evolved, but the goal of engaging and motivating the whole student is more important than ever.

## Project-Based Instruction

Project-based learning is not a new idea. It has a solid track record of increasing student motivation and improving students' problem-solving and higher-order thinking skills (Stites, 1998; Thomas, 2000). In the traditional model, students work in teams to investigate open-ended questions and apply their knowledge through culminating products or simulations. Students make choices about what they investigate and how they demonstrate what they have learned, setting the stage for active learning.

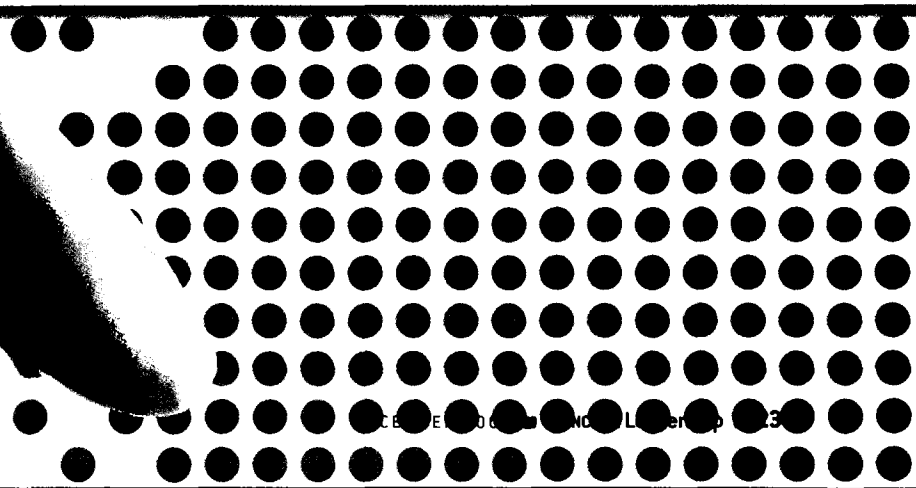
Reinventing the project approach for today's learners doesn't mean discarding this venerable model. Instead, it involves maximizing the use of digital tools to better reach essential learning goals, expanding classroom boundaries so that students gain real-world experiences and become global thinkers, and creating experiences that satisfy diverse learning styles and learner dispositions. The result can be a turbo boost that takes learning into a new orbit—and gets students ready for the 21st century world where they will work and learn.

# PREVIEW

Combining project-based learning and digital tools enables students to reach learning goals and gain real-world experience.

Students collaborate across continents and study and solve problems in their own communities.

Teachers need administrators' support to plan and use project- and technology-based instruction.



CELEBRATING 100 YEARS OF LEARNING



# New Roles for Learners—and Leaders

Digital-age projects change expectations for both teachers and students. Your role as instructional leader is likely to shift too. What does this new learning landscape ask of you?

- Establish a shared vision for authentic, digital-age learning. Communicate with your school community, and beyond, about the value of students engaging in real-world learning. Ensure that everyone understands that projects offer a powerful way to reach shared goals.
- Create a professional culture that encourages teachers to innovate, to collaborate, and to give and receive critical feedback.
- Remove barriers to projects. Help teachers make time for collaboration. Ensure that they have access to the tools they need. Create a process through which teachers solicit administrative support for project plans that meet desired instructional objectives.
- Provide opportunities for professional development that meets teachers' learning needs in 21st century areas, such as project management, information literacy, and interdisciplinary instructional design.
- Watch projects unfold. Join in the dialogue. Ask students what they are doing and why it matters.
- Celebrate and broadcast success. Let your community know about effective projects. Encourage students to be ambassadors for what you are accomplishing together.

For more ideas about the administrator's role in digital-age learning, see "Essential Conditions for Implementing National Educational Technology Standards," at [www.iste.org/inhouse/nets/cnets/administrators/a\\_esscond.html](http://www.iste.org/inhouse/nets/cnets/administrators/a_esscond.html).

For example, high school teachers in rural Georgia and Bangladesh teamed up to design the award-winning Flat Classroom Project. Pairs of students from opposite sides of the globe used podcasts, wikis, and videos to share their thinking about *The World Is Flat*, Thomas Friedman's bestselling book. Student teams had to work around distant time zones, navigate cultural and language differences, and use new tools to create digital content. Their online project workspace attracted an international audience (<http://flatclassroomproject.wikispaces.com>). Even Friedman himself responded, one of many surprises the global project generated.

What makes this kind of effort worthwhile? Vicki Davis, the Flat Classroom teacher from Georgia who codesigned the project, remembered a key moment with her 10th-grade students: "About two weeks into the project, we saw a transformation. It was like our students grew up. They became more eloquent. They understood deadlines, what it means to have a global audience, the importance of being professional. This was a tough project, but our students' self-confidence just soared." What's more, Davis said, "my students now have a unique bond with each other and with me. We've all been through something challenging together. I know they'll never forget this experience."

## How Administrators Can Help

In schools where digital-age learning is central to instruction, school leaders play a key role in helping the project approach succeed. Paul Curtis, the chief academic officer of the New Technology Foundation, works with a growing number of secondary

schools that have adopted the New Tech model. Participating schools agree to make authentic, digital-age projects the centerpiece of instruction. Administrative support is essential as teachers make the transition from more traditional teaching to student-driven learning. "Doing this effectively requires a professional culture of trust, respect, and responsibility," Curtis said. "All those things are difficult if you try to do it piecemeal."

Curtis is a former high school teacher, and he was quick to admit that project-based learning "is a harder way to teach. Classes are going to be significantly more rigorous, more challenging. Projects are not just culminating events at the end of a unit—project-based learning drives the entire curriculum design. Unless the whole school is convinced that this is the way to go, you're going to be fighting an uphill battle. You don't want to be the only one in the building teaching this way."

The project approach—more than traditional instruction—requires teachers to be learners too. Tipton and other administrators emphasize the need to build a strong learning community in which colleagues can learn from and with one another. "In a more traditional class, a teacher can use the work of the textbook writer. We typically don't use textbooks. All our classes come from original work," she said, "and that means teachers must be willing to do their own research and instructional design to meet standards."

To help them succeed, Tipton ensures that her teachers have adequate time for planning, collaboration, and critical review of one another's project plans. Tipton pairs teachers who are new to project-based learning with

more experienced colleagues. "We don't throw them into this alone," Tipton said. Sharing good ideas is a given. Teachers are encouraged to submit their project plans to a digital library so that others can learn from their experience and modify projects to meet their learners' needs and instructional goals.

The building itself promotes sharing. Even the classroom walls that face interior corridors at New Tech are made of glass—providing a view of project-based learning in action. It's typically an active scene: some students converse in small groups, others do online research, and still others talk with teachers. And students who are approached by visitors are able to explain not only what they are doing but also why it matters to their whole team.

### **Not Renegades**

Innovative teachers, such as Davis of the Flat Classroom project, appreciate knowing that administrators will support their creativity in designing projects that push the boundaries. Davis was first contacted by Julie Lindsay, then teaching at International School Dhaka in Bangladesh (and now at an international school in Qatar). Lindsay was intrigued by an entry on Davis's blog about Friedman's book. The two teachers had never met face to face, but they began exchanging ideas about a collaborative project on globalization that would involve their two distant classrooms. Before long, they had a detailed instructional plan that met their objectives and had the support of an international team of educators who were willing to provide authentic assessment of students'

work. But before they introduced the project to students, both teachers shared their thinking with their administrators.

"We wrote a proposal that laid out our objectives, purpose, and learning strategies," Davis said. "I got approval from my curriculum director and our headmaster. We're not renegade teachers or loose cannons. In my school, I'm encouraged to innovate. But I don't do anything without running it by my administration."

### **A New Look at What Matters**

Digital-age projects are still far from the norm in most secondary schools, but those who see the value of this approach point to encouraging signs. The National Education Technology Standards for Students (NETS\*S)

## **Project Management—A 21st Century Skill**

Managing a complex project is the stuff of real work. In the business world, a good project manager is a master communicator, an efficient time manager, a careful budgeter, and a tireless troubleshooter. These skills can be applied to the world of teaching and learning, too.

Few teachers have received formal training in project management. If your school is considering a project approach, help teachers think about the tools and strategies they can use with students for managing time, collaborating with team members, and assessing progress.

For example, teachers will need to:

- Communicate with students and others about the project
- Make milestones and events visible and notify students of changes
- Get resources to students
- Assess student work from many angles and give just-in-time feedback on student work as it develops, not just when it's completed.

Students will need to:

- Manage their time and flow of work
- Manage materials and control work drafts
- Collaborate with team members and experts
- Get and use feedback on their work (through self-reflection, team input, and teacher advice)
- Work iteratively and see how parts add up to the whole.

A variety of digital tools can help meet these needs. A simple folder on the district server or a workspace in the school's learning management system may suffice, but consider Web-based home pages or desktops that give students space to work and associated tools (e.g., calendars and task lists) to help them plan and organize. They can get to their homepage at any time, from any connected computer—at home, at school, at the library, or elsewhere. For some examples, take a look at Netvibes ([www.netvibes.com](http://www.netvibes.com)), Protopage ([www.protopage.com](http://www.protopage.com)), iGoogle ([www.google.com/ig](http://www.google.com/ig)), or My Yahoo! (<http://my.yahoo.com>).

# The Community as Classroom

The EAST Initiative is a national network that fosters authentic, student-driven projects. EAST started in rural Arkansas in 1996 and has grown to include more than 260 schools in seven states. Partners from industry and academia have come on board, and government recognition has come from state and federal levels.

Tim Stephenson, who first developed the EAST model at Greenbrier High School in Arkansas, came to teaching after a previous career in law enforcement. "He got the students you would expect—'those kids' that nobody had high expectations for," said Matt Dozier, the national program director for EAST Initiative. Stephenson introduced novel ways to engage learners who were not successful in a traditional school setting. He started with a greenhouse and pond where students raised catfish. Before long, Stephenson was introducing geospatial technologies. Students not only demonstrated that they could learn to use these technologies but also that they could use them to enhance their communities.

"All of a sudden, 'those kids' were really coming to school for the first time," said Dozier. "They started doing significant things, and people began to notice. Technology is the hook we use to get kids into significant projects, and to get communities into significantly wanting to support those projects."

Recently, a middle school and high school team in the EAST network collaborated to produce an award-winning documentary about a Japanese-American internment camp that had nearly disappeared from their community's collective memory. Another team, in a county with the nation's highest number of veterans per capita, recorded oral histories of World War II vets and then used design software to develop architectural plans for a museum in their honor.

When schools join the EAST network, teachers and administrators gain access to long-term professional development and technical support to help make the shift in instructional design. The network brings participating schools together for regional trainings, where good ideas can be shared. An annual project showcase puts students on center stage. Their achievements and enthusiasm remind educators why it's worth the effort—and why good projects deserve recognition from the larger community.

"There is nothing more special than seeing a team of 14-year-olds describe how they designed a project that helps their own community," Dozier said. "Students become invested in these projects. They aren't intimidated to learn a new technology or seek help from an expert if it's something they need to be successful. Once they have permission to learn this way, they just take off."



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were updated in 2007 after a yearlong review process. The standards now emphasize the wide range of skills that are required to learn and live in an increasingly digital world, such as performance and behavior that reflect the emerging learning opportunities that technology enables and that the world requires. Such skills as creativity and innovation, information fluency, and communication and collaboration are emphasized in the NETS\*S revision (International Society for Technology in Education, 2007), underscoring the global need for adaptable thinkers who can address the still-unknown challenges of the 21st century. By encouraging a project approach to learning, visionary school leaders can help today's students gain the opportunities they need to become independent, aware, and productive citizens. **PL**

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