Perspectives on K-12 Education Technology

Integrating Technology in the Classroom

acer

Summary

For education CIOs seeking to develop the technology strategy for their schools, it can seem as though they have both too much and too little. Too much in the way of good ideas, possible technology projects, and new infrastructure initiatives, all with great potential. Too little IT staff, trained teachers, budget and time to do it all. The most successful technology leaders are those who find a way to prioritize the most important new approaches, then find a way to make them work within their limited resources.

New, technology-driven approaches to classroom learning and participation have great potential—but only if they are well thought-out and embraced by teachers, administrators and students. To make a lasting impact, start small and prioritize proven, workable technologies over new and unknown approaches.

Set your vision

Today, education technology leaders trying to set their technology plan have almost too many choices. They must choose from such a wide range of new technologies and projects, ranging from infrastructure improvements to new digital curriculum initiatives. For many, the challenge becomes how to prioritize among many possible projects and directions, and how best to spend their sharply limited budget and time.

Rob Mancabelli, a consultant who advises schools, universities, and corporations, believes that education CIOs need to think bigger and challenge their school communities to use technology to teach in entirely new ways.

"We used to live in a world where content and access to knowledge was precious, locked away in libraries and institutions," he says. "In the last 10 years, all the information in the world has been put online, along with millions of people who can teach you about it. But the way we teach today doesn't leverage the power of those connections."

For Mancabelli, the issue of how technology should impact the classroom is often scoped too narrowly. He distinguishes between what he calls "teaching with technology," which means using technology to facilitate the way you teach today, and "learning with technology," which means enabling fundamentally new types of learning and interaction. The real choice that confronts CIOs is how willing they are to go beyond making incremental strides and commit to creating what he calls "21st century learning environments."

Each option has value and the potential to improve the classroom environment, he stresses, but offers very different tradeoffs in terms of complexity and impact.

"In the last 10 years, all the information in the world has been put online, along with millions of people who can teach you about it. But the way we teach today doesn't leverage the power of those connections."

Rob Mancabelli,
Education Technology Consultant

"We're so engrained in the traditional seven-bells-a-day model of schooling... we need to start doing new things and taking risks."

William Fritz,
Director of Technology
Sycamore Community Schools, OH

Follow a clear framework

Many of the initiatives that CIOs lead today are really about helping embed technology in the current teaching process. Examples of this include making multimedia available to teachers, deploying new teacher training online, or posting homework assignments online.

Much more disruptive, but also potentially more impactful, are projects that seek to change the fundamental way the classroom and the school works. Examples including enabling students to interact online in real time with other students in the same classroom or school, connecting them with kids from a different school or country, or having them learn from an outside expert or teacher.

What's the right balance? Most school districts need both types of initiatives. To help education leaders make choices about their technology agenda, Mancabelli suggests they consider a simple framework:

- **Infrastructure.** Without a fast and stable wireless network, reliable PCs in the classroom, and the right software, it is difficult or impossible to deploy advanced education scenarios.
- **Vision.** To achieve your goals, you first have to get others to share them. Take the time to articulate and communicate your technology agenda with teachers, parents, administrators and other important audiences.
- **Capabilities.** The critical link in most technology projects aimed at improving the classroom is teacher training. Teachers have to be motivated and enabled with highly relevant, targeted skills and capabilities.
- **Support.** For teachers and others to adopt new ways of teaching and working, they need to be backed with quality, rapid support. If something breaks and isn't fixed quickly enough or is too confusing to use, it will fail.

"You can start anywhere," says Mancabelli. "The secret sauce tends to be: 'How do we help our teachers go beyond what they do today?'"

Fit your environment and your culture

For William Fritz, Director of Technology at Sycamore Community Schools in Ohio, the key to making change work is ensuring broad buy-in.

"You need to help all staff in the district understand the value of technology integration," he says. "Then go even further and reach out to neighboring districts to share services and ideas. Now you have a region with an aggressive change agenda."

Gary Brantley, Chief Information Office of Lorain City Schools in Ohio, has implemented a range of programs in his district. In each case, he says, preparation was key to success.

"You have to take the time to look at your environment," he says. "What's happening in your classrooms now? Do you have the infrastructure you need? What are the opportunities to make it better?"

School culture is another critical factor to consider, and an important aspect of whether your change initiatives succeed. In some cases, even successful programs can be called into question if they seem too different from the status quo or trigger specific concerns. Mancabelli remembers deploying a pilot program in which high school kids were talking live through webcams to Latin American students.

"We found that our students who were learning Spanish were much more engaged than when using a traditional textbook," he says. "But we had parents coming to us saying, 'What is happening in this class? Our kids are online talking to people, how do we know that they are being kept safe?'"

Case Study

Profile

Hunterdon Central Regional High School serves Hunterdon County in New Jersey. The school has an enrollment of over 3,000 students.

What They Did

Working as a team, the technology department, department heads and 20 teachers deployed a pilot that focused on bring 21st Century skills into the classroom. Those teachers designed class experiences that ranged from students receiving direct feedback on their writing from working journalists in the field to entire classes collaborating with overseas students on wikis comparing types of literature.

Why It Worked

- **Vision.** Vision and communication plan were clearly developed prior to launching.
- **Policy.** Policy and social media rules were in place.
- **Infrastructure.** The team purchased the critical infrastructure but didn't over-invest.
- **Teacher training.** By establishing an effective, continuous rhythm of training that continued all year long, the team ensured success.

Redefine the classroom

In that case, Mancabelli says, parents eventually came to accept the program once they understood more about the extent of teacher monitoring. Often, parents and sometimes even teachers and administrators may be initially uncomfortable with redefining the traditional classroom experience. Teachers will sometimes be concerned about losing control of their students. To help teachers keep the class productive and free from disruption, he provides tools that allow them to manage the technology, either at the student or classroom level.

"We provide tools for them to manage student interaction. This can range from tools that help with classroom management to those that help manage web environments."

Helping teachers maintain order is essential but usually not nearly as much of a challenge as many teachers initially expect. And what that makes possible—a classroom without walls or boundaries—is well worth it, says Mancabelli.

"Some of the most exciting things that can happen in the classroom are not that complicated from a technology standpoint," he says. "If you just have a PC, a webcam, and an Internet connection, that's enough in many cases."

He encourages the schools he advises to make use of the greatest untapped resources: outside networks of students. For example, a history class might participate in a video chat with a historian from the local university, or a social studies class might interview a state judge over email.

"A lot of times, all you have to do is ask," he says. "Teachers can really unlock some amazing experiences for their kids."

Balance risk and control

With every new initiative to enable learning through technology, there is always the need to balance risk and control. If you allowing students to talk to others online, what level of monitoring is needed? If you are allowing students to access search engines, what kind of filter is being used?

Nowhere is this tension between risk and control more evident than in the area of social media. At Lorain City Schools, the district notifies parents of changes and upcoming activities via Facebook. Teachers are encouraged to set up pages for their classes on the social networking site, and to exchange information and homework assignments over the site.

Other districts are much more cautious to embrace social media, or even to consider less advanced scenarios such as wired classrooms. Whatever the culture and needs of your schools, by starting small and gradually introducing technology into the learning process you give yourself the best chance at success.

Keys to Success

- **Assess your needs.** Look before you leap. Take the time to survey teachers informally to understand what they really need in terms of new technology solutions.
- **Go slowly.** Pilot by grade or by school and then expand gradually.
- **Focus on training.** Build a continuous learning cycle for teacher and administrators. Involve teachers early and ensure they have incentive to learn new skills.
- **Consider support.** "We had a deal with teachers that if something happened, we would be right there to fix it," Brantley remembers. "It was a huge part of earning their trust." Support matters, be sure that you can keep teachers up and running no matter what.
- **Communicate.** Make a point of educating and reaching out to all the audiences who will be impacted by a new change: teachers, students, parents and administrators. It can mean the difference between success and failure.
- **Empower teachers.** Provide simple tools to manage and control the technology in the classroom. By making it easy for teachers to freeze, shut down, or view student screens, you can make them a lot more comfortable with technology in their classroom.

Getting Started

- Find out if your district has a social media policy. If not, create one based on input from teacher leaders, administrators, parents and students.
- Experiment with creating a "back channel" in a classroom. Allow kids to IM chat with each other during a class, but make sure they know that the teacher will read the chats later. This can lead to kids answering each others' questions.
- Connect one of your classrooms to a classroom in another state or country. Have kids tutor one another under the supervision of the teacher.

Contact Us

Contact Acer For More Information

Phone: 1800.848.2237 option 4

Email: us_promarketing@acer.com

URL: https://professional.us.acer.com/edu/

Address: 333 W San Carlos Street, Suite 1500, San Jose, CA 95110