



EDUCATIONAL TECHNOLOGY LEADERSHIP

The Key to Progress and Change

As districts look at the millennials in their classrooms and plan for the most effective educational strategies to reach them, it is clear that technology can enable learning in ways that never before have been possible. It is also clear that this generation grew up with tools and techniques that are well integrated with their lifestyles. When adults worry about what to do with technology, they can look at the seamless integration of living and learning that students already achieve.

To these students, the nearly 70 million born between 1982 and 2001, the tools are personal, ubiquitous, and necessary. For instruction to be successful and relevant, schools and districts must leverage how millennials live and learn and implement new strategies. These students do not understand education's disconnect with gaming, social networking and mobile devices.

Enlightened Leadership

According to Leslie Wilson, President of the One-to-One Institute, "We have to be concerned about the snail-pace transformation in our schools. Reasons abound. Solutions exist. It is possible and do-able to move forward even at one step at a time. It comes down to leadership to make it happen. Leadership to step up the pace, and create the sense of urgency, vision and strategic plan."

Today's superintendents and other district-level leaders face new technology-related challenges. These may include spearheading a district-wide education technology vision, developing security awareness policies, developing assessment and data management strategies, driving professional development efforts, streamlining networking and infrastructure processes, enlisting community support for funding, and making the case for solutions to the board.

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About the Fundamentals of K-12 Technology Programs

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For more information, go to

<http://www.techlearning.com/K12/Fundamentals>

Leadership Tasks

- **Building the Vision**
A leader asks stakeholders to decide what they want for the district's education in the future. This vision is a statement of values that must address the district's mission and goals, describe outcomes, be practical and specific, and reflect the best thinking and judgment of the community.
- **Managing Change**
A leader creates the structure for stakeholders to evaluate the current situation and identify strengths and weaknesses, target priorities for improvement, establish plans to address these priorities, measure success, and make revisions accordingly.
- **Changing the Culture**
Digital learning environments can transform classrooms into constructivist student-centered learning settings. Leaders understand that educators need opportunities to adopt new strategies and allow teachers to learn what is possible and decide on the instructional practices that will result in improved student learning.
- **Staff Development**
Transforming classrooms requires leaders to commit the time and money needed for professional development. Even when teachers are willing to use new tools and new methods, they need ongoing instruction and support.
- **Classroom Management and Technical Support**
A 1:1 classroom looks very different from a traditional environment and brings with it new management issues and challenges for teachers. A thoughtful leader provides the support for easy transitions.
- **Communication and Input**
Education leaders have to set up a system that establishes clear lines of communication and input and stakeholders must be able to address areas of concern.
- **Monitoring and Sustaining Change**
Effective leaders prepare participants to implement systems for monitoring and evaluating for regular assessment of effectiveness and progress.

The job of overseeing a school district's technology program has grown exponentially in recent years as computers, the Internet and other technology applications have become essential to the daily operation of schools. What does today's district-level technology leader need to know in order to keep up with the challenge of ever-changing technologies and ever-shrinking budgets? A group of technology leaders affiliated with the Consortium for School Networking (CoSN) identified nine skills. In summary, the K-12 CTO must be a skilled administrator, a knowledgeable educator, an effective communicator, and a technologically-savvy individual who can work with all district staff at all levels within the organization. For more information and the skills framework, read *What it Takes: Essential Skills of the K-12 CTO* — http://www.cosn.org/resources/cto_council/skills.cfm

Essential Skills

Technology leaders must have insight about ways in which the world is changing, the new tools that are available for teaching and learning, and cutting-edge technologies.

They must have an understanding of the technologically-rich information society for which students must be prepared intellectually and the media-rich environment in which students are comfortable.

Thus leaders must be change agents who help others think beyond what is happening in schools today to what could or should be happening. They lead the district in developing a shared vision and big-picture perspective on the district's goals and they lead staff, students, parents, and administrators to implement meaningful and effective uses of technology.

Focusing on What Matters

Leadership means keeping focused. In today's world, too many students fail to graduate high school and even more are ill prepared to join global, competitive work environments. While students use technology almost intuitively, they lack the wisdom to understand how to leverage that facility into the ability to find information and turn it into knowledge. That is where schools can help. An education leader knows that his or her staff must be prepared to help students be prepared for life and work in an uncertain future. Thus the goal of technology integration is to use the best tools for each job seamlessly so that the technology itself becomes transparent and supports teaching and learning. Leadership must drive this.

When computers and software are used so that students have new methods of learning curriculum, these tools can promote and enhance students' understanding of content in powerful ways. They can find information, collaborate with others and use images and sound as well as text to communicate what they have learned. It can prepare them with thinking skills. Only educators' leadership can instill a love of learning in students that will prepare them for a future in which nothing is certain and the norm is change.

“Integrating technology throughout a school system is, in itself, significant systemic reform. We have a wealth of evidence attesting to the importance of leadership in implementing and sustaining systemic reform in schools. It is critical, therefore, that we attend seriously to leadership for technology in schools.”

— Don Knezek, ISTE CEO

The pursuit of knowledge has never been as exciting as it is today. Computers, the Internet, accessibility to hundreds of thousands of databases all over the world, and the ability to learn in a mobile environment allow us all to participate in a new paradigm of technology-enabled education. Everyone in this education enterprise must show leadership and keep focused on how things can change so that schools can:

- Offer a choice of learning styles and formats.
- Support lifelong learning.
- Enable mobility for more flexible learning.
- Empower collaboration for research and sharing of best practices.
- Build for ongoing change.
- Support digital content and services.

Leadership At-a-Glance

Technology can make the greatest difference when all stakeholders agree about its purpose, use, and importance in education. With most of the adults in a school system educated before technology became such a major force in society, understanding and accepting such change requires thoughtful discussion, comprehension, education, and most of all, a supportive environment. Thus at every level, someone bears the responsibility for the kind of leadership that leads to effective technology implementation and change. Among these roles are:

DISTRICT TECHNOLOGY LEADER

An effective district technology leader is someone who takes ownership and responsibility, has expertise and experience, and who can provide guidance and direction and inspire others to change.

The tasks include:

- Articulate a clear vision of technology and curriculum integration.
- Provide resources to demonstrate effectiveness of 1:1 computing and its relationship to curriculum and instruction.
- Keep teachers and principals informed on the latest 1:1 literature, research.
- Challenge the status quo and takes responsibility for achieving results.
- Have a positive attitude and inspire teachers and principals to believe they can accomplish the goals.
- Create the environment for success: Establish lines of communication; a system for input that includes teachers and principals in the decision making process; a system of procedures to ensure that problems are solved in an efficient manner.
- Know when to push people forward and know when to pull back.
- Make decisions that make change happen and enable others to change.

BUILDING PRINCIPAL

A principal is the key leader in implementing a one-to-one environment and other technology implementations and the skill with which he or she enables change directly impacts its success. The tasks include:

- Identify the purpose of technology use and create a shared vision.
- Communicate with stakeholders honestly.
- Build a supportive climate that supports risk taking and change.
- Facilitate cooperation and collaboration among stakeholders.
- Create professional learning communities for staff.
- Install a system of professional development and just-in-time support.
- Ensure technology support and system for problem-solving.
- Visit classrooms; interact with students and teachers.
- Use technology for data management and other administrative needs.

“We educators throw around terms such as ‘transformation’ and ‘reform’ when discussing the need for meaningful integration of education and technology. The heart of the matter is that those who are truly engaging ubiquitous technology have to rethink and retool their craft and skill set to move successfully into the 21st century market of expectations.”

— Leslie Wilson, President of the One-to-One Institute

SCHOOL TECHNOLOGY LEADER

The school CIO or Technology Director can ensure a quality education technology instructional environment by making sure that the practical necessities of teachers and students and the support to help them is always available. These include:

- Provide ongoing curriculum integration support — ongoing classes, workshops, and classroom assistance.
- Provide tech support on an as-needed basis.
- Ensure practical needs such as power supplies, printers and cables are addressed.
- Enforce an Acceptable Use Policy and employ filtering software.
- Establish and enforce disciplinary policies for infractions.
- Provide a list of resources for educators and acceptable web sites for students.
- Establish a system for educators to share resources and strategies.
- Develop a system for technical issues such as device re-imaging, loaners, and trouble shooting.

RESOURCE: *Standards for Administrators*, From the International Society for Technology in Education (ISTE)

Administrators play a pivotal role in determining how well technology is used in our schools. ISTE’s Technology Standards for School Administrators enable us to define what administrators need to know and be able to do in order to discharge their responsibility as leaders in the effective use of technology. These standards are indicators of effective leadership for technology in schools and represent a national consensus among educational stakeholders of what best indicates effective school leadership for comprehensive and appropriate use of technology in schools. In summary, “Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.”

For more information and details, read *NETS for Administrators* — <http://www.iste.org>



Professional Development for Leaders

When we talk about technology in K-12 schools, we should focus on school leaders first because they are the ones charged with setting direction and directing people. They're the only individuals with the power to redesign the organization. Research has shown that there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader.

Leaders have the responsibility and power to set the vision, control the budget, reassign personnel, empower others, alter school culture, establish priorities, facilitate buy-in, reallocate resources, ensure organizational alignment, and more.

Yet administrators do not automatically know how technology can impact the entire school culture to create positive change and impact student learning and achievement. Discover some ways to design professional development for leaders that can make the difference (at right).

Empowering the 21st Century Superintendent

Technology leadership presents special challenges for superintendents for good reasons. Chief among them is that the focus of educational technology is changing rapidly, from putting in place a solid infrastructure to using technology systematically to change educational practices and significantly improve results. Districts are at very different places when it comes to realizing the full, transformative value of technology. The Consortium for School Networking suggests:

FIVE THEMES AND ACTION STEPS FOR TECHNOLOGY LEADERSHIP

1. Strengthen district leadership and communication.
2. Raise the bar with 21st Century Skills.
3. Transform pedagogy with compelling learning environments.
4. Support professional development and communities of practice.
5. Create balanced assessments.

Ten Ways to Design Professional Development for Leaders

1. **Change their mindset.** Give them concrete examples of successful technology usage by teachers and students and help them understand why those examples are models of success. Give them a reason to want to learn more.
2. **Understand the nature of their work.** Understand the pressures and time demands of their positions. The nature of administrators' work can be conceptualized as practical problem-solving. Like other educators, their learning is situated, contextually embedded in their social and physical environment.
3. **Ensure that training is authentic.** Training for administrators must be job-embedded. For example, show them how a wiki might facilitate their need to collaborate on a policy document. If they can see how technology can help them better address the problems that they're facing, they're yours.
4. **Make it easy for them to learn.** Don't just talk about podcasts. Hand them a CD or an iPod loaded with leadership-focused podcasts and ask them to listen while they're driving around.
5. **Make their lives easier.** If what you're showing them won't make them more efficient or effective, if it doesn't have a relative advantage to what they're doing now, why are they going to bother?
6. **Tap into what they already know.** Many school leaders feel hopelessly lost because they struggle to make connections between what they already know and these new technology tools and systems. Help them make the connections.
7. **Address their concerns about change.** The technological world changes so fast that many administrators feel that both they and their school organizations have no hope of keeping up. Structure concrete learning opportunities that, over time, help show them that they can.
8. **Comply with what we know about effective professional development.** Make it safe for them to learn. Make it collaborative and social. Make sure it's intentional, purposive, and long-term rather than a one-time "sit and get" session.
9. **Respect their time.**
10. **Focus on leadership, not tools.** While it's good for administrators to know how to use a few digital technologies themselves, it's much more important that they know how to empower others, how to support technology use by students and teachers, and how to evaluate when technology is used effectively.

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