Supporting a New Generation of Technology Standards

Early innovators believed that dealing with issues of access and infrastructure would be enough to entice most educators to use technology as an instructional tool. Computer labs were built and teachers received minimal training in software use, but not much changed in lesson design or delivery. The introduction of ISTE's original National Educational Technology Standards created an initial impetus for the necessary change by providing frameworks to identify what students, teachers, and administrators needed to know and do to use technology effectively based upon the technology and information available at the time. But performance standards alone, even in the specific context of lesson or unit plans, were not enough to ensure that technology would become an ongoing resource for learning, teaching, and leading in our schools. Other system-wide conditions had to be in place for even the most accomplished technology users to realize the full potential of technology for learning.

ISTE's Essential Conditions identify those factors that educational administrators must consider as they plan for and make decisions regarding the physical, human, and financial policies related to implementation of technology-based learning opportunities and environments conducive to increased learning opportunities, creativity, innovation, and global awareness. District- and school-based leaders provide oversight and share responsibility for ensuring that these Essential Conditions are in place to support technology-infused teaching, learning, assessment, and communications at the district and school levels. Therefore, it is critical that administrators lead the way in facilitating the implementation and assessment of the Essential Conditions listed on page 5.

We have powerful new technologies, increased understanding of learning and instruction, and widespread demand for solutions to educational problems. In the last decade, the design of technologies and our understanding of how people learn have evolved together, while new approaches to research and design make the development and testing of technologies more responsive to real-world requirements and learning environments.

Fostering Learning in the Networked World

Report of the National Science Foundation Task Force on Cyberlearning

Starting with the Fundamentals

ISTE launched the three-year NETS refresh project with the fundamentals—an update of the NETS for Students. This reflects ISTE's belief that educational transformation starts with student learning at its core: What will tomorrow's students need to succeed in a digital age? ISTE followed with refresh efforts of the NETS•T and NETS•A to guide the professional and educational leadership necessary to realize the vision embodied in the NETS•S. You will see this progression of standards development mirrored in the pages ahead, beginning with the NETS for Students and followed by the NETS for Teachers and the NETS for Administrators.

What administrators should know and be able to do to lead effectively and improve learning for all students in an increasingly digital world…

Digital-Age Learning Culture

Visionary Leadership

Excellence in Professional Practice

ISTE's Educational Technology Standards for Administrators

Systemic Improvement

Digital Citizenship

NETS•A Organisation

The technology standards for administrators are divided into five broad categories. A brief standard statement follows each category. The performance indicators (e.g., a–e) for each standard provide specific outcomes to be measured.

Profiles and Scenarios
for Digital-Age Administrators

Additional components of the NETS Project include profiles describing specific actions that can be taken by school administrators who are working to implement the NETS•A and scenarios describing authentic job-embedded activities illustrating ways the standards, indicators, and profiles can be addressed in practice. It is ISTE's belief that all administrators must strive to transform their schools from industrial-age to digital-age places of learning. Along with the standards, the profiles and scenarios provide tools to help administrators lead this transformation.

Profiles

Based upon the premise that there is a common core of skills and knowledge that every P–12 administrator needs to be an effective technology leader, the refreshed NETS•A provide a framework of standards and performance indicators applicable to all school administrators, regardless of job title. By the same token, there are job-specific requirements as well. These more specific requirements are addressed in profiles created for three different job roles:

- Superintendent and executive cabinet

- District-level leaders for content-specific or other district programs

- Campus-level leaders, including principals and assistant principals

Each profile includes descriptors identifying the kinds of tasks performed by administrators in a specific job role who are effective leaders of technology integration in their schools or districts. Although the profiles list specific actions, they are intended to be suggestions, not mandates, and are not comprehensive. School and system size, the degree of site-based governance, community characteristics, and strengths of individual administrators are but a few of the parameters that may cause variations in actual job roles. For this reason, wise users of these standards will apply this global resource in ways that acknowledge the local context of school leadership.

Scenario for Principals

When asked to describe how technology impacts her work day, Laura Sanchez, principal of a P–8 inner-city school of 700 students, reports that her smartphone and tablet computer have been the most transformative technologies for her. Each morning she connects to the wireless network to check her blog, which she uses to post daily announcements and other important school news.

Daily 3–5 minute classroom walk-throughs are part of Sanchez's routine. Using a form stored on her smartphone, Sanchez makes brief notes as she conducts her visits. The data is quickly aggregated into a document that shows overall school trends based on the indicators the school is working on for the term. At staff meetings Sanchez can quickly pull up charts that show data over time and provide rich conversation about how the school is working towards learning goals. For formal classroom observations, Sanchez prefers using her tablet. The handwriting recognition feature makes it easy for her to complete the lengthy classroom observation form and then email copies to the office manager and teacher prior to leaving the classroom.

Sanchez believes strongly in data-driven instructional planning; she monitors student attendance, formative assessment data and other key performance indicators regularly. The district-wide student information system gives Sanchez up-to-the-minute information on her students, including health and behaviour information and changes in family demographics. She works with teachers to analyse data at the subject, year and classroom levels to get the information they need to inform the continuous improvement of professional practice and student learning.

Sanchez has organised her teachers into learning teams for the purpose of improving their professional practice, according to the recommendations in a recent report by the National Council of Staff Developers and Stanford University. Sanchez has restructured the work week to allow for job-embedded professional learning time, and she and her teachers have launched a dynamic, local online professional learning community for team collaboration and to share tips and resources with the whole staff. Starting with areas of greatest student need, which are identified by analysing student data with Sanchez, learning teams follow a cycle of continuous improvement. They determine where additional learning on their part is necessary and use their online community to identify and create learning experiences using digital-age tools to address these needs. Next, they develop lessons and assessments, which they try out in the classroom and then refine. They reflect on the impact on student learning and repeat the cycle with new goals.

School, site and district meetings and committee work are another critical part of Sanchez's workload. All agendas are now posted to an online collaborative document. Working documents such as the school site plan or policies undergoing revision are also posted as online collaborative documents.

"These may not represent leading-edge uses of technology," Sanchez says, "but I feel good about the progress I'm making as a technology leader. I model uses of various technologies on a daily basis."