

Technology Standards for School Administrators



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Design and printing provided by North Central Regional Technology in Education Consortium

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Message from the TSSA Collaborative

On behalf of the TSSA Collaborative, I am pleased to present the Technology Standards for School Administrators. The impetus for the development of these Standards was the recognition that administrators play a pivotal role in determining how well technology is used in our schools. These Standards enable us to move from just acknowledging the importance of administrators to defining the specifics of what administrators need to know and be able to do in order to discharge their responsibility as leaders in the effective use of technology in our schools.

The Technology Standards for School Administrators fit with and complement the exemplary work done by the International Society for Technology and Education (ISTE) in the NETS Projects, which produced educational technology standards for teachers and students. As a member of the Consortium, and particularly as the operational host for TSSA, ISTE played a very important role in this Project. We were able to accomplish this Project faster and better because of the expertise the ISTE team brought to it as a result of their previous work developing educational technology standards.

You will see in this document the names of the organizations in the Collaborative. These organizations provided the leadership for this effort. All of these organizations recognized the need for technology standards for school administrators and recognized that it made sense for us to work together rather than to devise divergent and competing sets of standards. You will also see the list of Participating Organizations. These organizations lent their support and council in the development of the standards. We expect that all of these organizations and others who may join with us will be involved in the most important task ahead – the implementation of the Standards.

I also wish to acknowledge the support provided by our Project Contributors. Their vote of confidence in us though their investment of funds and in-kind support is deeply appreciated.

Finally, I want to thank the hundreds of administrators, teachers, school board members, higher education faculty, state officials, and others who engaged in the process of developing the Standards with us. Working with you in this Project made the past year and a half a productive and rewarding experience.

> James Bosco, Chairperson Technology Standards for School Administrators Professor, Department of Educational Studies Western Michigan University

James Bosco Chair, TSSA Collaborative



Technology Standards for School Administrators

The Collaborative for Technology Standards for School Administrators (TSSA Collaborative) has facilitated the development of a national consensus on what P-12 administrators should know and be able to do to optimize the effective use of technology. This consensus is presented by the Collaborative (November 2001) as Technology Standards for School Administrators (TSSA).

The Collaborative believes that comprehensive implementation of technology is, in itself, large-scale systemic reform. Leadership plays a key role in successful school reform. The Collaborative's standards, therefore, focus on the role of leadership in enhancing learning and school operations through the use of technology.

These standards are indicators of effective leadership for technology in schools. They define neither the minimum nor maximum level of knowledge and skills required of a leader, and are neither a comprehensive list nor a guaranteed recipe for effective technology leadership. Rather, these standards are a national consensus among educational stakeholders of what best indicates accomplished school leadership for comprehensive and effective use of technology in schools. The standards challenge almost every school administrator in some areas, yet each individual standard is attainable by the professional educational leader. Although a national consensus, in no way should these standards inhibit new development, innovation, or progress for schools or for school leadership.

The TSSA Collaborative and the many professionals who contributed to this effort realize the wide range of roles administrators play in schools, even when titles are similar. School and system size, 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 consumers of these standards will apply this national resource in a way that acknowledges the local context of school leadership. A rich array of expectations exists for use of these standards. They will find application in:

- administrator preparation and professional development program design
- assessment and evaluation
- role definition and job descriptions
- individual and system accountability
- accreditation of schools and of administrator preparation programs
- certification (credentialing) of administrators
- self-assessment and goal setting
- design of technology tools for school administrators

The audiences for these standards also are varied. School boards, administrators, human resources staff, staff developers, higher education personnel, and state education agencies will make use of this resource. Others include state and federal policy-makers, industry representatives and service providers, professional organizations, parents, taxpayers, and other community constituents. This places priority, then, on clarity and simplicity of language, free from specific education jargon. The document speaks to a variety of audiences, and it encourages accomplished leaders to stay abreast of current strategies and accepted principles as these evolve.

An underlying assumption to these standards is that administrators should be competent users of information and technology tools common to information-age professionals. The effective 21st Century administrator is a hands-on user of technology. Much of the benefit of technology is lost for administrators who rely on an intermediary to do their e-mail, manipulate critical data, or handle other technology tasks for them. While technology empowers administrators by the information it can readily produce and communicate, it exponentially empowers the administrator who masters the tools and processes that allow creative and dynamic management of available information.

Administrators who recognize the potential of technology understand that leadership has a responsibility to ensure digital equity. They must also know that technology can unlock tremendous potential in learners and staff with special and diverse needs. Administrators are responsible for incorporating assistive technologies that enable a school system to more comprehensively serve its constituents.



Highly successful school districts carefully align educational initiatives to address district priorities. Leaders must acknowledge this need for alignment as technology is integrated across the district. The shared vision for technology must be consistent with the district's overall educational vision, and technology plans must smoothly integrate with overall planning for school effectiveness.

The vision of the TSSA Collaborative is that the Technology Standards for School Administrators identify knowledge and skills that constitute the "core" – what every P-12 administrator needs regardless of specific job role – and, then extends the core to include the specific tasks of administrators in each of three job roles: (1) superintendent and executive cabinet, (2) district-level leaders for content-specific or other district programs, and (3) campus-level leaders, including principals and assistant principals. This phase of the effort does not address role-specific standards for business officers or technology directors.

The TSSA Collaborative recommends the standards be communicated as six standards statements along with a corresponding set of performance indicators for each. In addition, there are three sets of role-specific technology leadership tasks describing different expectations in three distinct administrative job roles. Also included are illustrative scenarios of practice corresponding to each job role. For clarity and brevity, performance indicators and leadership tasks that correspond to more than one standard are listed with the most closely aligned standard.

"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, Director TSSA Standards Project ISTE

Technology Standards for School Administrators

I. Leadership and Vision:

Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.

Educational leaders:

- **A.** facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision.
- **B.** maintain an inclusive and cohesive process to develop, implement, and monitor a dynamic, long-range, and systemic technology plan to achieve the vision.
- **C.** foster and nurture a culture of responsible risk-taking and advocate policies promoting continuous innovation with technology.
- D. use data in making leadership decisions.
- E. advocate for research-based effective practices in use of technology.
- **F.** advocate, on the state and national levels, for policies, programs, and funding opportunities that support implementation of the district technology plan.

II. Learning and Teaching:

Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.

Educational leaders:

- A. identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.
- **B.** facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning.
- **C.** provide for learner-centered environments that use technology to meet the individual and diverse needs of learners.
- **D.** facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.
- **E.** provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology.

III. Productivity and Professional Practice:

Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.

Educational leaders:

- A. model the routine, intentional, and effective use of technology.
- **B.** employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community.
- **C.** create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity.
- D. engage in sustained, job-related professional learning using technology resources.
- E. maintain awareness of emerging technologies and their potential uses in education.
- F. use technology to advance organizational improvement.

Framework, Standards, and Performance Indicators

IV. Support, Management, and Operations:

Educational leaders ensure the integration of technology to support productive systems for learning and administration.

Educational leaders:

- A. develop, implement, and monitor policies and guidelines to ensure compatibility of technologies.
- B. implement and use integrated technology-based management and operations systems.
- **C.** allocate financial and human resources to ensure complete and sustained implementation of the technology plan.
- **D.** integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources.
- **E.** implement procedures to drive continuous improvements of technology systems and to support technology replacement cycles.

V. Assessment and Evaluation:

Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.

Educational leaders:

- **A.** use multiple methods to assess and evaluate appropriate uses of technology resources for learning, communication, and productivity.
- **B.** use technology to collect and analyze data, interpret results, and communicate findings to improve instructional practice and student learning.
- **C.** assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions.
- D. use technology to assess, evaluate, and manage administrative and operational systems.

VI. Social, Legal, and Ethical Issues:

Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues.

Educational leaders:

- **A.** ensure equity of access to technology resources that enable and empower all learners and educators.
- **B.** identify, communicate, model, and enforce social, legal, and ethical practices to promote responsible use of technology.
- C. promote and enforce privacy, security, and online safety related to the use of technology.
- D. promote and enforce environmentally safe and healthy practices in the use of technology.
- **E.** participate in the development of policies that clearly enforce copyright law and assign ownership of intellectual property developed with district resources.

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"This material was originally produced as a project of the Technology Standards for School Administrators Collaborative."

Leadership and Vision

Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.

Performance Indicators

Educational leaders:

- A. facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision.
- B. maintain an inclusive and cohesive process to develop, implement, and monitor a dynamic, longrange, and systemic technology plan to achieve the vision.
- C. foster and nurture a culture of responsible risk-taking and advocate policies promoting continuous innovation with technology.
- D. use data in making leadership decisions.
- E. advocate for researchbased effective practices in use of technology.
- F. advocate, on the state and national levels, for policies, programs, and funding opportunities that support implementation of the district technology plan.

Role-Specific Technology Leadership Tasks:

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

- ensure that the vision for use of technology is congruent with the overall district vision.
- engage representatives from all stakeholder groups in the development, implementation, and ongoing assessment of a district technology plan consistent with the district improvement plan.
- advocate to the school community, the media, and the community at large for effective technology use in schools for improved student learning and efficiency of operations.

District Program Director

District program directors who effectively lead integration of technology typically perform the following tasks:

- assure that program technology initiatives are aligned with the district technology vision.
- represent program interests in the development and systematic review of a comprehensive district technology plan.
- advocate for program use of promising practices with technology to achieve program goals.

Principal

- participate in an inclusive district process through which stakeholders formulate a shared vision that clearly defines expectations for technology use.
- develop a collaborative, technology-rich school improvement plan, grounded in research and aligned with the district strategic plan.
- promote highly effective practices in technology integration among faculty and other staff.

Learning and Teaching

Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching.

Performance Indicators

Educational leaders:

- A. identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.
- B. facilitate and support collaborative technologyenriched learning environments conducive to innovation for improved learning.
- C. provide for learner-centered environments that use technology to meet the individual and diverse needs of learners.
- D. facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.
- E. provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology.

Role-Specific Technology Leadership Tasks:

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

- provide equitable access for students and staff to technologies that facilitate productivity and enhance learning.
- communicate expectations consistently for the use of technology to increase student achievement.
- ensure that budget priorities reflect a focus on technology and its relationships to enhanced learning and teaching.

District Program Director

District program directors who effectively lead integration of technology typically perform the following tasks:

- participate in developing and providing electronic resources that support improved learning for program participants.
- provide rich and effective staff development opportunities and ongoing support that promote the use of technology to enhance program initiatives and activities.
- ensure that program curricula and services embrace changes brought about by the proliferation of technology within society.

Principal

- assist teachers in using technology to access, analyze, and interpret student performance data, and in using results to appropriately design, assess, and modify student instruction.
- collaboratively design, implement, support, and participate in professional development for all instructional staff that institutionalizes effective integration of technology for improved student learning.

Productivity and Professional Practice

Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others.

Performance Indicators

Educational leaders:

- A. model the routine, intentional, and effective use of technology.
- B. employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community.
- C. create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity.
- D. engage in sustained, jobrelated professional learning using technology resources.
- E. maintain awareness of emerging technologies and their potential uses in education.
- F. use technology to advance organizational improvement.

Role-Specific Technology Leadership Tasks:

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

- establish a culture that encourages responsible risk-taking with technology while requiring accountability for results.
- maintain an emphasis on technology fluency among staff across the district and provide staff development opportunities to support high expectations.
- use current information tools and systems for communication, management of schedules and resources, performance assessment, and professional learning.

District Program Director

District program directors who effectively lead integration of technology typically perform the following tasks:

- use technology and connectivity to share promising strategies, interesting case studies, and student and faculty learning opportunities that support program improvement.
- model, for program staff, effective uses of technology for professional productivity such as in presentations, record keeping, data analysis, research, and communications.
- use online collaboration to build and participate in collaborative learning communities with directors of similar programs in other districts.

Principal

- use current technology-based management systems to access and maintain personnel and student records.
- use a variety of media and formats, including telecommunications and the school Web site, to communicate, interact, and collaborate with peers, experts, and other education stakeholders.

IV

Support, Management, and Operations

Educational leaders ensure the integration of technology to support productive systems for learning and administration.

Performance Indicators

Educational leaders:

- A. develop, implement, and monitor policies and guidelines to ensure compatibility of technologies.
- B. implement and use integrated technologybased management and operations systems.
- C. allocate financial and human resources to ensure complete and sustained implementation of the technology plan.
- D. integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources.
- E. implement procedures to drive continuous improvements of technology systems and to support technology replacement cycles.

Role-Specific Technology Leadership Tasks:

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

- provide adequate staffing and other resources to support technology infrastructure and integration across the district.
- ensure, through collaboration with district and campus leadership, alignment of technology efforts with overall district improvement efforts in instructional management and district operations.

District Program Director

District program directors who effectively lead integration of technology typically perform the following tasks:

- implement technology initiatives that provide instructional and technical support as defined in the district technology plan.
- determine financial needs of the program, develop budgets, and set timelines to realize program technology targets.

Principal

- provide campus-wide staff development for sharing work and resources across commonly used formats and platforms.
- allocate campus discretionary funds and other resources to advance implementation of the technology plan.
- advocate for adequate, timely, and high-quality technology support services.

Assessment and Evaluation

Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation.

Performance Indicators

Educational leaders:

- A. use multiple methods to assess and evaluate appropriate uses of technology resources for learning, communication, and productivity.
- B. use technology to collect and analyze data, interpret results, and communicate findings to improve instructional practice and student learning.
- C. assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions.
- D. use technology to assess, evaluate, and manage administrative and operational systems.

Role-Specific Technology Leadership Tasks:

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

- engage administrators in using district-wide and disaggregated data to identify improvement targets at the campus and program levels.
- establish evaluation procedures for administrators that assess demonstrated growth toward achieving technology standards for school administrators.

District Program Director

District program directors who effectively lead integration of technology typically perform the following tasks:

- continuously monitor and analyze performance data to guide the design and improvement of program initiatives and activities.
- employ multiple measures and flexible assessment strategies to determine staff technology proficiency within the program and to guide staff development efforts.

Principal

- promote and model the use of technology to access, analyze, and interpret campus data to focus efforts for improving student learning and productivity.
- implement evaluation procedures for teachers that assess individual growth toward established technology standards and guide professional development planning.
- include effectiveness of technology use in the learning and teaching process as one criterion in assessing performance of instructional staff.

Social, Legal, and Ethical Issues

Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues.

Performance Indicators

Educational leaders:

- A. ensure equity of access to technology resources that enable and empower all learners and educators.
- B. identify, communicate, model, and enforce social, legal, and ethical practices to promote responsible use of technology.
- C. promote and enforce privacy, security, and online safety related to the use of technology.
- D. promote and enforce environmentally safe and healthy practices in the use of technology.
- E. participate in the development of policies that clearly enforce copyright law and assign ownership of intellectual property developed with district resources.

Role-Specific Technology Leadership Tasks:

Superintendent

Superintendents who effectively lead integration of technology typically perform the following tasks:

- ensure that every student in the district engages in technology-rich learning experiences.
- recommend policies and procedures that protect the security and integrity of the district infrastructure and the data resident on it.
- develop policies and procedures that protect the rights and confidentiality of students and staff.

District Program Director

District program directors who effectively lead integration of technology typically perform the following tasks:

- involve program participants, clients, and staff in dealing with issues related to equity of access and equity of technology-rich opportunities.
- educate program personnel about technology-related health, safety, legal, and ethical issues, and hold them accountable for decisions and behaviors related to those issues.
- inform district and campus leadership of program-specific issues related to privacy, confidentiality, and reporting of information that might impact technology system and policy requirements.

Principal

- secure and allocate technology resources to enable teachers to better meet the needs of all learners on campus.
- adhere to and enforce among staff and students the district's acceptable use policy and other policies and procedures related to security, copyright, and technology use.
- participate in the development of facility plans that support and focus on health and environmentally safe practices related to the use of technology.

A Day in the Life of a Superintendent...

Imagining the Very Near Future

Dr. Sue Steinbeck's day begins at home with a quick check of her PDA (personal digital assistant) for the day's calendar. She then logs on to access email messages from board members, central office personnel, principals, teachers, parents, and community members. Messages demanding an immediate response from the superintendent are handled directly by email. Board members, using their districtsupplied workstations, typically get "priority" response. Tasks more appropriately handled by other staff members are referred via email for attention by directors, principals, and other district personnel. For responses requiring additional research, the superintendent "files" the message, tags it for followup, and sets an electronic "tickler" as a reminder to complete the response.

Upon arriving at her office, Dr. Steinbeck accesses the administrative team's online calendar to review schedules of senior administrators and determine an appropriate time for a special cabinet meeting. Reviewing the district calendar, she also gets a sense of what is happening across the district, and where she might best spend time attending functions or visiting classrooms.

Following her attendance at a Rotary Club luncheon, where she makes a multimedia presentation that highlights the district's new technology plan, Sue checks legislative Web sites to learn about pending action that may impact her school district. Dr. Steinbeck emails two influential legislators regarding a school funding bill under consideration, and she schedules herself to testify in support of a bill requiring technology competency for certification of new teachers in the state. An unusually high percentage of the district's graduating seniors were admitted to competitive colleges and universities this year, so Dr. Steinbeck emails the district chief information officer. She requests that he draft a story (complete with digital photos) that she will review online prior to publication in the local newspaper and posting on the district Web site.

Superintendent Steinbeck reviews requested electronic end-of-year reports from cabinet members and directors regarding transportation, food service, facilities, budget, personnel actions, and curriculum enhancement activities. An electronic reminder by her PDA of an upcoming meeting with an unhappy parent alerts her to query the student database to gain background information about the student's schedule and performance. She reviews a priority email requested that morning from the student's principal to gain further insight on this parent issue before moving to the conference. Following the meeting, Sue visits a campus improvement team meeting at the new middle school, and then a grand "re-opening" of an elementary library that had been damaged earlier in the year because of roof failure during an intense

thunderstorm. Dr. Steinbeck observes with pride the success of re-opening the library as a model, technology-rich, 21st Century library as she observes a student who served with her on the library redesign team guiding a parent through one of the new online, full-text periodical services.

> Dr. Steinbeck observes with pride the success of re-opening the library as a model, technology-rich, 21st Century library as she observes a student who served with her on the library redesign team guiding a parent through one of the new online, full-text periodical services.

Driving home from the office, Superintendent Steinbeck reflects upon the vision she hopes to advance for the use of technology across the school district. She begins to develop in her own mind strategies for using community connectivity to optimize her efforts to communicate and advocate that vision. Later that evening, Dr. Steinbeck connects via the Internet to prepare for a collaborative online course that involves other superintendents meeting virtually the next day to explore curriculum-based budgeting. Before retiring, she reviews her calendar for the following day and checks her email messages, which include a brief district budget update from the Associate Superintendent.

Technology Lessons from the Central Office

Leading Curriculum and Technology Use

Curriculum Director Rick Tan rises early in the morning and checks his personal digital assistant (PDA) for the calendar of the day's events and appointments. He logs on and checks email and then syncs his computer to his PDA. Upon arriving in the office he moves his work to his office workstation, checks voice mail and email, and responds. His first appointment is an 8:30 a.m. budget meeting with some staff physically present and others connected via compressed video. The department budget is projected, and changes are made simultaneously on the screen and on the server via wireless connectivity. Participants interact via voice and video and by sharing data and text using a collaborative software package. Everyone leaves the meeting with new budget figures at their fingertips whether on a laptop or PDA.

After a quick calendar check, Mr. Tan proceeds down the hall to his next scheduled appointment, a district accountability meeting. District program leaders, participating at local and remote sites, download district performance reports, analyze the data in smaller focus groups, and report out areas of acute district concern. As participants brainstorm various plans of action to address areas of identified need, Rick uses concept-mapping software to construct an organizing framework for the ideas generated. Following the meeting, he posts the plans for review and comment on the district intranet within an online discussion area prepared earlier in the week.

On the way back to his office, Rick checks for new email. As he prepares for a lunch meeting with the association of local realtors, Mr. Tan reviews his presentation summarizing recently published school performance data and highlighting the newly adopted district reading program. Curriculum Director Tan uses multimedia and presentation software to present a brief program overview and to introduce the new reading standards Web page. The presentation also includes a live link back to a first grade classroom for a peek at a demonstration lesson.

On the way to his office, Rick stops for an initial meeting with university personnel to plan graduate-level Master's Degree offerings delivered from local school sites and distributed via compressed video and Web-based courses. He logs on and shares with university personnel several model online programs he has researched during the previous week.

Upon returning to the office, Mr. Tan meets with the P-12 Curriculum Committee to discuss the progress of the student assessment/electronic portfolio project. He uses his own prepared Web pages to show examples of student portfolios gathered from other districts, and he invites the committee to browse these at their leisure. Upon returning to the office, Mr. Tan meets with the P-12 Curriculum Committee to discuss the progress of the student assessment/electronic portfolio project. He uses his own prepared Web pages to show examples of student portfolios gathered from other districts, and he invites the committee to browse these at their leisure.

Meeting with a group of middle school teachers after school, Rick joins the review of model standards-based lessons developed to demonstrate the use of technology to better address district curriculum priorities. The lessons have been posted temporarily on a password-protected district intranet site. Mr. Tan facilitates the group's selection of a committee to "jury" proposed lessons for posting on the district intranet, and the meeting adjourns.

Rick returns to his office and sends email to all district principals with an attached announcement of next week's principals' meeting and a private Web site address through which principals are to submit next year's professional development plans for review and approval.

Before he leaves for the day, he logs on to the district intranet and digitally approves purchase orders received that day for curriculum support materials.

Welcome to my World... The Principal

Visioning the Not-Too-Distant Future

Upon arriving at school, Ms. Linda Thompson keys her code into the door security pad and heads to her office to begin the day. The first order of business is to check her email. After logging on, she reads and responds to a number of messages, reviews the school improvement plan on the district Web site, and pulls up her presentation for the morning staff meeting to make a few enhancements she thought of on the way to school. Yesterday, Ms. Thompson developed graphs to be used in her presentation utilizing data from the state department, central office, and building-level surveys. Ms. Thompson's secretary arrives at work and pops in to remind her about the 11:30 a.m. student council luncheon. Ms. Thompson pulls out her personal digital assistant (PDA) to verify the appointment before heading to the 7:30 a.m. staff meeting.

During the meeting, Ms. Thompson encourages staff to post comments on two topics through the school Web site. The school improvement team is requesting feedback on the draft of the new school improvement plan, and the school's technology planning team has requested comments on and a prioritization of strategies for implementing the district vision for technology use. Ms. Thompson returns to her office and her email. In response to a message from the superintendent asking for data on SAT scores, she forwards the message to the counseling department and asks that they send to the superintendent an updated spreadsheet containing SAT information from the last five years.

Later that morning, Mr. Paul, who teaches Freshman English, comes in and closes the door behind him. He presents the Principal with a paper he believes was downloaded from a Web site. Ms. Thompson asks the teacher to work with the campus technology facilitator and library/media specialist to verify a violation of the district's acceptable use policy and intellectual code of conduct. Receiving verification of a violation using school computers, Ms. Thompson emails the district technology coordinator requesting the site be blocked using filtering software, and schedules a conference with the student and parents to outline the consequences spelled out in school policies. After reading an email from the student council president asking her to approve a live band for the homecoming dance next month, she replies with a request for music samples and more information to assist in her review of the band and their repertoire of music.

After lunch, Ms. Thompson grabs her laptop and goes to Mr. Garcia's room to do a classroom observation. Through the district's new wireless network, she downloads Mr. Garcia's lesson plan from the school file server as she observes the class. Ms. Thompson is excited to see that Mr. Garcia has incorporated technology use into his lesson. Using exciting new software supporting sophisticated mathematical reasoning, students are engaged as pairs, with each pair sharing a wireless laptop. Mr. Garcia moves from group to group offering support as students prepare to publish their solutions to a class Web page and to project their contribution for whole-class review and discussion. Ms. Thompson writes up a rough draft of the evaluation, thanks and applauds Mr. Garcia for his efforts, and heads back to the office to finish the observation report. In completing her report, she reviews Mr. Garcia's professional goals and last year's summative evaluation in his electronic portfolio on the secure district file server. After the final draft is completed, Ms. Thompson uploads the report to the evaluation folder on the district file server and emails Mr. Garcia complimenting his effective lesson design and use of technology and suggesting a time for his follow-up conference.

> Using exciting new software supporting sophisticated mathematical reasoning, students are engaged as pairs, with each pair sharing a wireless laptop.

Before Ms. Thompson leaves for the day, she makes one final check of her email. She sees that her secretary has added a few dates to her calendar, and the assistant superintendent has forwarded a first draft of next year's budget. She synchs to her PDA to update her calendar and drops the budget information into her planning folder. She turns out the lights and heads for the door. After dinner, Ms. Thompson connects to the Internet to do some leisurely research on motivating reluctant learners through student use of digital photography and digital video. TSSA Standards Development – The following information identifies the standards development team.

Project Leadership Team – The TSSA Collaborative acknowledges the wealth of expertise and hard work contributed to this effort by those named here and by the thousands of practicing administrators and other stakeholders who reviewed and responded to the work. The Collaborative especially recognizes the contribution to this effort by the International Society for Technology in Education (ISTE) who, in addition to its role as a member of the TSSA Collaborative, provided tireless leadership in fundraising, management, and logistics support for the project. Special thanks go to the three individuals accepting formal leadership roles for this initiative:

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Not-for-profit organizations that have applied and been approved by the TSSA Collaborative as Participating Organizations in the TSSA Standards Initiative are committed to supporting the standards by providing expertise in the development and refinement of the standards, assistance in disseminating the standards, and support in implementing the TSSA Standards. Current members are:

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Utah Association of Elementary School Principals (UAESP) Virginia Association of School Superintendents (VASS) Virginia Educational Technology Alliance (VETA) Virginia State Department of Education WestED RTEC

PROJECT CONTRIBUTORS

The following entities provided funding to support development and dissemination of the TSSA Standards.

TSSA Collaborative Members Preparing Tomorrow's Teachers to Use Technology (PT3) Program of the U.S. Department of Education International Society for Technology in Education Apple Chancery Software, Ltd Enterasys Networks, Inc. Microsoft Corporation NCRTEC at NCREL NetSchools Corporation NSBA ITTE Network Teacher Universe, Inc.



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