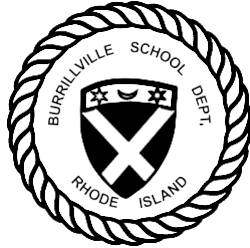# Burrillville School Department

Technology Plan

2015-2018

Technology is vital to transforming the classroom and it must be imbedded as an instructional tool to enhance teaching and learning and improve student performance.

Table of Contents

Burrillville School Committee

Burrillville School Department Administration

District Technology Advisory Committee

Mission Statement

The Mission of the Burrillville Public School System is to provide high quality education to all students in a secure, nurturing environment in which all are challenged to reach full potential as life-long learners, responsible citizens and contributing members of society, recognizing its role as the education center of our unique and evolving community.

Technology Vision Statement

Technology has become an integral component of the teaching and learning process for the staff and students of the Burrillville School Department. Technology allows users to connect, communicate and collaborate in ways that have previously been impractical or impossible. Technology expands the boundaries of the classroom, the school and even the community and provides access to information and resources of an unprecedented scope and breadth. When integrated into all areas of the curriculum, the creative and innovative application of technology skills, tools and resources allows both students and staff to more efficiently and effectively achieve their goals. A deep and thorough understanding of the responsible use of technology will allow our students to become contributing, productive members of a global 21st century society.

Because technology resources, tools and skills are dynamic, the Burrillville School Department will use this Technology Plan as a guide to support the use of technology across the district by all students and staff members. This plan will be updated as technology develops and new capabilities are available.

Beliefs

- Technology should be used to support the teaching and learning process of all students and staff members.
- Technology resources, tools and skills should be integrated throughout the curriculum.
- Professional development opportunities should be provided to staff members on the effective use of technology.
- Students should be able to demonstrate proficiency in their knowledge and use of technology.
- Students should participate in real-world technology applications to better prepare them to make the school to post-secondary/career transition.
- Students should participate in real-world technology applications to better prepare them for everyday life and experiences.
- Independent use of technology by students should be encouraged and promoted.
- Students should have an opportunity to share their expertise with teachers and peers.
- New and innovative technology tools and resources need to be explored and evaluated on an ongoing basis to expand the district's capacity to support teaching and learning.
- Technology should be used as a communication tool and to strengthen the home/school/community connection.
- Technology should be used to collect, organize and analyze multiple types of information across the school district.
- Technology should play a key role in the efficient and effective management of the district.
- Adequate resources need to be allocated to support the technology infrastructure of the district.

Current Technology Staffing Assessment

The primary source of technology support for the Burrillville School Department is the District Technology Department. The Technology Department provides support and oversees the purchasing for both information and instructional technology. This includes all hardware, software, peripherals, and networking.

The District Technology Department staff currently consists of the following:

> **Full-time**: Director of Technology
> **Part-time:** .75 Computer Technician
> **Part-time:** .4 Data Manager
> **Contracted Service**: .8 Computer Technician

Additional staff is necessary to provide an adequate level of support to maintain the current technology infrastructure, as well as to make available the type of professional development and classroom best practices necessary for technology integration.

Current Technology Infrastructure Assessment

The district core technology deployment consists of 1,000 Windows-based desktop and laptop computers, 250 nComputing thin-client stations running a Windows OS, 50+ Apple iPads, 150+ Chromebooks, 600+ Kindle eReaders, 20+ servers running Windows Server 2003, Windows Server 2008 R2, Ubuntu Linux 8.04 LTS, and 40+ network laser printers and multifunction copiers. Every classroom and instructional area in all five schools contains at least one networked computer. However, these computers vary widely in their capability and capacity.

Burrillville High School has five computers labs, four carts of wireless laptops, and approximately 130 classroom computers (for teacher and student use). Burrillville Middle School has two computer labs, three carts of wireless laptops, and approximately 45 classroom computers (for teacher and student use). William L. Callahan School has one computer lab, one cart of wireless laptops and approximately 110 classroom computers (for teacher and student use). Steere Farm Elementary School has one computer lab, one cart of wireless laptops, and approximately 136 classroom computers (for teacher and student use). Austin T. Levy School has one thin-client computer lab and approximately 30 classroom computers (for teacher and student use).

Each of the five schools and the administration building has at least a 100Mbit switched local area network, with some key switches utilizing copper and fiber connections of 1Gbit. Currently, all of the schools and the Administration Building have building-wide HP wireless networks to support the use of mobile devices across all classrooms and instructional areas. Burrillville High School, Burrillville Middle School, William L. Callahan School, and Steere Farm Elementary School will have a new, centrally-managed wireless infrastructure in the fall of 2014.

Each building has at least a 100Mbit wide area network connection provided by OSHEAN and Cox Communications, funded through the RITEAF program. Included in the Internet service, Cox Communications provides Internet content filtering via a ContentKeeper content filter.

Voice services are provided to each building via Centrex phone lines in contract with Cox communications. Each building has its own Vertical, Panasonic, or Simplex phone switching system and local voicemail system. The four buildings with Vertical Wave phone systems have the ability to receive and manage voicemail through email.

Burrillville School Department is a Google Apps for Education school district, and employs several of the tools in the Google Apps for Education suite. Google accounts are provided to all students and faculty, with customized control of the apps for different schools. District Gmail accounts are currently provided to all employees and staff members. District Gmail accounts are currently provided to all students at Burrillville High School and Burrillville Middle School, with certain sending and receiving restrictions. All email is currently archived with Google Vault. All users have access to Google Drive, which provides access to Google's productivity apps called Docs, Sheets, Slides, and Drawings. Google Drive also provides 30GBs of file storage space per account.

The district's Student Information System (SIS) is MMS Generations and is deployed to all administrative, secretarial and clerical personnel via Microsoft Terminal Services and online portals. The back end database of MMS Generations runs on Microsoft SQL Server 2005 Standard. While it provides a modest amount of flexibility in how the district can access student information and integrate with other data and communication systems, it is cumbersome to use and cannot keep pace with current state and local data initiatives. The district is currently reviewing alternatives with the intent to transition to a new student information system.

Burrillville School Department uses several software platforms and services to meet its day-to-day operational needs. The district uses TIENet for Special Education case management. Follett Destiny, the district's library system, has provided greater access to media center resources to all staff and students. ParentLink, a mass notification system, allows the district to send voice and email communications to parents, students, and staff. In collaboration with the Northern R.I. Collaborative, the district uses AESOP to schedule and call substitutes when needed. The district has implemented MyLearningPlan, a professional development management system designed to help teachers and administrators track and register for professional development activities.

Software tools and utilities used to secure and manage the technology of the district include Altiris Deployment Solution and Microsoft SystemCenter 2012 Endpoint Protection anti-virus software. Currently, the Facilities and Technology Departments use SchoolDude for work request tracking and ticketing. The Technology Department uses SpiceWorks for asset management and inventory, and is exploring transitioning the Technology Department's ticketing system to SpiceWorks.

Software available to staff and students includes Microsoft Office 2010, Microsoft Publisher, and various internet plug-ins and applications such as Apple Quicktime, Java, Real Player, Adobe Reader, Adobe Flash, and Adobe Shockwave. Free and/or open-source applications such as Audacity, Picasa, Google Earth, Google SketchUp, Microsoft Photo Story, Finale Notepad, GIMP, Inkscape, Scribus, Xmind, TuxPaint, and Freemind are being made available. Specialized labs and programs have access to additional software and applications based upon need, licensing requirements and availability of funds.

The district has begun to add additional tools for technology integration, such as Promethean interactive whiteboards and slates, Flip video cameras, and mobile stations that include a laptop, LCD projector, and speakers. The district is looking to extend these types of tools in greater numbers across all schools and include additional tools like document cameras/visual presenters. The district must also ensure that the selection of equipment, software, and tools is standardized to realize efficiencies in support and professional development.

While the technology accessible and available to staff and students across the Burrillville School Department is generally good, the existing equipment is aging and is having difficulty keeping up with modern applications. A realistic lifecycle for technology equipment must be established and resources need to be allocated to support such a replacement cycle. This cycle must include and address components of the infrastructure, such as servers, routers, network switches and power management.

The software requirements of the district need to be studied and analyzed and a recommendation of core software applications should be created. Resources need to be dedicated to maintaining this core group of applications and make them available to all students and staff members. In order to support the goals of the district to improve efficiency, web-based solutions should be investigated and pursued where possible.

Goals Summary

1. **Support teaching and learning** by improving access to a variety of technology tools and resources for all students and staff members.
2. **Provide professional development** necessary to support technology use and integration.
3. **Improve and diversify communication** using a variety of tools to strengthen the home/school connection and create greater community engagement.
4. **Establish and refine data systems** to provide information to guide instruction and assess student performance.
5. **Pursue innovative and effective technology solutions** that increase efficiency of operations and the utilization of resources.

Objectives and Action Plans

Goal 1: Support teaching and learning by improving access to a variety of technology tools and resources for all students and staff members

Action Plans	Timeline	Funding	PD	Evaluation
Ensure that every teacher has access to at least one (1) Chromebook to replace their teacher station	Complete by June 2015	Local Appropriation and Town Special Appropriation	No formal PD required	Progress towards this goal will be monitored by the Technology Department
Ensure that every student has a Chromebook/ tablet available to support student learning.	2015-2016: Grades,2,3,6 and Grade 10 (Class of 18) (All) Grade 9 Team (Class of 19) 2016-2017 Grade 1 (tablets), new grades 2, 6, and Rest of Grade 10 (Class of 19) Grade 9 Team (Class of 20) 2017-2018 Grade K (tablets), Grades 2, 6, and Rest of Grade 10 (Class of 20) Grade 9 (Class of 21)	Local Appropriation and Town Special Appropriation	No formal PD required	Progress towards this goal will be monitored by the Technology Department

Establish a replacement cycle for district hardware and resources.	Replacement cycle should begin in July 2016	Local Appropriation	Supporting information on need for replacement cycle should be provided to all stakeholders	Progress towards this goal will be monitored by district technology staff. Budgeting and funding will be monitored in cooperation with Business Manager, Superintendent and School Committee
Each classroom will have an LCD projector, document camera and the ability to connect to the teacher Chromebook (or other device)	Implementation should begin in the 2015-2016 school year. The goal for the end of the 2015-2016 school is to have a station in every ELA and math classroom; 2016-2017 every social studies and science classroom and by 2017- 2018 all other classrooms such as health, art and music.	Local Appropriation and Town Special Appropriation	Training to be offered on how to set-up and ensure connectivity and start-up.	Progress towards this goal will be monitored by district technology staff.
As the Chromebooks/tablets are introduced to the grade levels, the existing usable equipment will be redistributed at the school level and based upon school level needs. These computers will be replaced in areas where their use is essential for specific tasks.	Redeployment of existing equipment will be an ongoing process	Local Appropriation	No PD needed	Progress towards this goal will be monitored by the Technology Department
Actively pursue grant opportunities that support the use of technology in teaching and learning	Ongoing	No specific funding required	Utilization of the NWSC grant writer as a support.	Progress towards this goal will be jointly monitored by the technology staff and district Technology Advisory Committee.

Regularly evaluate the performance of existing/future technology services and tools; pursue better options and best possible solutions (Examples: Student Support Systems, Richer Picture, Aesop, My Learning Plan, etc.)	Ongoing	Local Appropriation and potential grant funds	Training and support for existing services needs to be sustained Training will need to be offered to staff on how to use any new tools and resources	Progress towards this goal will be jointly monitored by the technology staff, district Technology Advisory Committee, and administrative team
Extend and improve the capacity of the Technology Department to support the resources of the district, specifically in technology integration and network services	Capacity should be increased each year, based on the priorities agreed upon by the administrative team and district Technology Advisory Committee	Local funding	Training and support for any new staff members or positions	Progress towards this goal will be jointly monitored by the technology staff, district Technology Advisory Committee, and administrative team
Provide guidance to staff and students on the 9 Elements Digital Citizenship Establish school level and grade level expectations based upon the broad expectations of Digital Citizenship http://www.digitalcitizenship.net/Nine_Elements.html	Introduced in the 2015 - 2016 school year Ongoing throughout the plan	No cost	Building level leadership teams School Improvement Teams	Principals, parents and staff
Redistribute the grade level (ISTE) student competencies by grade level Establish a protocol to monitor individual student proficiency on the use of technology	Introduced in the 2015 - 2016 school year Ongoing throughout the plan	No cost	Building level leadership teams School Improvement Teams	Principals and teachers

Goal 2: Provide professional development necessary to support technology use and integration as a tool for teaching and learning

Action Plans	Timeline	Funding	PD	Evaluation
When new applications or hardware are introduced, ensure that training is offered to staff	Ongoing	Local Appropriation	PD and training are part of this goal when appropriate in collaboration with the Northwest Consortium	Progress towards this goal will be monitored in cooperation between the Director of Technology and Director of Curriculum
Establish building-level "experts"/resources around key technology tools, applications, and integration	Ongoing	Local Appropriation	Training for the building-level "experts" Use building-level "experts" to provide professional development	Progress towards this goal will be monitored in cooperation between the Director of Technology, Director of Curriculum, and building principals
Make available reliable and universally used online materials and resources (in place of printed materials and textbooks) selected with teacher input	Ongoing	Local Appropriation	Using a scaffolded menu of PD options, allow teachers to access just right PD for classroom integration	Lead teachers, Principals, and Curriculum Director
Teachers have a platform for storing their own notes and student performance data informally	August 2015 Baseline: Training on use of organizational tools to organize the student work file storage and distribution Ongoing for tools to better manage student subgroups. etc.	Local Appropriation	Using a scaffolded menu of PD options, allow teachers to access just right PD for classroom integration	Lead teachers, Principals, and Curriculum Director

District will explore the use of student devices when it supports formative assessment as well as internet searches	Ongoing as teachers are ready for the management of multiple devices in the classroom	Local, federal and school level funds Grants where applicable	Using a scaffolded menu of PD options, allow teachers to access just right PD for classroom integration	Lead teachers, Principals, and Curriculum Director
Increase student presence online in school to share with students and teachers- Use docs-sites- blogs - create their own YouTube, etc.	Ongoing	No cost - media specialists & teacher to teacher support	Local PD for teachers to train students on acceptable use and then the skills to create an online presence	Lead teachers, Principals, and Curriculum Director
Transition the classroom to offer *increased* student choice, student activity in class, project based learning, student collaboration, differentiation within lessons, small group instruction and learning that extends beyond the classroom walls and beyond the class day.	Ongoing	PD costs funded using local appropriation and federal funding.	Expand the scaffolded PD menu to include research based classroom instructional strategies tied to the use of technology, as needed	Lead Teachers, Principals and the Director of Curriculum and Instruction

Goal 3: Improve and diversify communication using a variety of tools to strengthen the home/school connection and create greater community engagement

Action Plans	Timeline	Funding	PD	Evaluation
Work with teachers to ensure full teacher use of the Parent Portal to include access to online grade books at the high school and middle school	Implement throughout the 2015-2016 school year	Local appropriation	Training for all high school and middle school teachers on how to use the parent portal. Workshops for parents on how to access the Parent Portal and their child's information.	Progress towards this goal will be monitored at each school, with the cooperation of the Director of Technology and principal
Explore implementation of Parent Portal to include access to attendance and final grade information at the elementary schools	Online attendance at elementary schools will need to be implemented prior to the start of the school year Implement throughout the plan	Local Appropriation	Training for elementary classroom teachers on how to record daily attendance online Workshops for parents on how to access the Parent Portal and their child's information.	Progress towards this goal will be monitored at each school, with the cooperation of the Director of Technology
Evaluate the continued use of the current high school Digital Portfolio system to include the ability for parents to view their child's online portfolio	Ongoing as the HS teachers learn to use the Google tools for educators.	Local Appropriation	Workshops for parents on how to access their child's online portfolio Online tutorials should be posted as a resource for parents	Progress towards this goal will be monitored at the high school, with the cooperation of the Director of Technology
Continue implementation of school, department/ team, classroom and teacher and websites	Ongoing	Local Appropriation	Workshops for teachers on how to create and manage their own classroom websites Online resources should be posted as a resource for teachers	Progress towards this goal will be monitored at each school, with the cooperation of the Director of Technology
Update all necessary technology-related policies	Implementation, as needed	No specific funding required	Resources provided to district Technology Advisory Committee and the district administrative team	Progress towards this goal will be monitored by the district Technology Advisory Committee and the district administrative team

Goal 4: Establish and refine data systems to provide information to guide instruction and assess student performance

Action Plans	Timeline	Funding	PD	Evaluation
Explore a "student profile" that collates and presents a wide variety information, including, but not limited to: biographical, assessment (local and state), progress towards proficiency	Begin working with SIS vendor during 2015-2016 school year to build profile. Implement profiles during the 2015-2016 school year	Local Appropriation	Training for staff entering student information. Workshops for teachers and administrators on how to access and use the student profiles.	Progress towards this goal will be monitored by the district administrative team
Integrate existing information systems to facilitate the exchange of data between systems	Ongoing	Appropriation	Training for technology staff on how to successfully integrate disparate systems Training and guidance for data entry staff on how to ensure data quality and facilitate data exchange	Progress towards this goal will be monitored by the Director of Technology, in cooperation with the district administrative team
Improve data quality across existing information systems by implementing clear guidelines for data entry and processes for data validation	Ongoing	No specific funding necessary	Training and guidance for data entry staff on how to ensure data quality Documentation of model procedures and practices should be created and made available to all stakeholders	Progress towards this goal will be monitored by the Director of Technology, in cooperation with the district administrative team

Goal 5: Pursue innovative and effective technology solutions that increase efficiency of operations and the utilization of resources

Action Plans	Timeline	Funding	PD	Evaluation
Transition to fewer textbooks, less printed paper, portable computers, increased wireless environments	Ongoing - decisions will be at the building level based upon needs as determined by teachers and administrators	Local Appropriation and Town Special Appropriation	Training on the use of virtual materials and web-based publishing and student product review	Principals and teachers
Pursue virtualization and consolidation of resources wherever possible, depending upon available bandwidth and capacity between buildings	Ongoing - decisions will be at the building level based upon needs as determined by administrators in consultation with the technology director	Local, RITEAF, E-rate, and capital improvement funding	No specific training/PD necessary	Progress towards this goal will be monitored by the Director of Technology
Evaluate "cloud-based" solutions (private and public) as alternatives to existing applications, services, and systems to realize savings on hardware replacement and support. Feasibility of these solutions will directly depend on available bandwidth and capacity, both in terms of internet bandwidth and connections between buildings	Ongoing - decisions will be at the building level based upon needs as determined by administrators in consultation with the technology director	Local, RITEAF, E-rate, and capital improvement funding	No specific training/PD necessary	Progress towards this goal will be monitored by the technology staff, in cooperation with the district administrative team and district Technology Advisory Committee
Investigate and pilot new and alternative technologies to see if they can serve needs of students and teachers	Ongoing -	Local, and grant funds	Training for staff piloting alternative tools Staff who have piloted tools should share knowledge and expertise with colleagues if there is widespread adoption	Progress towards this goal will be monitored by the technology staff, in cooperation with the district Technology Advisory Committee

Appendix A

International Society for Technology in Education Standards (ISTE•S) and Performance Indicators for Students

1. **Creativity and Innovation**
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:
   a. apply existing knowledge to generate new ideas, products, or processes.
   b. create original works as a means of personal or group expression.
   c. use models and simulations to explore complex systems and issues.
   d. identify trends and forecast possibilities.

2. **Communication and Collaboration**
   Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:
   a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
   b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
   c. develop cultural understanding and global awareness by engaging with learners of other cultures.
   d. contribute to project teams to produce original works or solve problems.

3. **Research and Information Fluency**
   Students apply digital tools to gather, evaluate, and use information. Students:
   a. plan strategies to guide inquiry.
   b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
   c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
   d. process data and report results.

4. **Critical Thinking, Problem Solving, and Decision Making**
   Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:
   a. identify and define authentic problems and significant questions for investigation.
   b. plan and manage activities to develop a solution or complete a project.
   c. collect and analyze data to identify solutions and/or make informed decisions.
   d. use multiple processes and diverse perspectives to explore alternative solutions.

5. **Digital Citizenship**
   Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:
   a. advocate and practice safe, legal, and responsible use of information and technology.
   b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
   c. demonstrate personal responsibility for lifelong learning.
   d. exhibit leadership for digital citizenship.

6. **Technology Operations and Concepts**
   Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:
   a. understand and use technology systems.
   b. select and use applications effectively and productively.
   c. troubleshoot systems and applications.
   d. transfer current knowledge to learning of new technologies.

Appendix B

International Society for Technology in Education Standards (ISTE•T) for Teachers

1. **Facilitate and Inspire Student Learning and Creativity**
   Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences   that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:
   a. promote, support, and model creative and innovative thinking and inventiveness.
   b. engage students in exploring real-world issues and solving authentic problems using digital tools and   resources.
   c. promote student reflection using collaborative tools to reveal and clarify students' conceptual   understanding and thinking, planning, and creative processes.
   d. model collaborative knowledge construction by engaging in learning with students, colleagues, and others   in face-to-face and virtual environments.

2. **Design and Develop Digital-Age Learning Experiences and Assessments**
   Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills,   and attitudes identified in the Standards•S. Teachers:
   a. design or adapt relevant learning experiences that incorporate digital tools and resources to promote   student learning and creativity.
   b. develop technology-enriched learning environments that enable all students to pursue their individual   curiosities and become active participants in setting their own educational goals, managing their own   learning, and assessing their own progress.
   c. customize and personalize learning activities to address students' diverse learning styles, working   strategies, and abilities using digital tools and resources.
   d. provide students with multiple and varied formative and summative assessments aligned with content   and technology standards and use resulting data to inform learning and teaching.

3. **Model Digital-Age Work and Learning**
   Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global   and digital society. Teachers:
   a. demonstrate fluency in technology systems and the transfer of current knowledge to new technologies   and situations.
   b. collaborate with students, peers, parents, and community members using digital tools and resources to   support student success and innovation.
   c. communicate relevant information and ideas effectively to students, parents, and peers using a variety of   digital-age media and formats.
   d. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use   information resources to support research and learning.

4. **Promote and Model Digital Citizenship and Responsibility**
   Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit   legal and ethical behavior in their professional practices. Teachers:
   a. advocate, model, and teach safe, legal, and ethical use of digital information and technology, including   respect for copyright, intellectual property, and the appropriate documentation of sources.

b. address the diverse needs of all learners by using learner-centered strategies providing equitable access   to appropriate digital tools and resources.
c. promote and model digital etiquette and responsible social interactions related to the use of technology   and information.
d. develop and model cultural understanding and global awareness by engaging with colleagues and   students of other cultures using digital-age communication and collaboration tools.

5. **Engage in Professional Growth and Leadership**

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective us of digital tools and resources. Teachers:

a. participate in local and global learning communities to explore creative applications of technology to   improve student learning
b. exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others.
c. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.
d. contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community.

Appendix C
International Society for Technology in Education Standards (ISTE•A) for Administrators

1. **Visionary Leadership**
   Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization. Educational Administrators:
   a. inspire and facilitate among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders.
   b. engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision.
   c. advocate on local, state and national levels for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan.

2. **Digital Age Learning Culture**
   Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students. Educational Administrators:
   a. ensure instructional innovation focused on continuous improvement of digital-age learning.
   b. model and promote the frequent and effective use of technology for learning.
   c. provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners.
   d. ensure effective practice in the study of technology and its infusion across the curriculum.
   e. promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital-age collaboration.

3. **Excellence in Professional Practice**
   Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources. Educational Administrators:
   a. allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration.
   b. facilitate and participate in learning communities that stimulate, nurture and support administrators, faculty, and staff in the study and use of technology.
   c. promote and model effective communication and collaboration among stakeholders using digital-age tools.
   d. stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning.

4. **Systemic Improvement**
   Educational Administrators provide digital-age leadership and management to continuously improve the organization through the effective use of information and technology resources. Educational Administrators:

a. lead purposeful change to maximize the achievement of learning goals through the appropriate use of   technology and media-rich resources.
   b. collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve   staff performance and student learning.
   c. recruit and retain highly competent personnel who use technology creatively and proficiently to advance   academic and operational goals.
   d. establish and leverage strategic partnerships to support systemic improvement.
   e. establish and maintain a robust infrastructure for technology including integrated, interoperable   technology systems to support management, operations, teaching, and learning.

5. **Digital Citizenship**

   Educational Administrators model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture. Educational Administrators:

   a . ensure equitable access to appropriate digital tools and resources to meet the needs of all learners
   b. promote, model and establish policies for safe, legal, and ethical use of digital information and technology
   c. promote and model responsible social interactions related to the use of technology and information
   d. model and facilitate the development of a shared cultural understanding and involvement in global issues   through the use of contemporary communication and collaboration tools.

Appendix D

ISTE Essential Conditions

Necessary conditions to effectively leverage technology for learning

Shared Vision Proactive leadership in developing a shared vision for educational technology among all education stakeholders including teachers and support staff, school and district administrators, teacher educators, students, parents, and the community

Empowered Leaders Stakeholders at every level empowered to be leaders in effecting change

Implementation Planning A systemic plan aligned with a shared vision for school effectiveness and student learning through the infusion of information and communication technologies (ICT) and digital learning resources

Consistent and Adequate Funding Ongoing funding to support technology infrastructure, personnel, digital resources, and staff development

Equitable Access Robust and reliable access to current and emerging technologies and digital resources, with connectivity for all students, teachers, staff, and school leaders

Skilled Personnel Educators, support staff, and other leaders skilled in the selection and effective use of appropriate ICT resources

Ongoing Professional Learning Technology-related professional learning plans and opportunities with dedicated time to practice and share ideas

Technical Support Consistent and reliable assistance for maintaining, renewing, and using ICT and digital learning resources

Curriculum Framework Content standards and related digital curriculum resources that are aligned with and support digital-age learning and work

Student-Centered Learning planning, teaching, and assessment center around the needs and abilities of students

Assessment and Evaluation Continuous assessment, both of learning and for learning, and evaluation of the use of ICT and digital resources

Engaged Communities Partnerships and collaboration within communities to support and fund the use of ICT and digital learning resources

Support Policies Policies, financial plans, accountability measures, and incentive structures to support the use of ICT and other digital resources for learning and in district school operations

Supportive External Context Policies and initiatives at the national, regional, and local levels to support schools and teacher preparation programs in the effective implementation of technology for achieving curriculum and learning technology (ICT) standards.