# From Crisis Management to Sustained Change:

## States Leading the Future of Learning With the ISTE Standards

# Contents

## Foreword

Our communities of teachers, instructional support staff, administrators, and district leaders, both in Rhode Island and across the country, have been working tirelessly in 2020 so that effective and equitable learning can continue for all students. Through these strategic and collaborative efforts, we continue to learn about how essential technology is to enable sound, evidence-based instructional practices. Even more so, we have learned how imperative it is for state leaders to support schools and districts as they implement those practices.

In Rhode Island, we continue to provide our schools and districts with the guidance and professional development necessary to ensure that technology is effectively leveraged during the pandemic and can continue to have an impact following current challenges. For example, this school year, every district in Rhode Island shares a unified calendar, so that we may better coordinate statewide trainings on digital learning practices and facilitate the exchange of model resources and ideas, while our students continue to learn asynchronously. We also continue to endorse districts' use of the ISTE Standards as a roadmap for educators and education leaders looking to re-engineer their schools and classrooms for digital age learning. Finally, we have built a central website, Back to School RI, to readily inform communities with the most up-to-date information on the virus and school plans.

While we as a country continue to navigate the unprecedented challenges for education brought upon by COVID-19, I truly believe that this moment can serve as a time to rethink how we can best set all students up for success, as we continue leveraging innovative, technology-empowered practices and build supports to sustainably do so. To stand by our educators who are on the front lines each day, the time is now for state leaders to take foundational steps in 2021 to ensure that lessons learned during the pandemic accelerate us towards the future of learning.

**Angélica Infante-Green**
Commissioner of Education
Rhode Island Department of Education

# Executive Summary

Fueled by the rapid transition to online and blended instruction in response to COVID-19 and continued need to equitably improve student outcomes, educators and leaders across the country have faced an unprecedented challenge to design, implement, and scale learning strategies made possible through technology. This challenge also presents a new opportunity, as systems and strategies used to address COVID-19 can also propel our schools forward towards the future of learning and better meet students' and educators' needs.

Research has continuously shown that, when used effectively, technology makes it possible to facilitate all students' growth as *lifelong*, empowered learners, thereby closing equity gaps and accelerating the learning process. Therefore, it is imperative that we consider how we can both use digital tools and resources to ensure continuity of learning during COVID-19, as well as leverage these unique circumstances to design a more effective and equitable future of education.

Unfortunately, COVID-19 has exposed a deep lack of expertise among educators when it comes to using technology in ways that accelerate learning. Therefore, state education leadership is critical for uplifting educators to design and implement transformative learning strategies and models enabled by technology.

The next step for state leaders in ensuring the effective use of technology for learning must involve the establishment of a clear, shared vision around essential educator skills and competencies necessary for student empowerment. The ISTE Standards for Educators provide a roadmap for educators to empower students with technology by serving as **learners, leaders, citizens, collaborators, designers, facilitators, and analysts.**

To identify how states are advancing this strategic vision at this critical moment, ISTE conducted a systematic review of each state's reopening and/or remote learning guidance documents. Through this review, ISTE identified states that have established a clear vision around the role of technology, as measured by their support for critical educator skills and competencies grounded in the ISTE Standards for Educators. ISTE also identified states that are lacking these critical elements.

Our analysis shows:
- **All states** align to at least some elements of the ISTE Standards.
- The majority of states have a vision that aligns to the **learner, collaborator, designer, and analyst** standards.
- The **leader, citizen, and facilitator** standards are missing in many states.
- At least **nine states** are currently planning systemic efforts that will scale effective practices and build support structures to serve districts more equitably in their implementation of learning strategies that empower students through technology.

Using these key takeaways, as well as insights gained from interviews with several exemplary state and district leaders, ISTE offers state leaders **three core recommendations** for establishing and implementing an ambitious vision for the future of learning. These recommendations aim to equitably empower students through technology, with the ISTE Standards as a critical tool to support all three. Such efforts must also lie in parallel with initiatives to provide all students with access to devices and taking full advantage of technology-enabled learning.

1.  **Set a shared vision for the future of learning enabled by technology.**
    COVID-19 provides a unique moment for state leaders to collaborate with – and generate buy-in among – stakeholders by developing a vision and guiding framework for the effective, empowering learning practices enabled through technology. This effort is critical whether learning occurs in face-to-face, online, or blended environments and can be achieved in part through a deeper focus on comprehensively implementing the newest generation of the ISTE Standards.

2.  **Build the capacity of educators to lead and implement effective learning strategies enabled by technology.** Implementing the central vision for the role of technology in learning (recommendation 1) requires aligned capacity building. State leadership and strategic incentives (e.g. micro-credentials, relicensure credits, endorsements) are needed to ensure all educators develop and apply their knowledge of effectively integrating technology into instruction, grounded in the ISTE Standards. State-coordinated investments into high-quality professional development and digital resource sharing opportunities are also necessary. Furthermore, state leaders can use the ISTE Standards for Educators to support educator preparation programs in comprehensively ensuring that new educators are ready to use technology effectively from day one.

3.  **Develop policies and structures to guide schools and districts equitably and sustainably towards the future of learning enabled through technology.** State policymakers can fund critical instructional support staff, such as technology coaches and library media specialists, to ensure that educators at all levels of experience are prepared to design and lead effective learning strategies supported by technology. State policymakers can additionally rethink policies around traditional instructional time and assessments, which allows flexibility for educators in approaching those learning strategies.

# Acknowledgments

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- **Jayne Malorni**, co-lead, Nevada Digital Learning Collaborative, Nevada Department of Education
- **Krista Heidenreich**, director of digital and professional learning and Virtual Learning Option principal, Lakota Local Schools
- **Meg Ormiston**, digital learning consultant, Oak Park Elementary School District 97
- **Michael Arensdorff,** senior director of technology, Oak Park Elementary School District 97
- **Todd Wesley**, chief technology officer, Lakota Local Schools
- **Tricia Kennedy**, executive director for eCLASS transformation, Gwinnett County Public Schools

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# About ISTE

The International Society for Technology in Education (ISTE) is a nonprofit organization that works with the education community to accelerate the use of technology to solve tough problems and inspire innovation. Our worldwide network believes in the potential technology holds to transform teaching and learning. ISTE inspires the creation of solutions and connections that improve opportunities for all learners by delivering: practical courses and guidance, the ISTE Certification for Educators, virtual networks, thought-provoking events and the ISTE Standards, a framework for rethinking education and creating innovative learning environments. The ISTE Annual Conference & Expo is one of the world's most influential edtech events, attracting over 20,000 participants each year. States with additional questions or seeking additional guidance can reach out to ISTE anytime for free assistance at advocacy@iste.org.

## ISTE thanks D2L for their support of this research and report.

"D2L is proud to support this important work by ISTE to guide states, districts, and educators as they transform education and empower students through technology. The ISTE Standards for Educators and the state leadership toward their adoption are critical to success for teachers and students. This is an important time for our education system to learn from the challenges encountered with COVID-19 and bounce forward, not back – as we create better learning environments for our students, teachers, and parents – and accelerate the future of teaching and learning." - **John Baker,** president and CEO, D2L

## About D2L

D2L is transforming the way the world learns – helping learners of all ages achieve more than they dreamed possible. Working closely with clients all over the world, D2L is supporting millions of people learning online and in the classroom. Our more than 900 global employees are dedicated to making the best learning products to leave the world better than where we found it. Learn more about D2L for schools, higher education and businesses at www.D2L.com.

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# Introduction: Reimagining the Future of Learning During a Crisis

Fueled by the rapid transition to online and blended instruction in response to COVID-19 and continued need to equitably improve student outcomes, educators and leaders across the country have faced an unprecedented challenge to design, implement, and scale learning strategies made possible through technology. This challenge also presents a new opportunity, as systems and strategies used to address COVID-19 can also propel our schools forward towards the future of learning and better meet students' and educators' needs.

For example, a bipartisan coalition that includes former U.S. Secretaries of Education recently called for a reimagined education system, led by educators with deep knowledge of how technology enables them to rethink instructional time and pedagogy, foster collaboration and connections, and authentically assess students' learning needs.[1]

Although innovative districts across the country are actively striving towards this vision[2], what remains true is that a majority are not prepared to do so. Educators[3] and local education leaders[4] continue to report their lack of capacity to use technology in ways that accelerate the learning process. This gap, made much more apparent by the global pandemic, makes it imperative that state education leaders help create evolving, responsive, and resilient systems that place educators at the forefront who share a vision for the role of technology in learning, while also equipping those educators with the resources, skills, and support necessary to implement that vision.

With such challenges in mind, what constitutes effective learning and in what ways does technology make this possible? What are the types of systemic actions state leaders can take to serve districts more equitably in their implementation of technology-empowered strategies and models?

## Role of Technology to Accelerate Learning

Research and practice have long demonstrated the role technology can play in accelerating the learning process. For example, the Technology Integration Matrix (TIM) from the Florida Center for Instructional Technology notes that technology is an essential tool in designing effective learning environments that are[5]:

- **Active**: Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.
- **Collaborative**: Students use technology tools to collaborate with others rather than working individually at all times.
- **Constructive**: Students use technology tools to connect new information to their prior knowledge rather than to passively receive information.
- **Authentic**: Students use technology tools to link learning activities to the world beyond the instructional setting rather than working on decontextualized assignments.
- **Goal directed**: Students use technology tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.

Furthermore, the 2017 National Education Technology Plan from the U.S. Department of Education elaborates on specific, effective learning strategies unlocked through the integration of technology, including experiential learning opportunities, as well as ongoing interactions with a global network of experts and peers.[6]

Together, these examples show that, when integrated strategically into learning environments, technology can facilitate students' growth as lifelong, empowered learners. Research indicates that empowering students to have agency in their education places them in a better position to thrive in college, career, and beyond, as they continue to reinforce executive functioning, perseverance, self-awareness and tolerance for ambiguity, among other critical skills.[7] Additionally, the pandemic has reinforced the importance of fostering students' learning mindsets and their capacities for self-directed learning.

## Role of State Leadership in Empowering Students With the ISTE Standards

To provide such opportunities to all students, states can adopt a vision and guiding framework for educator and district practices, where technology is used in service of student and teacher empowerment. The ISTE Standards, adopted by all 50 states, offers a roadmap for this vision. The Learning Policy Institute further recommends the ISTE Standards as a resource for "reflecting the ways in which technology is a tool for empowerment."[9]

Specifically, the ISTE Standards for Educators – the newest generation of which is adopted by states like Texas[10] and Maryland[11] – provide a roadmap for helping develop students into empowered learners by calling on educators to serve as a:

- **Learner**: Continuously improve instructional practice by learning from and with others
- **Leader**: Seek leadership opportunities to support student empowerment
- **Citizen**: Inspire students to positively contribute to and responsibly participate in the digital world
- **Collaborator**: Collaborate to discover and share resources and ideas and solve problems
- **Designer**: Design authentic, learner-driven activities and environments
- **Facilitator**: Facilitate student achievement of the ISTE Standards for Students
- **Analyst**: Use data to support students in achieving their learning goals

Since the onset of the COVID-19 pandemic, every state has published and revised guidance to inform districts' learning models to facilitate social distancing and related health guidance. Some states have gone a step further, using this guidance to outline their vision for how technology can be integrated into instruction and facilitate effective learning.

This raises an important question: Are states simply responding to current emergency needs or are they truly leveraging this unprecedented moment? The role of digital tools and resources in education has been greatly amplified in 2020, providing the opportunity to call for – and systemically support – practices enabled by technology, which will advance high-quality learning sustainably beyond this crisis. To that end, are states using their guidance to call for practices aligned with the ISTE Standards for Educators? If so, how are they planning for the sustainability of those practices through and beyond the current pandemic?

## Analysis Methods

In October 2020, ISTE reviewed state guidance for their inclusion of the ISTE Standards. Specifically, ISTE:

1. **Reviewed school reopening and/or remote learning guidance documents** published by all 50 states and the District of Columbia (collectively referred to as "states" below) in response to COVID-19. States' continuity of learning plans from spring 2020 were examined in cases where the state education agency website did not clearly indicate a central reopening and/or remote instruction guidance document (as of October 2020).

2. **Identified where elements of the ISTE Standards for Educators are reflected** in the guidance language to inform school planning and instruction. Specifically, ISTE condensed the ISTE Standards for Educators into a set of anchor terminologies for each of the seven standards and identified examples of guidance language associated with each terminology.

3. **Used the guidance to identify if and how a given state provides additional system-level supports** that scale effective practices and create room for the sustainability of ISTE Standards implementation through and beyond the pandemic.

Please refer to Appendix A for a summary table of findings. The full state-by-state guidance analysis data can be accessed at [bit.ly/3gJa2me](bit.ly/3gJa2me).

## Findings: State Progress and Opportunity to Support Educators and Improve Learning

All states have published some level of guidance to support schools and districts implementing technology for remote or hybrid learning, in addition to school safety guidance. Some states have produced comprehensive guidance that suggests discrete practices, while others have produced much more general guidance, relying on local decisions regarding practice. There are many variabilities in how states are incorporating different elements of the ISTE Standards for Educators.

First, the following are specific elements of the ISTE Standards for Educators that many states include in their school reopening and/or instructional guidance documents:

- **Learner**. All states advise that districts and schools provide professional learning opportunities for educators to deliver instruction in remote and/or hybrid formats. Thirteen states explicitly recommend leveraging professional learning communities. Georgia additionally advises that districts and schools leverage technology coaches and library media specialists to lead professional learning efforts.

- **Citizen**: Forty-six states address elements of this standard strand. There is a particular focus on integration of social-emotional learning into remote and hybrid instruction, as 32 states advise that technology be used to foster relationships between educators, students, and families.

- **Collaborator**: Forty-four states advise that educators virtually collaborate with each other, including across content areas (horizontal collaboration) and across grade-levels (vertical collaboration).

- **Designer**: Forty-seven states are encouraging new learning models made possible through technology. For example, 14 states include language about leveraging blended learning, whereas eight states include language around project-based learning.

- **Analyst**: Fifty states address elements of this standard strand. Thirty-six states are focusing on the implementation of formative assessments to continuously guide instructional practice and necessary interventions in remote and hybrid settings. Eleven states advise leveraging competency-based learning models.

Second, there are other elements of the ISTE Standards for Educators where states are falling short:

- **Leader**: Only 21 states integrate key elements of this standard (i.e. leveraging teachers as leaders in developing a renewed vision around digital learning, teachers leading advocacy efforts and modeling effective practices).

- **Citizen**: Only 12 states advise teaching about digital citizenship in their guidance language, whereas only three states advise teaching about media literacy. For example, Virginia's guidance advises schools and districts to address "Digital citizenship, including expectations for student behaviors and etiquette in a virtual setting."

- **Facilitator**: Only Alabama, Kansas, and West Virginia are providing guidance about building students' skills in computational thinking, and only Alabama and Kansas provide guidance about students engaging in a design process.

## Number of ISTE Educator Standards Addressed
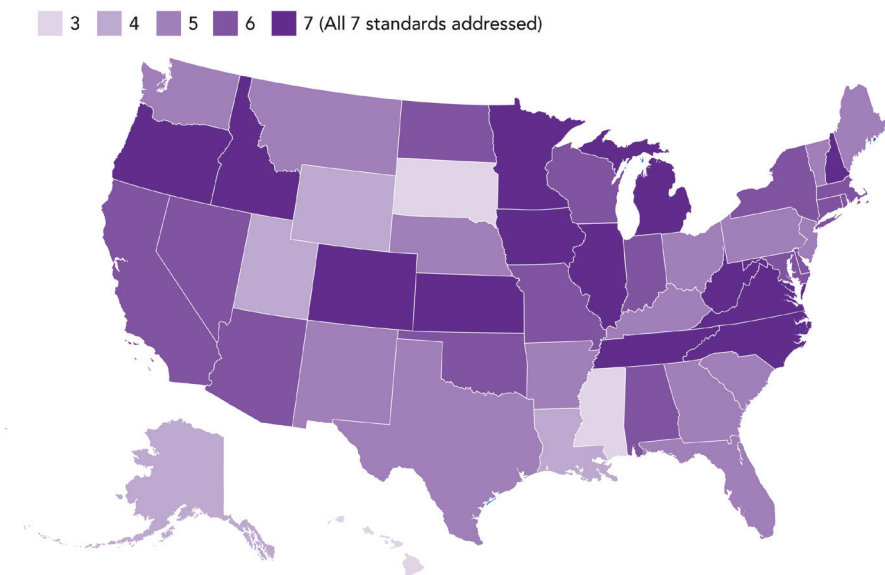
# Number of ISTE Educator Standards Addressed

## State Approaches

Some states are leveraging this moment to scale effective practices and build support structures that serve districts more equitably in their implementation of technology-enabled learning strategies. Some notable examples of states providing the leadership to move towards this systemic change include the following. The full list of state guidance documents examined can be accessed at bit.ly/3gJa2me.

**Georgia addresses educator capacity from preservice and inservice levels (Learner and Designer)** According to the state guidance, the Georgia Department of Education built an **educator readiness assessment**[12] that districts may use to identify areas where inservice educators need the most support to implement remote or blended learning models. The department also provides a **professional development catalog**[13] that lays out opportunities for educators to earn **state-recognized badges in digital learning**. Furthermore, the department hosts distance learning curricula and modular learning resources through **GA Virtual**.[14] Finally, Georgia's professional standards commission is improving preservice educator capacity by adopting the ISTE Standards for Educators and ISTE Standards for Coaches.[15]

**Kansas moves towards competency-based learning models enabled through technology (Designer and Analyst)** The Kansas State Department of Education is leveraging its school reopening guidance[16] to advocate for districts' to shift to competency-based learning models enabled through technology. After publishing its initial COVID-19 guidance, the department convened a **Learning of the Future Task Force** that identified **essential competencies** aligned to state content standards for each grade-band and subject area. This scope and sequence is intended to guide districts' implementation of **competency-based curricula, instruction, and assessments**. The department believes this initial set of work will guide the state over the next 30 years in a shift from traditional learning models.

**Michigan offers educators online learning support through an in-state expert organization (Learner and Collaborator)** The nonprofit Michigan Virtual has been a critical partner for the Michigan Department of Education during COVID-19 to equip educators with the skills needed to deliver effective instruction in an online environment. Michigan Virtual provides educators with **professional learning opportunities** on a range of topics, including **effective pedagogy with technology and supporting students with disabilities**.[17] During the pandemic, the organization in partnership with regional agencies has also provided Michigan schools with **"Keep Michigan Learning,"** which hosts digital content and guidance for selecting appropriate digital tools and analyzing professional learning needs.[18]

**Nevada recruits instructional technology experts from across the state to support implementation (Learner and Leader)**

The Nevada Department of Education recently created a statewide **"Digital Learning Collaborative"** to curate and share content resources and professional development opportunities on digital learning topics. Supports range from using a learning management system to building positive classroom cultures online. The collaborative also recruits 88 educators from across the state as **"digital engineers"** to lead the implementation of effective learning strategies enabled through technology.[19] To ensure that there is a framework for critical student competencies that can be reinforced through technology, the department has adopted the ISTE Standards for Students.[20]

*An interview with Nevada's officials leading this effort is included below.*

**North Carolina navigates research partnerships to support personalized learning programs (Collaborator and Analyst)**

The North Carolina Department of Public Instruction participates in the **REL Southeast Competency-Based Education Alliance** that researches and develops best practices to support the implementation of personalized learning across the state.[21] As a first step, this alliance developed a **shared definition for personalized learning**, incorporated into the state guidance, that districts can use as a guiding framework. According to the state guidance, the department also implemented an online platform that provides 100,000+ **standards-aligned assessment items**, as well as a means for educators to generate **data analytics** to identify learning gaps and further personalize instruction.[22] Finally, the department adopted the **ISTE Standards for Students** to guide the types of critical competencies students can build by leveraging technology.[23]

**Tennessee launches a one-stop shop of digital learning resources for educators and leaders (Learner and Leader)**

In summer 2020, the Tennessee Department of Education published detailed guidance on a variety of topics ranging from school improvement to professional development. As part of this effort, the department also launched a new virtual learning hub, called **Best for All Central: Tennessee's Hub for Learning and Teaching**.[24] Best for All Central provides a one-stop shop for educators and school leaders, including **free, credit-eligible training** for school leaders on supporting effective digital learning practices[25], a **standards navigator** paired with learning resources and formative assessment items, as well as **videos of effective learning strategies** with companion lessons.

**Virginia elevates existing resources to support competency-based digital learning
(Learner and Designer)**

Since 2019, the Virginia Department of Education has been focused on delivering instruction that prepares students on five overarching competencies known as the "5C's": citizenship, creative thinking, communication, creativity, and collaboration. To ensure that educators can use technology to support these core competencies, the Virginia Board of Education adopted new **Digital Learning Integration Standards** in 2020, adapted from the language of the ISTE Standards for Students.[26] The department leverages existing resources to further reinforce the "5C's" during COVID-19. For example, **Virtual Virginia**, originally designed as an online school platform, now hosts free access to online learning content, professional learning support for educators, support tools for counselors, and technology support for students.[27] Additional high-quality, standards-aligned instructional resources are made widely accessible through the **#GoOpenVA** hub.[28]

**Washington continues to develop students into digital citizens during COVID-19
(Citizen and Collaborator)**

Guidance from the Washington State Office of the Superintendent of Public Instruction (OSPI) recognizes the role that technology plays in enabling practices aligned to the citizen standard of the ISTE Standards for Educators, among others. Building on state stakeholders' recommendations for advancing digital citizenship and media literacy skills as outlined in a 2016 statewide advisory committee report, OSPI continues to provide educators with high-quality resources appropriate for distance and hybrid learning models.[29] This effort includes the allocation of a **state grant**, through which districts are currently creating and sharing **openly-licensed curricular units on digital citizenship and media literacy**. For example, with the help of this grant, educators are building curricula with explicit connections to the **Washington Educational Technology Standard**s, adapted from the ISTE Standards for Students.[30]

*An interview with a Washington official leading this effort is included below.*

**Wyoming engages in targeted professional development initiative for online learning
(Learner and Facilitator)**

According to the state guidance, the Wyoming Department of Education requires all educators engaging in a distance learning model to complete a **virtual learning workshop** approved by the state's professional teaching standards board and earn a **virtual education professional development credit**.[31] To guide the integration of effective learning strategies enabled through technology in all classrooms, the department adopted **digital learning guidelines**[32] based on the ISTE Standards for Students and integrated those competencies into content standards.[33] Finally, the state education agency developed a dedicated, **open enrollment, self-paced course** for educators on the implementation of those digital learning guidelines.[34]

# Perspectives: Interviews with State and District Leaders

The following are excerpts of interviews with several state and district leaders who recognize that policies and practices needed to respond to COVID-19 can serve as a basis towards the future of learning grounded in the ISTE Standards, which seek to develop students into empowered learners. **Full interviews are available in appendix B**.

State leaders from Nevada and Washington describe their systemic actions to ensure that the current investments in technology, professional learning, and effective learning strategies will continue to support educators and students far beyond the pandemic.

District leaders from Ohio, Illinois, and Georgia describe how they have strategically intentionally integrated elements of the ISTE Standards into their plans both before and during COVID-19, showcasing models that state leaders can highlight and support going forward.

### Cindi Chang and Jayne Malorni, co-leads, Nevada Digital Learning Collaborative
Nevada Department of Education

*In Nevada, we recognized early on that in order for schools to truly develop students into innovators and creators, the issue of educator capacity could not be overlooked. Many educators have not been adequately trained by their preparation programs to use technology in ways that accelerate effective learning strategies that empower students. Therefore, the burden of getting educators up to speed often falls on to districts. To address this gap, we first needed a vision, shared among all key stakeholders, for what the future of learning looks like.*

### Dennis Small, director of educational technology
Washington State Office of the Superintendent of Public Instruction

*In Washington, state leaders have recognized our systemic role in supporting educators to use technology in ways that accelerate students' achievement of critical competencies, including digital citizenship. We are ensuring that a comprehensive view around digital citizenship – encompassing not only online safety, but also discerning fact from fiction, navigating relationships, and using technology to champion change – is embedded into instruction. We are additionally ensuring that digital citizenship instruction can continue in light of COVID-19 and remote learning.*

### Todd Wesley, chief technology officer
### Krista Heidenreich, director of digital and professional learning, VLO principal
Lakota Local Schools, Ohio

*Even before COVID-19, we incorporated a commitment to "support personalized learning with the appropriate technology devices and tools" into our strategic plan, recognizing the important role technology can play in accelerating effective learning strategies that empower students.[35] In the past year, the district took a number of additional steps grounded in the ISTE Standards to ensure that this goal could continue to be pursued during the pandemic and beyond (see appendix C for an example of this strategy alignment).*

*In 2018, Lakota launched our WEareEMPOWERED initiative focused on personalized learning enabled through technology. Expanding device access was a key area of this work, with the district going 1:1 in grades 6-12 and at least 2:1 in K-6.[36] As the pandemic took shape and a statewide lockdown went into effect, our K-6 school leaders and our Office of Diversity and Inclusion worked to identify students who needed a device or reliable connection. Our district technology team worked closely with school staff to ensure every request for these essential remote learning resources would be filled. However, we recognized that digital equity must go far beyond access. Showing educators what effective earning strategies and models look like in a remote environment, in tandem with efforts to expand access, was critical.*

### Michael Arensdorff, senior director of technology
### Meg Ormiston, digital learning consultant
Oak Park Elementary School District 97, Illinois

*Led by coordinated efforts between the technology and teaching and learning departments, our district has long been collaborating with stakeholders to develop and implement a shared vision around effective learning that is accelerated through the use of technology.*

*Our work began long before the pandemic first struck. The initial years really focused on building the necessary infrastructure, ensuring device access and at-home internet connectivity for all students in grades 3-8. However, recognizing that equity of access only gets us so far, the work gradually evolved to encompass helping students and educators take advantage of innovative, empowering learning opportunities made possible through technology. All efforts were guided by our iLearn 97 advisory committee, composed of students, educators, families, community members and administrators.*

### Tricia Kennedy, executive director for eCLASS transformation
Gwinnett County Public Schools, Georgia

*As the largest district in the state, Gwinnett County Public Schools in Georgia serves a diverse population of almost 180,000 students. Even before the pandemic, innovating instruction with technology has been at the center of our strategic goals, as evidenced by our current work to integrate artificial intelligence comprehensively into K-12 curricula. During COVID-19, our team is continuing on with this innovative mindset and taking intentional steps to build educators' expertise in technology-enabled practices.*

*At the core of Gwinnett County's instruction is our Quality-Plus Teaching Strategies (QPTS) framework. The framework is grounded in three core strategies – opportunities to build literacy, reinforcing student agency through setting learning goals and plans, and ongoing assessment and feedback – that should be present across content areas. These overarching strategies are each supported by a number of research-based practices for effective learning, including collaboration, modeling, and activating prior knowledge. The final piece of the framework, technology, is interwoven throughout all of these strategies and does not stand on its own. We recognize that the integration of digital tools and resources can increase engagement, allow for differentiation, and empower students to take ownership of their learning.*

## Recommendations for Setting Ambitious State Priorities for the Future of Learning

States' school reopening and instructional guidance documents, as well as the above vignettes of exemplars, demonstrate that states can leverage this unique moment to ambitiously re-envision, design, and implement a future of learning that equitably empowers all students with technology, using the ISTE Standards as a critical tool. Such efforts must lie in parallel with state-level initiatives to equitably provide students with access to devices and connection to the internet, thereby narrowing the digital divide that currently inhibits students from taking full advantage of technology-enabled learning. Recommendations for state leaders include:
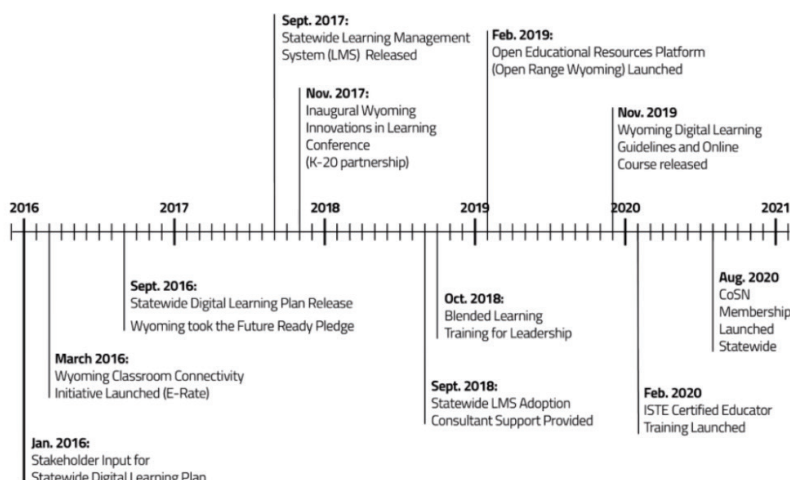
1. **Set a shared vision for the future of learning enabled through technology.**

   Technology can accelerate effective instructional practices that are active, collaborative, constructive, authentic, and goal directed. However, taking steps towards this end requires states to intentionally establish a vision and guiding framework for technology-enabled practices educators can implement, whether learning occurs in face-to-face, online, or blended environments.

   **COVID-19 offers a unique moment for state leaders to lead a conversation among stakeholders (e.g. state, district, and community leaders and educators) to define that shared vision.** What empowering competencies do they want students to graduate from the K-12 system with that would better prepare them for the changing demands of work and postsecondary education? Which skills should educators and leaders sharpen to facilitate students' achievement of those competencies? How does technology allow students and educators to build those competencies and skills? This intentional collaboration is essential in generating buy-in among stakeholders to work towards the shared vision.

   - **Wyoming** began their vision-setting process in 2016 by collecting input on specific areas of need from stakeholders around the state, which led to the development of a new state digital learning plan that outlines how the state will support educators in building their capacities (see a diagram of Wyoming's plan below). [37]
   - **Pennsylvania**[38] and **Oregon**[39] have conducted similar outreach in 2020, which is necessary to begin addressing the above questions on vision setting.
   - **Twenty states** have already worked with stakeholders to adopt the newest generation of the ISTE Standards to guide educator practice.

Building Capacity in Digital Learning

**Sept. 2017:**
Statewide Learning Management System (LMS) Released

**Nov. 2017:**
Inaugural Wyoming Innovations in Learning Conference (K-20 partnership)

**Feb. 2019:**
Open Educational Resources Platform (Open Range Wyoming) Launched

**Nov. 2019**
Wyoming Digital Learning Guidelines and Online Course released

2016 2017 2018 2019 2020 2021

**Sept. 2016:**
Statewide Digital Learning Plan Release
Wyoming took the Future Ready Pledge

**March 2016:**
Wyoming Classroom Connectivity Initiative Launched (E-Rate)

**Jan. 2016:**
Stakeholder Input for Statewide Digital Learning Plan

**Oct. 2018:**
Blended Learning Training for Leadership

**Sept. 2018:**
Statewide LMS Adoption Consultant Support Provided

**Aug. 2020**
CoSN Membership Launched Statewide

**Feb. 2020**
ISTE Certified Educator Training Launched

2. **Build the capacity of educators to lead and implement effective learning strategies enabled through technology.**

States should provide access and strategic supports for educators to build their capacities to lead and implement effective learning strategies enabled through technology. **Such educator capacity building efforts – including ongoing professional development, coaching, and mentoring – must be aligned to the central vision shared with stakeholders around the role of technology in learning (recommendation 1)**.

State leaders can also integrate strategic incentives – such as micro-credentials, relicensure credits, and endorsements – for educators to develop their capacities in designing and leading learning experiences grounded in the ISTE Standards.

- In **Utah**, educators who earn ISTE Certification qualify for the state's educational technology endorsement.[40] This Certification program provides competency-based, vendor-neutral professional development that builds educators' expertise with the ISTE Standards for Educators.
- In **Wyoming**, leaders show the progression of technology-empowered competencies grounded in the ISTE Standards from early grades to graduation and built a free, credit-eligible course for educators on using this progression in their practice. This course is a prerequisite for educators earning an ISTE Certification sponsored by the Wyoming Department of Education, which qualifies them for an instructional technology endorsement.[41]

**State leaders can also invest critical funds – including Titles II-A and IV-A federal block grants authorized under the Every Student Succeeds Act and COVID-19 education stimulus packages – to build and sustain professional development and digital content resource hubs for educators.** Such hubs can also be leveraged to promote cross-district collaboration, mentoring, and equitable resource sharing, as exemplified by districts in Alaska that have worked with local organizations to lead virtual training opportunities for their smaller neighbors.[42]

- In **Tennessee**, the state uses the Best for All Central platform to offer credit-eligible training opportunities on effective digital learning practices, as well as a way for educators to navigate state standards-aligned learning resources.[43]
- In **Ohio**, a statewide learning management system offers districts ease of access to various courses and professional development tied to credit hours for educators.[44]

Finally, research continues to show discrepancies in districts' access to new educators who are prepared to integrate technology into instruction in ways that accelerate learning,[45] thus leading to inequities in students' access to high-quality learning experiences. **s preparation programs continue to introduce new educators into the workforce, relevant policymaking bodies at the state level can ensure that all preservice educators are adequately trained in how technology can enable effective learning strategies and empower students.**

- The **Texas** State Legislature requires all teacher candidates undergo "instruction in digital learning … aligned with the International Society for Technology in Education's standards for teachers."[10]
- The **Georgia** Professional Standards Commission integrates the ISTE Standards for Educators and ISTE Standards for Coaches into rules guiding preservice requirements for educators.[15]

3. **Develop policies and structures to guide schools and districts equitably and sustainably towards the future of learning enabled through technology.**
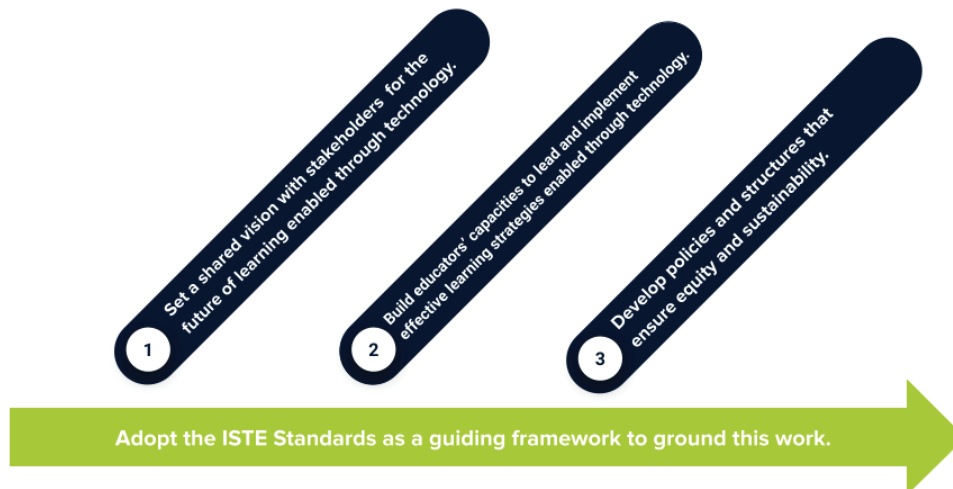
The above vision setting and capacity building efforts require new state policies and structures to ensure continued and equitable impact. Critical areas for state leaders to address include funding for instructional support staff and key flexibilities for schools to better meet the needs of each student.

With the pandemic's impact on the economy and public education agencies threatening the security of hundreds of thousands of education jobs[46], there is critical need for state leaders to help protect instructional support staff, such as technology coaches and library media specialists, who have led the transition to remote and hybrid learning models in 2020.[47] **State policymakers can ensure that adequate and equitable aid is provided to schools and districts to fund these critical roles that educators rely on continuously to better understand how to use technology in service of student empowerment.**

Finally, the ISTE Standards for Educators call for educators to help personalize learning strategies according to each student's needs, interests, and other individual factors. **Doing so requires flexibility in key state-level policies, including how technology allows us to rethink instructional time and assessments**. Such flexibilities must place equity at the forefront, ensuring that all learning and assessment strategies conducted using technology are still aligned to the central state vision (recommendation 1) and lead to high-quality learning opportunities for all students.

- **California** allows schools to meet instructional time requirements through a combination of both in-person learning and technology-based remote learning.[48]
- **Kansas** is moving towards a competency-based model that allows students to demonstrate their learning in a variety of meaningful and authentic ways.[49]



1. Set a shared vision with stakeholders for the future of learning enabled through technology.

2. Build educators' capacities to lead and implement effective learning strategies enabled through technology.

3. Develop policies and structures that ensure equity and sustainability.

Adopt the ISTE Standards as a guiding framework to ground this work.

## Conclusion: Charting a Path for Effective and Equitable Learning With Technology

Due to the rapid, nationwide implementation of online and blended instructional models in 2020, there is an increasing recognition that technology is an important enabler of effective learning strategies, engaging curricula, authentic assessments, and educator collaboration, all which help develop students into *lifelong, empowered learners*.

State leaders can take strategic steps now to build on this recent development by re-envisioning the future of learning transformed through technology and supplying schools and districts with the necessary capacity and momentum.

**Specifically, states can leverage the ISTE Standards as a guiding vision and framework, ensuring that steps taken during the ongoing pandemic do not serve merely as an emergency response, but rather accelerates us towards a rethinking and redesigning of what schools can be.**

To remedy immediate needs to bridge the digital divide and ensure continuity of learning, districts are continuing to invest federal education relief dollars in technology infrastructure, digital curriculum resources, and other teacher supports.[50, 51] State leaders can build on this effort to further transform and improve learning opportunities for all students through and beyond COVID-19, ensuring progress towards digital equity.[52]

Other national crises like the Great Recession have shown us that leadership matters in order for effective learning to advance amid difficult challenges. In the late 2000's, failing to adequately prioritize student learning in the recovery process ultimately negatively impacted the achievement of students from historically-disadvantaged communities.[53, 54]

At a 2020 National Association of State Boards of Education forum, ISTE CEO Richard Culatta challenged state education leaders, saying, "Many states are in emergency response mode right now, but how do we think about this moment not as something to simply get through, but really an opportunity to rethink and reset the future of learning?"

The time is now for state leaders to collaborate with stakeholders to not only remedy immediate needs around remote learning, but also take strategic, forward-looking steps to provide all students with equitable, empowering learning opportunities made possible through technology.

## Appendix A: ISTE Standards for Educators in State School Reopening/Instructional Guidance

| State | ISTE Standards for Educators Strands | | | | | | | |
|-------|---------|--------|---------|--------------|----------|-------------|---------|-------|
|       | Learner | Leader | Citizen | Collaborator | Designer | Facilitator | Analyst | Total |
| Alabama | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| Alaska | ✔ | | ✔ | ✔ | ✔ | | | 4 |
| Arizona | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | 6 |
| Arkansas | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| California | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| Colorado | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Connecticut | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | 6 |
| Delaware | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| District of Columbia | ✔ | | ✔ | ✔ | | | ✔ | 4 |
| Florida | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Georgia | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Hawaii | ✔ | | | | ✔ | | ✔ | 3 |
| Idaho | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Illinois | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Indiana | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | 6 |
| Iowa | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Kansas | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Kentucky | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Louisiana | ✔ | | ✔ | | ✔ | | ✔ | 4 |
| Maine | ✔ | ✔ | | ✔ | ✔ | | ✔ | 5 |
| Maryland | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| Massachusets | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | 6 |
| Michigan | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Minnesota | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Mississippi | ✔ | | | | ✔ | | ✔ | 3 |
| Missouri | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| Montana | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Nebraska | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Nevada | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | 6 |

| State | ISTE Standards for Educators Strands | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Learner | Leader | Citizen | Collaborator | Designer | Facilitator | Analyst | Total |
| New Hampshire | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| New Jersey | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| New Mexico | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| New York | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| North Carolina | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| North Dakota | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | 6 |
| Ohio | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Oklahoma | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| Oregon | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Pennsylvania | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Rhode Island | ✔ | | | ✔ | | | ✔ | 3 |
| South Carolina | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| South Dakota | ✔ | | | ✔ | | | ✔ | 3 |
| Tennessee | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Texas | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| Utah | ✔ | | ✔ | | ✔ | | ✔ | 4 |
| Vermont | ✔ | ✔ | ✔ | ✔ | | | ✔ | 5 |
| Virginia | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Washington | ✔ | | ✔ | ✔ | ✔ | | ✔ | 5 |
| West Virginia | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 |
| Wisconsin | ✔ | | ✔ | ✔ | ✔ | ✔ | ✔ | 6 |
| Wyoming | ✔ | | ✔ | | ✔ | | ✔ | 4 |
| Total | 51 | 21 | 46 | 46 | 47 | 21 | 50 | |

# Appendix B: Full State and District Interviews

**Cindi Chang and Jayne Malorni, co-leads, Nevada Digital Learning Collaborative**
Nevada Department of Education

In Nevada, we recognized early on that in order for schools to truly develop students into innovators and creators, the issue of educator capacity could not be overlooked. Many educators have not been adequately trained by their preparation programs to use technology in ways that accelerate effective learning strategies that empower students. Therefore, the burden of getting educators up to speed often falls on to districts. To address this gap, we first needed a vision, shared among all key stakeholders, for what the future of learning looks like.

*What steps did Nevada take to create this shared vision?*

ISTE's 2016 Student Standards update prompted state leaders to seriously consider how our own standards could be revised to reflect the types of competencies that Nevada students should achieve. In the following year, our legislature officially called for an update through S.B. 200. We built on this charge by convening students, teachers, librarians, coaches and administrators, as well as higher education and business sector leaders. These stakeholders agreed that the ISTE Standards provided a well-crafted framework for how technology can be used to empower students. We worked to incorporate the ISTE Standards into our state's own integrated technology standards. We also offered all districts an opportunity to give input through public comments. In August 2019, the state board adopted the final standards.

But we knew we weren't finished. Adopting new standards meant educators need to be trained on how to support students in meeting specific competencies. Our department collaborates with Nevada's regional agencies to coordinate training opportunities, where educators can unpack the ISTE Standards and identify standards-aligned resources.

*How are you ensuring that this shared vision is implemented effectively in classrooms, especially during and beyond COVID-19?*

As we engage in our response to COVID-19, our goal is to make sure that the technology-empowered pedagogical skills that our educators are building right now are sustained beyond the pandemic. Therefore in July, we launched our Digital Learning Collaborative. On the collaborative website, which has been rapidly gaining visitors each month, educators can find a range of curricular materials and instructional strategies to connect with students and families virtually, along with resources to meet the needs of diverse learners, including English language learners and students with disabilities.

We also recognize that we have deep expertise in the effective use of technology in our schools and districts and are making sure we share that knowledge equitably across the state. A key component of this collaborative is our team of 88 digital engineers, composed of teachers, school administrators, and district leaders who represent several Nevada districts. Our digital engineers are working with our department and regional agencies to develop and support digital and blended learning pedagogy and tools, platform expertise, curriculum and content, professional learning opportunities, and resources for families.

Finally, we are working with external partners to ensure high-quality, standards-aligned content can be provided through our statewide learning management system.

*What advice do you have for other states looking to engage in this work?*

Our state's leaders and stakeholders share a vision that technology is not a "nice to have," but an essential component of effective pedagogy. Setting this type of vision requires strategic collaboration and outreach to stakeholder groups, bringing them together to achieve consensus. Each group has something special to offer. In Nevada, the business sector provided a means to improve technology access, students provided valuable input on how they would like to use technology to demonstrate learning, and state leaders provided the prioritization necessary to develop and implement the new standards. This work is just too important to be done in siloes.

**Dennis Small, director of educational technology**
Washington State Office of the Superintendent of Public Instruction (OSPI)

In Washington, state leaders have recognized our systemic role in supporting educators to use technology in ways that accelerate students' achievement of critical competencies, including digital citizenship. We are ensuring that a comprehensive view around digital citizenship – encompassing not only online safety, but also discerning fact from fiction, navigating relationships, and using technology to champion change – is embedded into instruction. We are additionally ensuring that digital citizenship instruction can continue in light of COVID-19 and remote learning.

*What efforts were in motion prior to COVID-19 to support educators with digital citizenship?*

In 2016, state legislators called on the Office of the Superintendent of Public Instruction (OSPI) to conduct an environmental scan of how digital citizenship instruction is currently integrated and suggest how this work may move forward. Accordingly, we convened statewide stakeholders to develop a recommendations report that, among other items, defined digital citizenship to not only focus on online safety, but also advocacy and evaluation of accurate and valid information – all skills necessary to prepare active, empowered citizens in a functioning democracy.

In line with the report's recommendation to support professional development in digital citizenship, we delivered targeted training to approximately 400 school librarians. Further, in partnership with the Washington State School Directors' Association, we developed model policies for local school boards to consider to better reinforce students' digital citizenship skills.

*How are you ensuring that educators can support students' digital citizenship skills during and beyond COVID-19?*

We recognized early during the pandemic educators' lack of preparedness to use remote learning technology to implement effective learning strategies. We quickly mobilized to create model instructional guidance and leveraged our state's funding under the CARES Act to deliver asynchronous modules on effective pedagogy.

When it comes to digital citizenship in particular, we are focusing on equipping educators with high-quality resources they can redesign and remix based on their school communities' and students' interests. Through a state grant, districts are currently creating and sharing openly-licensed curricular

interests. Through a state grant, districts are currently creating and sharing openly-licensed curricular units on digital citizenship and media literacy.

One strong example of this grant's impact includes a "digital survival" curriculum developed by teacher leaders in Seattle Public Schools that features activities for high school students to learn about misinformation and fact-checking and explicitly shows a direct connection to our Washington Educational Technology Standards (adapted from the ISTE Standards for Students). Teacher leaders also partnered with the University of Washington to plan a virtual MisInfo Day 2020, where both students and educators had an opportunity to learn about a variety of topics related to digital citizenship, ranging from confirmation biases to algorithms that dictate suggested web content.

*What advice do you have for other states engaging in this work?*

First and foremost, educators need to know why this work matters. Work with your educators to ensure that digital citizenship is embedded into existing curricula, especially in topics such as English language arts, health, and social studies. Also, don't overlook the power of open educational resources (OER) in advancing digital citizenship. There are teacher leaders in your state who can contribute to the development and dissemination of high-quality instructional resources aligned to your state's learning standards.

**Todd Wesley, chief technology officer**
**Krista Heidenreich, director of digital and professional learning, VLO principal**
Lakota Local Schools, Ohio

Even before COVID-19, we incorporated a commitment to "support personalized learning with the appropriate technology devices and tools" into our strategic plan, recognizing the important role technology can play in accelerating effective learning strategies that empower students. In the past year, the district took a number of additional steps grounded in the ISTE Standards to ensure that this goal could continue to be pursued during the pandemic and beyond (see appendix C for an example of this alignment).

*What actions is the district taking to ensure that effective learning can continue during COVID-19?*

In 2018, Lakota launched our WEareEMPOWERED initiative focused on personalized learning enabled through technology. Expanding device access was a key area of this work, with the district going 1:1 in grades 6-12 and at least 2:1 in K-6. As the pandemic took shape and a statewide lockdown went into effect, our K-6 school leaders and our Office of Diversity and Inclusion worked to identify students who needed a device or reliable connection. Our district technology team worked closely with school staff to ensure every request for these essential remote learning resources would be filled.

However, we recognized that digital equity must go far beyond access. Showing educators what effective learning strategies and models look like in a remote environment, in tandem with efforts to expand access, was critical.

Our team of innovation specialists immediately designed professional development opportunities and worked with our curriculum and technology teams to quickly develop a continuously updated digital guide. This Lakota Remote Learning Resources page calls on educators to lead flexible and accessible remote learning experiences that focus on essential learning goals and emphasize social and

emotional supports. In line with practices outlined in the ISTE Standards, the guide also recommends that educators foster agency by allowing opportunities for students to use technology to creatively demonstrate their learning and practice inquiry, reflection, and research skills.

As we planned for fall 2020, we recognized a substantial percentage of our students and families did not plan to return to in-person instruction for a variety of reasons, including high-risk health concerns. Therefore, we mobilized a large-scale initiative – spearheaded by our curriculum leaders and teachers – and engaged in a cross-district collaboration effort to build a Virtual Learning Option (VLO). In terms of enrollment, VLO is our largest "school" this year with almost a quarter of our students.

*How is the district ensuring that the impact of such efforts can be sustained even after COVID-19?*

Creating structures for cross- and intra-district collaboration has been key. At the beginning of the pandemic, Superintendent Matt Miller helped set up regular virtual calls across the state to ensure that promising practices for educators would not be siloed. We took this same approach with our staff to further align our leaders, teachers, departments, and project teams.

Furthermore, aligned to our goal to support educators in implementing a personalized learning approach and the ISTE Standards, we are led by a cohort of educators who have earned ISTE Certification for Educators through a partnership with the Butler County Educational Service Center. These certified educators with expertise in the ISTE Standards have continuously been sharing their knowledge of technology-empowered practices with other Lakota staff.

Finally, we are building processes and systems around VLO to ensure that this option can continue to be provided at a high quality beyond the current pandemic.

*How has COVID-19 shaped educators' vision for effective learning, and how can state leaders supply momentum to your work?*

The sudden flip to remote learning required all of our teachers to take advantage of the digital tools and resources available. In doing so and receiving professional development from the district, many are recognizing the value that technology brings to accelerating practices that promotes active student engagement and builds their agency. As we've transitioned slowly back to face-to-face learning environments, educators are continuing to use digital tools and resources towards this end.

Such experiences are also helping us reflect on the types of support that state leaders can provide in reimagining the future of learning beyond the pandemic. How can districts be provided with the flexibility around assessments so that students can demonstrate their mastery of critical competencies, like problem solving and creative communication, in a variety of ways through technology? How can states promote cross-district collaboration to share resources and better serve different student populations with unique strengths and challenges? How can the school day and learning models look different, when supported by technology to better meet the needs of today's students?

**Michael Arensdorff, senior director of technology**
**Meg Ormiston, digital learning consultant**
Oak Park Elementary School District 97, Illinois

Led by coordinated efforts between the technology and teaching and learning departments, our district has long been collaborating with stakeholders to develop and implement a shared vision around effective learning that is accelerated through the use of technology.

*What actions is the district taking to ensure that effective learning can continue during COVID-19?*

Our work began long before the pandemic first struck. The initial years really focused on building the necessary infrastructure, ensuring device access and at-home internet connectivity for all students in grades 3-8. However, recognizing that equity of access only gets us so far, the work gradually evolved to encompass helping students and educators take advantage of innovative, empowering learning opportunities made possible through technology. All efforts were guided by our iLearn 97 advisory committee, composed of students, educators, families, community members and administrators.

With this new vision in mind, we began supporting key stakeholders in rethinking their roles. For example, instructional technology and data specialists, who were often leveraged by school staff simply as technology support, were trained to become coaches who would assist teachers in integrating technology to accelerate effective learning practices and models. Teacher librarians were trained on how competencies in the ISTE Standards for Students, such as computational thinking, creative communication, and digital citizenship, can be reinforced in their unique learning spaces.

During COVID-19, these coaches, librarians, and other teacher leaders are not only supporting educators on topics like using various tools and platforms, building a sense of community, supporting social and emotional needs, and reinforcing student agency and creativity, but also building tutorials for families on how they can become co-teachers from home. They have even been involved in innovative projects that empower students as leaders, including organizing a student technology club, composed of fifth graders who are actively supporting staff in using technology for various projects and assignments.

*How is the district ensuring that the impact of such efforts can be sustained even after COVID-19?*

All staff continue to be provided with both synchronous and asynchronous professional learning opportunities that emphasize learning strategies that can be sustained beyond COVID-19. For example, as emphasized in the ISTE Standards, how can educators create opportunities to reinforce student agency (e.g. breakout groups led by student leaders, activities that require students to explore their environments and report back)? How can we think about assessments as not simply a method of measuring progress, but also a tool for engagement (e.g. discussion-based assessments, creative projects to demonstrate learning)? How can we help administrators become comfortable with such approaches and support teachers in continuing to explore different strategies?

*How has COVID-19 shaped educators' vision for effective learning, and how can state leaders supply momentum to your work?*

COVID-19 truly has been an accelerator. Having to engage in instruction largely through technology has forced us to think about the learning approaches enabled through it and critical student competencies that we may now be in a better position to reinforce. In reflecting on our experiences and remaining challenges that we continue to overcome, we pose the following questions to state leaders to ensure that we do not retreat to outdated practices and models following the pandemic:

1. Who is involved in the decision making processes? How can we better ensure that we are continuing to directly listen to the needs of stakeholders, as Oak Park has done through our iLearn 97 advisory committee? How can they be involved in developing a shared vision for the future of learning in the state?

2. Various organizations and groups are publishing useful information and guidance for districts. How can the state develop repositories of resources that are evidence-based and most relevant to our specific learning standards and goals?

3. Funding support cannot be overlooked. In Oak Park, support from the CARES Act were critical in ensuring 1:1 access for K-2 students this year. However, additional investments need to be place so that we can continue to provide adequate support to our staff, families, and students, including critical professional learning opportunities.

**Tricia Kennedy, executive director for eCLASS transformation**
Gwinnett County Public Schools, Georgia

As the largest district in the state, Gwinnett County Public Schools in Georgia serves a diverse population of almost 180,000 students. Even before the pandemic, innovating instruction with technology has been at the center of our strategic goals, as evidenced by our current work to integrate artificial intelligence comprehensively into K-12 curricula. During COVID-19, our team is continuing on with this innovative mindset and taking intentional steps to build educators' expertise in technology-enabled practices.

*What actions is the district taking to ensure that effective learning can continue during COVID-19?*

At the core of Gwinnett County's instruction is our Quality-Plus Teaching Strategies (QPTS) framework. The framework is grounded in three core strategies – opportunities to build literacy, reinforcing student agency through setting learning goals and plans, and ongoing assessment and feedback – that should be present across content areas. These overarching strategies are each supported by a number of research-based practices for effective learning, including collaboration, modeling, and activating prior knowledge. The final piece of the framework, technology, is interwoven throughout all of these strategies and does not stand on its own. We recognize that the integration of digital tools and resources can increase engagement, allow for differentiation, and empower students to take ownership of their learning.

All staff development activities build from the QPTS framework. During the pandemic, we've been able to support educators with our "QPTS gone digital" resources, comprised of videos and other guidance for implementing the framework in remote and hybrid settings. Throughout 2020, our district's message to schools has been, "Let's stick with what we know about good learning and just think about how to leverage it in a different modality."

*How is the district ensuring that the impact of such efforts can be sustained even after COVID-19?*

Our 10-year strategic priorities outline our goal to ensure that technology is effectively infused into the learning process to foster innovation, creativity, and collaboration. In line with this goal, we have been actively implementing the eCLASS system that gives us a platform to offer students a number of different ways to engage with content by leveraging digital resources. This effort has been foundational to our digital learning days this school year, as students not only regularly meet synchronously with educators, but also use eCLASS to access and explore a rich library of assignments and activities.

The ISTE Standards have been foundational to integrating the eCLASS system, and we are leveraging our district- and school-level leaders to sustain technology-enhanced instruction throughout and beyond the pandemic. For example, our local school technology coordinators, who share knowledge with teachers about how to leverage eCLASS as a means to implement elements of the ISTE Standards, use the ISTE Standards for Coaches to ground their training strategies. Furthermore, our team of district-level eCLASS instructional specialists collaborate with each school's technology coordinator and eCLASS lead innovator to mentor and guide other teachers at the site about how to design and lead effective instruction with technology.

*How has COVID-19 shaped educators' vision for effective learning, and how can state leaders supply momentum to your work?*

We believe that Gwinnett County's vision for effective learning – where a strong instructional framework serves as the bedrock and is enhanced through technology – has been affirmed by the pandemic. Peer leadership and coaching has been critical to our district's success in carrying out this vision during COVID-19, and state leaders must ensure that funding for such critical roles are protected going forward.

# Appendix C: Lakota Local Schools' Strategy Alignment with the ISTE Standards

**Key:** Each item below is labeled with the corresponding ISTE Standard.
- **S:** ISTE Standards for Students
- **E:** ISTE Standards for Educators
- **L:** ISTE Standards for Education Leaders

**Devices and Internet Access:** Remote learning requires internet access and a learning device. Our district technology team and schools have focused on providing that access to develop students into empowered learners during COVID-19 and beyond.
**S (Empowered Learner), E (Leader), L (Equity and Citizenship Advocate)**

**Virtual Learning Option:** The Virtual Learning Option (VLO) provides our students the opportunity to learn entirely online and supports a flexible learning schedule to meet the individual needs of students and families.
**S (Empowered Learner), E (Facilitator), L (Empowered Leader)**

**Online Curriculum:** We leveraged our learning management system (LMS) and other digital tools to develop model online courses for use in VLO or to supplement face-to-face instruction. We continue to gather regular feedback from students, parents, and staff to improve the learning experience.
**S (Empowered Learner), T (Designer, Facilitator), L (Visionary Planner, Empowered Leader)**

**Digital Citizenship:** We reviewed our current instruction around digital citizenship and designed additional resources that could be easily accessed in an online setting. We also developed modules within our LMS designed to build critical competencies.
**S (Digital Citizen), E (Citizen), L (Equity and Citizenship Advocate)**

**Digital Collaboration:** Educators virtually collaborated across our own district and with districts across the country to share learning resources and troubleshoot common problems related to remote learning. Our students are also provided with opportunities to connect with experts in our community and across the country to explore real world applications and career opportunities. Finally, our innovation specialists and ISTE Certified Educators provide parents and teachers with online support sessions around the use of instructional technology.
**S (Global Collaborator), E (Collaborator), L (Visionary Planner, Connected Learner)**

**Communication:** We continue to regularly and clearly communicate guidance and support to our teachers and parents around instructional design and expectations. Teachers are also using various digital tools to provide quality feedback that personalizes student learning according to individual strengths and needs.
**S (Empowered Learner), E (Analyst), L (Empowering Leader)**

**Social and Emotional Health:** We are encouraging our staff to take advantage of digital tools to build relationships with students and families. For example, we are specifically providing guidance around how teachers can provide a personal touch to feedback and messages. We are also working with various partners to allow students to share their experiences and connect them with resources and strategies to support their social emotional health.
**S (Empowered Learner), E (Leader), L (Connected Learner)**

## Appendix D: Additional Resources

- In collaboration with the Education Commission of the States, ISTE published a series of interviews showcasing how exemplary leaders, including state chiefs, are promoting effective technology use.
https://bit.ly/2IW2HDu

- In collaboration with the National Association of State Boards of Education, ISTE published a report with specific recommendations for state board members around developing a comprehensive policy strategy for effective and equitable digital learning during COVID-19 and beyond. The report emphasizes the critical need for state leaders to focus on vision-setting, preservice and inservice educator capacity building, strategic investments, igital citizenship, and equity.
https://bit.ly/3fyJymH

- In collaboration with Central Michigan University, ISTE hosted a virtual statewide stakeholder convening on effective and equitable digital learning. The convening invited educators, administrators, district leaders, regional agencies, and the Michigan Department of Education (MDE) to make collaborative recommendations on how to better foster effective and equitable technology use that builds skills and competencies all students need to succeed. This report captures key takeaways of the virtual statewide stakeholder convening.
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