# California Digital Learning Integration and Standards Guidance

Excerpt: Section A—Implementing Research-Based Digital Learning Practices (pages 10–100)

Cover Page

## Section A: Implementing Research-Based Digital Learning Practices

### Chapter 1: Designing Effective and Engaging Digital Learning

#### Ensuring Equity and Access

High-quality digital learning requires intentional planning and effective online instruction. When designing online or blended learning experiences, research-based guidance is essential in helping meet the needs of every student and educator. Quality technology and focused instruction that is student-centered and engaging enhance students’ virtual learning experiences.

A prerequisite to effective digital learning is the availability of reliable infrastructure. When creating a reliable infrastructure, three core elements must be addressed: internet connectivity, digital devices, and content management.

##### Internet Connectivity

For nearly 20 years, the state has funded the K-12 High Speed Network, with the goal of ensuring reliable internet connectivity at schools throughout the state. When the COVID-19 global pandemic emerged, however, that reliable school network was not able to meet the needs of the approximately one million CA learners who lacked internet access in their homes. This digital divide became a significant barrier, impacting economically disadvantaged families and students of color at disproportionate rates. To address this situation, CA legislation and a variety of California Department of Education (CDE) sponsored initiatives were implemented.[[1]](#footnote-1) County offices of education and school districts also leveraged varying approaches to provide connectivity to their learners during the pandemic as can be seen in the following examples.

The Fullerton Joint Union High School District purchased and distributed 500 Wi-Fi hotspots for students without internet access at home.[[2]](#footnote-2) This is an example of the immediate response of many districts throughout the state that purchased hotspots and computer devices for students as they pivoted to distance learning.

West Contra Costa Unified, a 30,000-student district in the East Bay Area with more than 65 percent of its students eligible for free and reduced-price meals, created a community wireless network to make Wi-Fi available to students without internet service.[[3]](#footnote-3)

Moreno Valley Unified School District equipped school busses with Wi-Fi hot spots to offer internet access to students who did not have access at home. Busses were parked at strategic locations around Moreno Valley to offer internet access to its students.[[4]](#footnote-4)

Many other districts have devised creative ways for providing internet connectivity for students. Nevertheless, many students have been significantly hampered (or impeded) due to limited access or slow internet connectivity. Feedback generated from online surveys and parent and student focus groups validated the lack of adequate connectivity for home-based instruction. It is critical that teachers and school staff speak with each family to ensure a reliable connectivity plan is in place for them as the foundational element of effective digital learning. To assist with connecting families to affordable offers for internet service, CDE has identified the Internet For All Now web page as a useful resource.[[5]](#footnote-5)

##### Digital Devices

The second core element essential for the successful implementation of effective online and blended learning is a personal digital device, not only for students but also for educators (e.g., access to additional monitors).[[6]](#footnote-6),[[7]](#footnote-7) At the beginning of the COVID-19 pandemic, the CDE partnered with major technology companies to create programs to make it easier for schools to acquire necessary equipment and services for their students. Tony Thurmond, State Superintendent of Public Instruction, said, “We cannot stop until we know that we have leveled the playing field for every student in California by connecting them to the technology they need to succeed now, and in the years ahead.”[[8]](#footnote-8) Realizing the importance of equipping every student with a digital device, both large and small CA districts are devising solutions. Los Angeles Unified School District (LAUSD) authorized an emergency investment of $100 million to provide laptops for students who did not already have one. LAUSD Superintendent Austin Beutner shared, “This is an unprecedented commitment, but a necessary one. Many of our families are struggling to make ends meet and cannot afford to do this on their own — but their children deserve the same opportunity those in more affluent communities have.”

Oakland Unified School District (OUSD) created a coalition to increase the number of students and teachers with access to devices and strong internet connectivity. Serving as a model of collaboration across diverse stakeholder groups, the coalition includes partners from the OUSD, Office of the Mayor, and charter school leaders, as well as representatives from community organizations, such as Tech Exchange, Oakland Public Education Fund, and Oakland Promise.

To augment state and public-school efforts, a number of nonprofit agencies in California are helping to make computers available for low-income families. For example, Computers for Schools will provide refurbished computers available to schools in which 75 percent of the students qualify for free or reduced-priced meals at a highly reduced cost. In addition to Computers for Classrooms, dozens of other nonprofit organizations make computers and laptops available for low-income families. The best way to find these programs is to do a simple web search using the search string, “California low cost computers for schools.”

##### Content Management

###### Learning Management Systems

With connectivity and devices in place, a third key element of a digital learning infrastructure is a learning platform or platforms. Learning platforms help organize learning, enable communication, and provide tools for participation in online learning. Many schools have a synchronous digital learning platform (e.g., Zoom or Microsoft Teams) for classes to meet in real time. Another common learning platform is a learning management system (LMS). An LMS is generally used as a platform to store digital learning content, maintain class calendars, and manage assignment submissions and feedback. LMS platforms help provide an organizational structure for both online and in-person learning, as well as provide means of asynchronous communication between teachers and students.

Schools and districts often invest considerable financial resources in LMSs to support instructional delivery and assessment. After schools and districts have selected an LMS, teachers can begin to share learning materials aligned to the district curriculum. It is critical for teachers to understand how to use an LMS and to participate in ongoing professional learning to ensure students and teachers are supported in the use of the platform. As teachers become proficient in using the LMS, they can begin to incorporate specific grade-level or course content.

###### Other Content Management Supports

There are many other types of online learning platforms that can be used to support in-classroom or online learning. These include video libraries, collaboration tools, polling/assessment systems, and digital portfolio systems. Rarely does any one single online learning platform meet all of the learning needs of a school or district. Schools and districts should identify the types of learning interactions they want to enable and seek top-rated platforms to enable these interactions. Services, such as the EdSurge Product Index, can help provide reviews of the functionality of various digital learning platforms.

Lack of access to the internet, electronic devices, and appropriate learning software inhibits effective digital learning. Educators need time and support to familiarize themselves with the resources their district has available. CDE provides guidance related to equity and access, emphasizing that “LEAs should assess how all students will be able to access e-learning, looking at:

* whether a student has access to the internet,
* whether a student has access to a device and what alternatives exist for them to access a device,
* what support students need in order to comply with student privacy guidelines,
* how familiar a student is with the device and necessary support to ensure they are familiar with navigating its features, and
* additional support for teachers.”[[9]](#footnote-9)

With internet service and devices in place for students, schools and districts may also need to provide training on how to use the technology. This training would include basic information about how to use the devices, or how to navigate the user interface to access materials required for students’ learning. Families and caregivers might also need to learn about their role in supporting digital learning. Specific activities, such as remote testing, may also require additional support for students and their families.[[10]](#footnote-10) Part of this training can also include topics, such as attendance expectations and monitoring, student data privacy, security, safety, acceptable use for devices, and accessibility features or integration of assistive technologies for inclusive access.[[11]](#footnote-11) Districts and schools might also consider providing training in multiple languages and via various communication methods based on their needs of their community.

Ongoing technical support is crucial as well. Some districts rely on a technical support department that provides just-in-time assistance to students, families, and caregivers. Whether teachers rely on technical support from a district team or are involved in providing direct technical support to students and families/caregivers, they play a critical role in ensuring that students, families, and caregivers have the knowledge, skills, and tools needed to support learning. This is especially true for vulnerable populations, such as students with disabilities, English learner (EL) students, foster youth, and youth experiencing homelessness.

##### Meeting the Needs of Students with Disabilities

Shifting to a distance learning environment has offered both challenges and opportunities for students with disabilities, their families, educators, and related service providers. In that individualized education programs (IEPs) have typically been customized to an in-person learning environment, these challenges are exacerbated for students who require a significant level of support in order to access their education. For some students, however, distance learning presents an opportunity to reimagine delivery of their education, and online learning may mitigate some barriers that previously existed during in-person learning. This section of the guide is intended for both general and special education teachers and staff to support deep partnership through mutual goals of reaching and teaching every learner.

It is essential that LEAs plan for future and sudden pivots so that students with disabilities are provided the right to a free appropriate public education (FAPE) in their Least Restrictive Environment (LRE) under the Individuals with Disabilities Education Act (IDEA), regardless of in-person or distance learning. The speed at which schools had to shift to distance learning during the pandemic underscored the need to plan ahead for any future school site closures. It also prompted legislation requiring LEAs to include distance learning plans in all future IEPs. In general, the extent to which education (online, hybrid, or in-person) is provided to students without disabilities sets the foundation of what should be provided to students with disabilities. For example, if an LEA is offering three hours a day of distance learning, it must offer at least that to students with IEPs. That does not mean, however, that an LEA cannot offer more.

In addition, students with disabilities, regardless of a shift to distance learning, are required to receive their education, to the maximum extent appropriate, with nondisabled peers just as they are when learning in person. It is also important to note that although students may be accessing their education from home, LEAs remain responsible for ensuring FAPE and student outcomes when learning environments transition to online settings at home.

To ensure each student with an IEP has access to the tools and support they need to access their learning, an IEP distance learning plan should specify how a student will access the general education curriculum (accommodations and modifications), receive related services, and interact with peers without disabilities. Providing inclusive opportunities should remain an important component/consideration in distance learning as it is for in-person school. In planning for distance learning options, it is essential for school districts to consider how to implement all aspects of a student’s IEP via distance learning. This includes not only access to curriculum and instruction, but also includes provision of related services. In addition, school districts must consider the accessibility of the curriculum and how students with disabilities may require modifications both to the technology (assistive technology) and the information being delivered. Provision of related services may require special technology (e.g., large screens, multiple devices, additional specialized equipment for students who are blind or low vision, or hard of hearing) for services, such as speech therapy, occupational therapy, counseling, and language interpretation.

Unlike some other federal and state laws and regulations that were suspended during the pandemic, no provisions of the IDEA were waived or suspended. This means that students with disabilities had and continue to have the right to access their education in accordance with all existing rules, regulations, and statutory timelines. The U.S. Department of Education has released a Q&A[[12]](#footnote-12) outlining LEA’s responsibilities to children with disabilities during the pandemic.

As LEAs reflect on lessons learned from school closures due to the pandemic, there is a renewed opportunity to improve access for all students, including students with disabilities. These reflections offer a chance to identify and work on both previous IEP goals as well as mastery of new skills that may have been illuminated during distance learning. It also offers the opportunity for students to gain important skills in accessing technology, augmentative communication, and adaptive equipment that will assist them throughout their lives.

Assistive technology and augmentative communication allow additional opportunities for meaningful access to the general curriculum, peers, social and emotional health, and related activities both online and in-person. For students who are non-verbal, attaining skills in augmentative communication is essential to accessing a virtual environment.

Educators who need guidance on the accessibility of technology might use the resources from Educating All Learners Alliance,[[13]](#footnote-13) a National Network of Educational Experts who created a resource library to help teach all learners during the pandemic. The California Open Access Project, a state-funded project at the Placer County Office of Education, also offers a set of best practices districts might consider as they refine and extend their distance learning support.[[14]](#footnote-14) Two additional important resources include the California Department of Education Special Education COVID Guidance and Resources[[15]](#footnote-15) web page and the U.S. Office of Special Education Programs IdeasAtWork[[16]](#footnote-16) website.

Students with significant cognitive disabilities, who often require extensive support in school, will likely need additional support and planning as they pivot to distance learning. The challenge to meet the needs of this unique group of students has prompted work by a number of research and technical assistance organizations who have created many evidence-based practices, suggestions, and roadmaps for consideration. One of these entities is the federally funded TIES Center (National Technical Assistance Center on Inclusive Practices) at the University of Minnesota. TIES has developed a distance learning framework known as the 5C Process, which is universal and applicable to all students including neurodiverse students learning in a virtual environment. [[17]](#footnote-17) According to the Center, there are two underlying principles of the 5C Process:[[18]](#footnote-18)

1. A student’s learning priorities do not change just because the learning environment changes. Learning priorities are specific to the student. Learning priorities are tied to the long-term vision and planning for each student. As part of their education, students must learn and practice skills related to each priority in multiple settings. For example, if a student has a learning priority of initiating communication with peers and adults in order to reach a long-term vision of greater independence, then this priority would remain a constant regardless of where instruction happens. An annual IEP goal related to this learning priority would be developed. The IEP goal may or may not need to be modified during periods when instruction is happening at school versus home. What will need to be modified is how, when, and where the instructional plan for this IEP goal will be taught and who will support student learning in each environment. To make this shift, it is important to think about space and time differently. Learning does not just happen when students are together in the same building or space at the same time. Learning occurs both in class times and non-class times throughout the whole day.
2. An IEP is not the student’s curriculum. The general education curriculum and routines and the IEP comprise a student’s educational program. All students are general education students first. Special education services supplement grade-level general education curriculum and routines in order to provide access and make progress in those areas of learning. Special education services also support other learning priorities in order to enhance a student’s independence or interdependence across school, home, and other typical community environments. Inherent in the 5C Process is the opportunity for teams to create IEPs that enhance and plan for meaningful, active, and engaging participation within the grade-level content with peers while also addressing the individual needs of a student.

This process is useful when considering and planning for all students with IEPs, not just those with significant cognitive disabilities. It is also important to note that special education was designed to be a support and service to allow students with disabilities access to the general education environment/curriculum, not a location, although some students with extensive needs may require a specialized program that is partially or completely delivered outside of the general education classroom. In such cases, students must still receive instruction in their appropriate grade-level standards whether in distance learning, hybrid learning, or in person.

While there is no single strategy to ensure students with disabilities are able to access distance learning, there are a few foundational ideas to keep in mind when thinking about students with disabilities and distance learning:

1. An IEP should be designed to provide equity and access to each student with a disability – both in-person at a school-site and in distance learning. As in face-to-face instruction, distance learning should be customized based on factors related to each student, and IEP teams will also need to consider unique home and family circumstances. The development or review of a distance learning plan, now required under California law, is an opportunity to evaluate what has worked during the pandemic and what might need to be addressed to allow a student access should an LEA need to pivot to distance learning in the future.
2. The more general education curriculum and instruction is made accessible and designed for all learners in a classroom, the less special education will need to supplant or modify to meet the needs of students with IEPs. The Universal Design for Learning (UDL) framework and guidelines were created to eliminate barriers to learning and to make learning accessible for all students and are universal. Using the tenets of UDL to purposefully build both in-person and distance lesson plans, and having special and general educators co-planning lessons, will allow for more inclusive and accessible lessons for all students especially students with disabilities. Student learning can be optimized when teachers believe in their ability to learn, design accessible lessons with UDL principles in mind, and create opportunities for meaningful practice.
3. Early, often, and individualized communication with families is essential for distance learning to be successful. The partnership between the family and school should be trusting and collaborative to support learning and growth among students.

For more information on building UDL lessons, the developers of UDL at the Center for Applied Special Technology (CAST) Institute, have made a set of free, curated resources including UDL Guidelines.[[19]](#footnote-19),[[20]](#footnote-20),[[21]](#footnote-21) Visit *Building Accessible Lessons through a Universal Design for Learning Framework* under *Accessibility* that appears later in this chapter.

Accessing education in a distance learning environment for students with disabilities is only possible through a strong partnership between families and schools. Learning Policy Institute offers suggestions and strategies for *Home-School Partnerships Key to Supporting Students with Disabilities*[[22]](#footnote-22) during distance learning. And, to ensure equity and access for families of diverse populations, who have had to take on new roles during the pandemic and who may need additional support in order for them to support their children in distance learning, WestEd offers strategies and resources[[23]](#footnote-23) for communicating, engaging, and partnering with families from diverse populations.

**Voices from the Field: Angela Barnett | Willow Elementary School | Lakewood, CA**

One of the many concerns voiced this past year has been the challenges of meeting both the learning and social and emotional needs of students, particularly those with disabilities, during the implementation of remote instruction. In spite of the myriad of challenges, third grade teacher Angela Barnett has demonstrated—by effectively deploying technology and offering lots of personalized support—that all students can succeed, whether in-person or virtually.

An 11-year veteran who currently teaches at Willow Elementary in the ABC Unified School District, Barnett shared with us some of her experiences teaching online.

**Can you walk us through some of the challenges and successes that you and your students have experienced since moving to fully remote instruction?**

My students have enjoyed lots of success this year. I am continually impressed with their resilience and resourcefulness. Although there have been challenges, it’s their problem-solving skills that I continue to see grow.

In terms of deploying technology to address my learners’ needs, especially my EL students and those receiving speech services, closed captioning has been very beneficial. I use GoGuardian [a student information and learning management suite] to observe them working in real time and see closed captioning on quite a bit. I use video a lot, and whether I am using EdPuzzle [video-based lessons] or YouTube clips inserted into Google Slides, the students are using closed captioning.

When teaching face-to-face in a classroom, I can walk around and do quick checks for understanding. This is harder to replicate online. It’s about building a digital and virtual classroom culture. I do lots of check-ins—via camera, audio, or chat. It’s okay to use all of these at different times. We have to create the environment online where we get used to checking on one another.

**How does IEP implementation change in a remote learning environment vs. face-to-face?**

One example is how I work to meet with my students to provide their small group instruction, primarily focused on speaking, writing, and reading opportunities. I utilize Flipgrid [video-based discussion software] a great deal across all content areas because I can hear and listen to students. I can share these videos with support staff, and they can be used to show growth over time to support an IEP. Flipgrid also has the ability to add a co-teacher. So, I can add support staff, such as our English Language Arts (ELA) intervention teacher, who can watch and comment on videos. Any platform that allows me to add a co-teacher is beneficial to students with IEPs and students receiving extra support or interventions.

**To what extent does social and emotional learning (SEL) factor into your instruction and the creation of supportive learning communities for your students?**

I have worked hard to have an intentional and focused part of every day be about SEL. I have integrated class jobs and leadership roles as a way to create culture and have an effective classroom. Sample roles include attendance monitor, teacher’s assistant, point tracker—where we use ClassDojo [a school communication hub]—and our meteorologist, who gives a weather report in Flipgrid.

This is about student agency built through independence and responsibility. I also use programs, such as Leader In Me [a school community framework] and “The 7 Habits Of Happy Kids” [a children’s book by Sean Covey], to support my interpretation and implementation of growth mindset.

I have also been focusing on executive functions. When introducing new uses of technology with my students, I explicitly and systematically teach them. For example, I introduce Pear Deck [a formative assessment platform] with my beginning of year expectations lesson. We don't want to assume that students know how to use the technology or know how to use it in a meaningful and academic way.

**How do you strike a balance between analog and digital tools in your class?**

I am a huge proponent of blended learning. My students are using a spiral notebook and a digital device simultaneously. Obviously, during distance learning, we’ve been using our online resources more. For math, as an example, we have a workbook, utilize white boards, and then also use tools, such as Pear Deck.

Sometimes, it’s not about one tool or resource being better than the other. It’s often about mixing it up to keep it engaging. They get bored like the rest of us. If they get bored, especially virtually, that is when I don’t get completed work. Virtual instruction has really reminded us that engagement has to happen first.

##### Meeting the Needs of English Learners

In California, approximately 1.3 million students are English learners.[[24]](#footnote-24) The California English Learner Roadmap is a comprehensive policy that provides guidance to districts to ensure students who are English learners have meaningful access to relevant and rigorous education in a safe and affirming learning environment, including in-person, online, and hybrid.[[25]](#footnote-25) This begins with recognizing that the languages and cultures EL students bring to their education are assets that contribute to their learning and development. These assets are valued and built upon through culturally-responsive instruction, which creates inclusiveness and a positive school culture that honors diversity and equity.

The EL Roadmap also calls for:

* explicit literacy instruction, especially in early grades;
* peer-assisted and small-group learning opportunities;
* academic language support during content area instruction, along with structured opportunities for oral and written language skills development;
* appropriate assessment in various forms (e.g., formative benchmark, summative, including home language assessment) to understand and support student learning;
* instruction that is responsive to different EL levels and characteristics (newcomer, long-term English learner, dually-identified EL student with disabilities); and
* processes related to social emotional development and identity formation.

In online and blended learning environments, supports for EL students may include, but are not limited to, the following:[[26]](#footnote-26),[[27]](#footnote-27)

Family Engagement and Student Supports

* Leverage technology and applications to establish two-way communication with students and their families/caregivers in their preferred languages to promote meaningful relationships.
* Clarify expectations for distance learning, including attendance and grade and course requirements.
* Select relevant and timely multilingual support services and tools, including translators/interpreters for families and students.
* Cultivate home-school partnerships between family, educators, and community to support the student in virtual learning.
* Bridge home-school learning with trainings for families on the use of technology and applications required for student learning.
* Establish a hotline for technical support that is linguistically accessible.
* Provide students access to mental health counselors/social workers.
* Assess family/home technology needs and ensure students and families have access to digital devices and internet connectivity.

Instructional Supports

* Implement high-quality integrated and designated English Language Development (ELD) instruction and related supports as part of the regularly-scheduled day and across synchronous and asynchronous instructional activities in all content areas.
* Establish a virtual help desk for homework and technology assistance that is linguistically accessible with home language support.
* Use screencasting for recording instructions and lessons so that EL students can watch again.
* Use an online share document or collaboration platform (e.g., Flipgrid, Google Docs, Jamboard, Padlet) to have students record their responses, then analyze their language use to plan for linguistic supports.
* Group students purposefully in breakout rooms during synchronous learning so that EL students have an opportunity to engage with peers at more advanced levels of English proficiency; whenever possible, group students by language alike to support reinforcement of concepts in home language use.
* Provide scaffolds and routines for discussion in online collaborative spaces (e.g., talk moves, assigned roles, self-assessment rubrics, sentence stems).
* Design linguistically and culturally-relevant tasks, and use materials that reflect multiple cultures and languages.
* Integrate digital tools for translation and language supports, video-based discussions, formative assessment platforms, communication hubs, student feedback, and collaboration.
* Encourage EL students to use their home language to produce digital representations of their full understanding of the content or tasks.
* Promote an inclusive, safe, and welcoming online learning environment by creating classroom structures to facilitate home language use, student voice, positive online interactions, and connections to students’ lived experiences.

Additional resources to help educators support EL students in online and blended learning environments are located in Appendix C: Section Resources under Section A.

**Vignette: Bridging the Gap—Engaging English Learners in a Virtual Classroom**

The world of education was forced into an educational experiment when the pandemic crisis abruptly ended in-person classes. Among the most vulnerable populations: students who are English learners. In years past, the annual promotion ceremony for Newcomer students at Abraham Lincoln Middle School in Fresno County was a celebration attended by hundreds of family, school, and community members. It recognized the achievements of those in the Newcomer Program, which serves EL students who have been in the country for three years or less. At this gathering, Newcomer teacher Efrain Tovar would introduce students in their primary language.

“Arabic, Punjabi…Zapotec,” says Tovar, who was himself an EL as a Spanish-speaking child attending school in the Central Valley. “It means so much to the students and their families to elevate their language as an equal to English.”

This particular gesture may seem like a small detail, but attention to students and their families’ experience is essential to addressing the needs of EL students. Personalized attention has become increasingly important during the pandemic and the shift to distance learning.

“During my 25 years of teaching, I’ve continually affirmed that, before we teach, we must reach,” says Tovar. “We reach or engage when we empathize with our students’ experiences and situations.”

**Involving Families and Caregivers**

In a June 2020 webinar (“Communicating with Families of English Learners During Distance Learning” sponsored by WestEd in collaboration with the California Teachers Association and the California Department of Education), Tovar shared that one of the first challenges of distance learning was simply being able to get students to respond to contact attempts. In brainstorming ways to optimize communication, Tovar and his colleagues found that they could best serve families by utilizing technology to establish and maintain daily communication.

The group created a Google Form [a surveying tool] to update student and family contact information, collect data on students’ current internet access availability, and provide families in rural areas with internet options. They were also able to leverage Google’s accessibility features to connect with families using their preferred language. “Google Translate,” Tovar says, “is a great tool to do this.”

After synthesizing the families’ data, the group learned that 100 percent had access to smartphones. “Through their cell phones,” Tovar said, “we were able to know how to tailor communication according to their needs and language preferences. Leveraging these technologies helped us all stay connected.”

For example, Tovar uses Remind.com [a messaging tool] to engage parents when he cannot write in their home language. The application allows him to have a two-way conversation with them and be able to send important documents and even short videos – without giving out his personal cell phone number. “Videos can be a powerful way to engage parents,” Tovar added, “especially when you use a few phrases in the parents’ language.”

Tovar is adamant that knowing specifics about the students’ internet situation matters when meeting EL students’ learning needs. Internet speed and capacity impact their ability to use the apps designed to support their learning. By identifying gaps and deficits in internet services, Tovar says, “we can connect students to the resources they need to help them maintain their learning.”

**Using Synchronous and Asynchronous Activities Strategically**

Beyond the technological challenges, Tovar notes that moving students to a distance learning model was a significant shift pedagogically. “Teaching in a classroom meant the teachers could create an optimal environment for learning, minimize distractions, and help, support, and clarify lessons as needed at that moment,” says Tovar. “Contrast this with a sudden home environment potentially filled with factors that are not conducive to learning. Aside from the initial emotional and psychological uncertainties students encountered, they now have to create a space for themselves to shift into self-guided learning suddenly. We encountered students trying to learn in environments where they were helping take care of their siblings, where internet access was too slow or inaccessible for learning, and a host of challenging home distractions and hardships.”

Given those conditions, Tovar finds that his students do not typically engage well during asynchronous learning. However, one of the factors he can control for students is synchronous learning time.

“By providing a well-designed project lesson that focuses on core ELD standards with time to complete lesson components (typically a week),” Tovar says, “I can provide support and increase student engagement through task organization, management, and in-class completion. Students have reported a sense of accomplishment after learning to break down tasks and set goals for themselves in their learning.”

Although synchronous time is only 33 minutes, Tovar still manages to infuse social and emotional learning (SEL) into the students’ learning experience by asking inference questions when reading articles together. “I pose questions that aim to teach empathy and compassion for others while helping them recognize their emotional patterns. I also make space for regular check-ins where I ask students to rate their current mood while in class.”

**Leveraging Engaging and Supportive Digital Tools**

To make learning fun during their time together, Tovar engages students around realia, objects found in daily life, particularly items from within their home – a powerful language development tool. For example, on most Mondays in his virtual meeting classroom, three students are assigned to be “special guests.” These students practice their oral language development skills by showcasing a meaningful object from their home. The rest of the class practices listening skills and asks follow-up questions.

Digital tools can make virtual learning a bit more seamless. Most Fridays in Tovar’s class, students experience PechaKucha, Japanese for “chit chat.” Students are given an image and have twenty seconds to tell a story about the picture by recording their story on the digital platform Flipgrid [video-based discussion software]. Tovar says his Newcomers have shared their love for the tool because of its ease of use and the “save recording” feature, which allows them to return to previous recordings and measure progress throughout the year.

Another valuable tool for Tovar has been the Immersive Reader. He says the Chrome extension has been “game-changing” for his Newcomers. The tool provides access to reading content in visual and auditory forms while also providing primary language translations. Immersive Reader may also be used in text-to-speech format so that students can hear how words are pronounced and see how multisyllabic words are decoded.

While the digital tools themselves are excellent resources for learning, it is vital not to make assumptions about student abilities. Tovar realized during the first two weeks of distance learning that there were disparities in his students’ skill levels when it came to their technological proficiencies.

“This was a turning point in my teaching in that I realized I had to teach to the students’ current levels and pace,” Tovar says. “I trained my students on how to use all of the educational tools that we would be utilizing throughout the school year. I continue to teach them to become self-sufficient in troubleshooting and how to become a resource for others in this area.”

##### Meeting the Needs of Foster Youth and Youth Experiencing Homelessness

In 2019-2020, California schools served over 45,000 foster youth in grades K-12.[[28]](#footnote-28) According to a 2018-19 survey conducted by the University of California Los Angeles, almost 270,000 students in K-12 schools in California lacked stable housing. A disproportionate number of students experiencing homelessness are Latinx (70%) and Black (9%).[[29]](#footnote-29) For the mobile youth experiencing homelessness, it can be a challenge to ensure that students have access to adequate digital devices and a stable internet connectivity. Additionally, they may be experiencing food insecurity, limited or no access to academic support, and more. Students may be living in inadequate and unsafe housing situations, and in densely populated situations, making it difficult to focus on online learning. The services schools provide may be the only source of food, educational experiences, contact with consistent caring adults, and safety during the day. Students experiencing homelessness are highly mobile and are many times unlikely to benefit from initiatives that are based on a stable and safe home environment. Addressing the unique needs of these populations can be challenging but can also be seen as an opportunity to expand capacity to ensure equity and access for all students.

The CDE has developed resource web pages to mitigate the impacts of COVID-19 and the transition to distance learning for foster youth and students experiencing homelessness.[[30]](#footnote-30),[[31]](#footnote-31) Included are webinar topics, such as *Safeguarding Children Through Distance Learning* and *The Engagement in Distance Learning*. In addition, CDE partnered with the California Department of Social Services to develop resources to support foster youth, including guidance on outreach to foster caregivers, cell phone access for foster youth access, and extended flexibilities for foster care programs.

As part of their work as technical assistant providers, Foster to Youth Services Coordinating Programs under CDE's Technical Assistance Provider (TAP) grant, Sacramento County Office of Education (SCOE) has created a website that provides education resources for county and district foster youth liaisons.[[32]](#footnote-32) For example, the California Foster Youth Education Task Force's recently published *Supporting School Stability for Youth in Foster Care During Virtual Learning and the Transition Back to In-Person Instruction,[[33]](#footnote-33)* which is available in English and Spanish, as well as a monthly Trauma Informed Practices for Schools (TIPS) newsletter focusing on supporting foster youth in the classroom.

As students transition to distance learning, the number of students meeting the eligibility criteria of homelessness may become more challenging to identify. This can be due to a number of possible factors, including reduced in-person interactions with students and families, limited number of McKinney-Vento trained staff assisting with the enrollment process, and inconsistent use of the housing questionnaire. CDE’s Integrated Student Support and Programs Office has developed identification strategies[[34]](#footnote-34) to ensure that students and families are connected to resources and support services needed to mitigate further learning loss. To support the identification of students experiencing homelessness, SCOE’s Project TEACH maintains an online training for LEA liaisons, which includes major aspects of the liaison role and professional development tools to conduct workshops for teachers and school staff. Project TEACH also released a video entitled "You Can Enroll in School!”[[35]](#footnote-35) Based on the CDE’s statewide poster, this free video explains the educational rights of youth experiencing homelessness and is used by LEAs and community agencies to train staff.

In addition, San Diego County Office of Educationhas provided distance learning guidance[[36]](#footnote-36) for supporting foster youth and students experiencing homelessness. These best practices can be considered in both blended and fully online environments across grade-levels. Key components addressed are expanding the equity lens, digital content delivery, digital devices and internet access, non-tech options, community partners and resources, and recommended practices for youth experiencing homelessness.

In virtual learning environments, teachers and school staff are key to identifying students in need. Teachers are working directly with families and students and are often the first to find out if a student is in need. If teachers create an inclusive online learning environment, checking in with students allows for the identification of students in unstable housing. If a teacher suspects a student is experiencing unstable housing, the teacher should notify the district or county office of education homeless liaison contact. Additional guidance to create a supportive virtual environment includes but is not limited to the following:

* Be flexible with deadlines and synchronous participation requirements.
* Ensure the student has access to internet connectivity and a digital device.
* Be mindful of student privacy and living situations, and offer students the option to change their virtual background to create equity.
* Offer non-technology options, and make accommodations for students to complete work.
* Use multiple methods for communication (e.g., email, phone call, text message, mail), and check in frequently.
* Offer options for providing learning materials and resources (e.g., delivery, pick up, mail).

#### Preparing and Supporting Teachers for Digital Teaching

Research shows that teacher quality is the most influential factor in promoting student success, regardless of the learning environment. LEAs and teacher preparation programs play a critical role in preparing and supporting teachers for teaching in digital learning environments, as the pedagogy required for online learning is different than that for traditional in-person classrooms (Archambault & Kennedy, 2018; Kolb & Carter, 2020). National standards can help guide practices for effective digital teaching and learning.

##### National Standards to Guide Effective Digital Teaching and Learning

Effective use of technology can accelerate the creation of learning environments that are active, collaborative, constructive, authentic, and goal directed.[[37]](#footnote-37) 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.[[38]](#footnote-38) Together, these examples show that, when integrated strategically into learning environments, technology can facilitate students’ growth as lifelong, empowered learners.

National education technology leaders, including previous leadership at the U.S. Department of Education, state that guiding educators to use technology in such meaningful ways requires a framework of empowering learning practices enabled through technology.[[39]](#footnote-39) The International Society for Technology in Education (ISTE) Standards for Educators[[40]](#footnote-40) is an internationally-adopted framework for educators as they make decisions about curriculum, instruction, professional learning, and how to transform pedagogy enabled by the thoughtful, purposeful, and strategic use of technology. The ISTE Standards describe the various roles educators must take as they facilitate effective digital learning:

* Learner: Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning.
* Leader: Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning.
* Citizen: Educators inspire students to positively contribute to and responsibly participate in the digital world.
* Collaborator: Educators dedicate time to collaborate with both colleagues and students to improve practice, discover, and share resources and ideas, and solve problems.
* Designer: Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability.
* Facilitator: Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students.[[41]](#footnote-41)
* Analyst: Educators understand and use data to drive their instruction and support students in achieving their learning goals.

While the ISTE Standards describe how technology can be used to advance digital learning in any setting (including online, blended, and face-to-face), the National Standards for Quality Online Teaching[[42]](#footnote-42) provide additional descriptions of effective fully online learning environments. Elements of the National Standards for Quality Online Teaching include the following:

* Professional Responsibilities: The online teacher demonstrates professional responsibilities in keeping with the best practices of online instruction.
* Digital Pedagogy: The online teacher supports learning and facilitates presence (teacher, social, and learner) with digital pedagogy.
* Community Building: The online teacher facilitates interactions and collaboration to build a supportive online community that fosters active learning.
* Learner Engagement: The online teacher promotes learner success through interactions with learners and other stakeholders and by facilitating meaningful learner engagement in learning activities.
* Digital Citizenship: The online teacher models, guides, and encourages legal, ethical, and safe behavior related to technology use.
* Diverse Instruction: The online teacher personalizes instruction based on learner’s diverse academic, social, and emotional needs.
* Assessment and Measurement: The online teacher creates and/or implements assessments in online learning environments in ways that ensure the validity and reliability of the instruments and procedures. The teacher measures learner progress through assessments, projects, and assignments that meet standards-based learning goals, and evaluates learner understanding of how these assessments measure achievement of the learning objectives.
* Instructional Design: The online teacher curates and creates instructional materials, tools, strategies, and resources to engage all learners and ensure achievement of academic goals. For an expanded set of standards for online course design, see the National Standards for Quality Online Courses.[[43]](#footnote-43)

Both the ISTE Standards for Educators and National Standards for Quality Online Teaching provide a set of indicators for deepening practice related to each of the specific competencies. To ensure alignment to these national frameworks, the following subsections feature descriptions around how strategies presented are anchored in specific indicators for these standards.

The remainder of this part of the chapter addresses guidance on four key areas that are critical to prepare and support teachers: Professional Responsibilities; Teacher Presence; Digital Citizenship; and Data-Informed Instruction. Each is noted with direct connection to the relevant indicators within the ISTE Standards for Educators and the National Standards for Quality Online Teaching. Each area also includes educator vignettes and interviews that describe instructional strategies in detail.

##### Professional Responsibilities

ISTE Standards for Educators Indicators

* Learner: Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.
* Learner: Pursue professional interests by creating and actively participating in local and global learning networks.
* Collaborator: Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.

National Standards for Quality Online Teaching Indicators

* Professional Responsibilities: The online teacher is a reflective practitioner.
* Professional Responsibilities: The online teacher continuously pursues knowledge and skills related to online learning and pedagogy.

Because digital learning strategies are continuously evolving and online and blended teaching require distinctly different pedagogical approaches than traditional in-person learning environments, the ISTE Standards for Educators and National Standards for Quality Online Teaching emphasize the vital importance of teachers’ participation in quality professional learning. Research indicates that professional learning must be ongoing, practice-based, culturally-relevant, context-specific, and standards-aligned to best improve educator practice (Kolb, 2019; Pew, 2013; Dawson & Dana-Fichtman, 2018).

Furthermore, such professional learning develops educators’ competencies to use technology effectively in a variety of ways, such as those outlined in the ISTE Standards for Educators and National Standards for Quality Online Teaching. Focusing on competency-based opportunities, rather than those tailored to a specific tool, helps ensure that educators are best prepared to use technology effectively no matter which specific digital resources may be available.

In California, there are many options for professional learning focused on online and blended teaching:

* California Teachers Association (CTA)[[44]](#footnote-44): The CTA offers webinars, reports, booklets, and handouts to support educators with online and blended instruction.
* Leading Edge Certification:[[45]](#footnote-45) This California-based organization is a national alliance of nonprofits, universities, and educational agencies that have created a curriculum grounded in national standards for effective digital teaching and learning. There are four certification options for educators, including Leading Edge Online & Blended Teacher; Leading Edge Administrator; Leading Edge Digital Educator; and Leading Edge Professional Learning Leader.
* California Collaborative for Educational Excellence (CCEE):[[46]](#footnote-46) CCEE offers distance teaching and learning modules focused on serving underserved populations, SEL and mental health, best practices in online and blended learning, learning acceleration, goal setting, scope and sequence with pacing guidance, family engagement, and more.
* California Coalition for Inclusive Literacy:[[47]](#footnote-47) CDE, CCEE, and the Center for Applied Special Technology (CAST) have created a page with resources that include links to webinar series, recommendations on remote design, video assessments in the virtual class, lesson planning guides, and more.
* Computer-Using Educators (CUE):[[48]](#footnote-48) CUE provides customized professional learning for educators, schools, and districts.
* ISTE:[[49]](#footnote-49), [[50]](#footnote-50) ISTE provides professional learning for online and blended learning through their annual conference, webinars, ISTE Certification, and other professional learning opportunities. Furthermore, ISTE U offers self-paced courses to help K–12 educators learn foundational digital learning principles so they are prepared to teach in ways that effectively leverage technology.
* Digital Promise Micro-credentialing Library:[[51]](#footnote-51) The goal of Digital Promise is to “infuse the latest learning science research into the development and improvement of products and programs to advance public education and improve learning.” Digital Promise has a Micro-credentialing Library filled with courses for preparing educators for online and blended learning environments.
* Accessible Blended Learning Education:[[52]](#footnote-52) Created by the Computer Science and Digital Learning Subcommittee within the Curriculum and Instruction Steering Committee (CISC), a committee of the California County Superintendents Educational Services Association (CCSESA), this page serves as an introductory guide for educators to support all students in distance and hybrid learning environments.
* KQED Media Academy for Educators:[[53]](#footnote-53) An NPR and PBS affiliate nonprofit, KQED provides free professional learning to teachers that is focused on digital media.
* Digital Learning Collaborative (DLC):[[54]](#footnote-54) DLC offers two teacher professional learning courses, one focused on teaching grades K–6 and the other on grades 7–12.

In addition to ongoing professional learning, educators benefit from continuous reflection on their practice to understand what is going well and what they might do to improve. Some educators also use check-ins with their students to gather feedback regarding what the students think could be improved. Other educators welcome colleagues and instructional coaches, including teachers on special assignments (TOSAs), to observe and provide constructive feedback to improve their pedagogical approaches. This collaboration among colleagues is also aligned to the “Leader” standard of the ISTE Standards for Educators, which calls on teachers to model the identification, exploration, evaluation, curation, and adoption of new digital resources and tools for learning.

Finally, educators can share their knowledge about effective digital learning practices with students and families/caregivers so that they feel prepared. Districts can provide forums to achieve this goal, including online orientations to new learning environments.

**Vignette: Supporting Teachers with Professional Learning**

During the past year, professional development has been crucial in Adelanto Elementary School District (AESD) for teachers to make optimal use of educational and technological resources. As soon as the pandemic hit, Dr. Marguerite Williams, Assistant Superintendent of Academic Services, worked diligently with district leaders to support teachers’ transition to a distance learning model. Professional development focused on weaving in ISTE Standards and pedagogy into current instructional environments.

**Identifying Teacher Needs**

To serve students’ remote learning needs, the Academic Services department worked with the San Bernardino County Superintendent of Schools (SBCSS) to deliver high-quality professional development (PD), focusing on the key areas of need based on stakeholder input: early literacy, early numeracy, online engagement, and social-emotional learning.

“All of our teachers were trained to fully implement Google Classroom during full-distance learning, which added new learning opportunities in an unprecedented time,” says Dr. Williams.

Training also included Google Classroom Plus, online lesson design, best practices for online learning, online engagement strategies, trauma-informed practices, mindfulness, Universal Design for Learning, building relationships, Ellevation [instructional support platform for EL students], HyperDocs [digital lesson plans], Kami [a Chrome-based app that allows for annotation on digital documents], and grade-level planning with modified curriculum guides.

**Promoting Teaching Collaboration and Structured Supports**

School teams developed professional learning plans collaboratively–a key element in encouraging teacher ownership. The plans included ongoing structured professional learning opportunities, success criteria, and key performance indicators, resulting in a coherent Professional Learning Plan for Academic Services. In this way, says Dr. Williams, the Academic Services staff has been positioned to be “more deliberate and intentional in the type of professional learning opportunities offered to support each school sites’ professional learning focus. We are now offering micro-credentialing to our teachers in the area of ‘Digital Educator.’ Our teachers are becoming experts at integrating technology into their day utilizing a variety of different apps including, but not limited to, Jamboard [collaborative digital whiteboard], Kami, Nearpod [a formative assessment platform], Pear Deck [a formative assessment platform], and much more.”

Micro-credential programs are competency-based; facilitators from SBCSS lead teachers in pre-scheduled synchronous sessions. Teachers then work asynchronously to produce artifacts reflective of their learning. There are plans for additional micro-credentials in teacher clarity, literacy, and mathematics. Each program integrates technology as a valuable tool for teachers to utilize as they deliver high-leverage practices.

During the transition from classroom teaching to distance learning, the district provided ongoing support and training to teachers and support staff. Each school went through a comprehensive process to identify two professional learning goals for their team and developed a multi-year learning plan.

“The Academic Services Department utilized the three Curriculum Coordinators and other members from the team to coordinate professional development based on surveys conducted, which asked about the type of PD the teachers wanted to see, goals identified in the district’s Learning Continuity Plan, and student needs,” says Dr. Williams. “The district also provided four PD Days, as well as a comprehensive Professional Development Program, in response to needs identified by the survey and each school’s professional development focus.”

**Addressing Other Key Priorities**

Attention to educators’ social and emotional needs, especially related to the challenges of the COVID environment, has been an essential part of professional development. Resources and professional learning have included such activities as an SEL focus group during back-to-school preparedness sessions, virtual mindfulness sessions, and SEL-focused sessions, including keynote speakers.

According to Dr. Williams, another priority for professional learning support in response to COVID-19 has been in special education. Through PD and other forms of training, teachers and administrators learned to apply current procedures and practices of special education in the school. Each group is now employing more robust techniques and services to meet the goals of students with special needs.

Professional development is a critical building block in the structure to support student learning. “We deeply believe that it is essential that we build the knowledge, skills, and capacity of our teachers to provide high-quality instruction for all students,” says Dr. Williams.

##### Teacher Presence

ISTE Standards for Educators Indicators

* Collaborator: Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.
* Collaborator: Demonstrate cultural competency when communicating with students, parents, and colleagues and interact with them as co-collaborators in student learning.

National Standards for Quality Online Teaching Indicators

* Digital Pedagogy: The online teacher uses digital pedagogical tools that support communication, productivity, collaboration, analysis, presentation, research, content delivery, and interaction.
* Digital Pedagogy: The online teacher demonstrates basic troubleshooting skills and addresses basic technical issues as they arise.

Online and blended learning environments that feature effective teacher presence are infused with human elements of collaboration, interaction, communication, well-being, and support (Kennedy & Ferdig, 2018). Aligned to the ISTE Standards for Educators and National Standards for Quality Online Teaching, teachers can encourage teacher-student and student-student interactions that foster collaboration and promote the use of high-order thinking skills, such as analysis, synthesis, and evaluation.

Through such interactions, particularly within a project- or problem-based learning approach, teachers can help students build a sense of belonging in their learning community. Some specific strategies for educators include:

* asking students to signal their understanding using a thumbs up or thumbs down;
* requesting students to create visual representations to show their understanding or to teach a concept to others; and
* inviting students to incorporate their own perspective on how they understand a topic and what prior knowledge helped them get to that understanding.[[55]](#footnote-55)

Furthermore, instruction that is culturally-responsive affirms racial and cultural identities to further cultivate inclusive conversations. Resources for cultural responsiveness can be found on CDE’s Culturally and Linguistically Responsive Teaching web page.[[56]](#footnote-56) Teachers may also visit TeachingBooks,[[57]](#footnote-57) where they can find book lists that reflect diversity and also help guide conversations. Additional resources related to Asset-Based Pedagogies include, but are not limited to Culturally Sustaining Pedagogy, Culturally and Linguistically Responsive Teaching, and Culturally Relevant Pedagogy and can be found on the CDE Asset-Based Pedagogies web page.[[58]](#footnote-58)

Finally, teacher presence includes meeting students’ basic technical needs in a timely manner so that learning is not impeded. While technical troubleshooting is not always a responsibility of the teacher, they can be prepared with a contact list of support staff who can help students with technical issues so that the students can get back to learning as soon as possible.

**Vignette: Leveraging Teacher Presence to Create a Supportive Digital Community**

When Tory Wadlington shares his thoughts about being a K-5 special education teacher in the Murrieta Valley Unified School District for the past six years, it becomes clear that trust is a foundational piece upon which he builds relationships with students and parents. Teacher presence is paramount in the learning environment he creates, which is crucial when navigating distance learning. This approach involves an intentional effort to build a sense of community in a virtual environment by creating opportunities for positive interactions, being responsive to student’s needs, and engaging parents and caregivers.

Wadlington currently teaches K-1 in the Resource Specialist Program. Students with IEPs who receive their education in a general education classroom, work with Wadlington to receive individualized support in areas such as math, reading, and writing. As the case manager of his students’ IEPs, Wadlington provides academic support as well as accessibility modifications for students who are deaf, hard of hearing, or visually impaired.

To build confidence in his students as learners, Wadlington is generous with words of encouragement. He begins each session by asking about their day and if anything is bothering them. He ends each session with positive comments about their work. He understands the importance of creating a supportive, positive classroom environment and incorporates these strategies daily.

He takes time to reach out individually to students who are having difficulty, listening and responding to their challenges. When any new lesson proves to be challenging and causes frustration or discouragement, Wadlington stops the class and allows the student to explain “what they understand, what they find confusing, and how I can better help them understand it.” He recognizes the importance of modifying a lesson to respond to student needs.

In his virtual classroom, Wadlington shared a daily Flipgrid [video-based discussion software] message to all his students. Wadlington wraps up the virtual session with a mindfulness activity of the students’ choosing. “Some like breathing and imagining a balloon. Others want to dance like crazy,” Wadlington says. “I let kids be kids, but with a little guidance. I think of how I would have wanted my teacher to treat me had I been in their situation.”

Wadlington’s support for his students extends to his relationships with their parents. In a May 2020 webinar hosted by Common Sense Education, Wadlington stated that his goal has always been to build relationships with parents. When speaking with parents about their child’s IEP, he is mindful that parents already know their own child best. Wadlington contacts parents every week and nurtures the relationship to cultivate a community of collaboration and growth. The parents know they may speak candidly with him and trust that he will put their child’s success first.

##### Digital Citizenship

ISTE Standards for Educators Indicators

* Citizen: Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationships and community.
* Citizen: Model and promote management of personal data and digital identity and protect student data privacy.

National Standards for Quality Online Teaching Indicators

* Digital Citizenship: The online teacher facilitates learning experiences that model and promote digital citizenship.
* Community Building: The online teacher creates expectations for appropriate interaction among learners, including establishing netiquette requirements, modeling implementation, and enforcing the requirements.

Digital citizenship, as one of the core tenets of both the ISTE Standards for Educators and National Standards for Quality Online Teaching, calls on teachers to model, guide, and encourage legal, ethical, and safe behavior related to students’ technology use.

As a first step, educators can establish norms for respectful communication in online and blended learning environments. Such online etiquette or “netiquette” expectations can allow for more productive conversations and help reinforce students’ sense of safety and belonging. Educators must note that students may need multiple opportunities to practice such behaviors.

The DigCitCommit competencies developed by ISTE take digital citizenship a step further than safe and healthy communication and comprehensively define this topic as being composed of five distinct competencies that educators can help students build:

* Inclusive: I am open to hearing and respectfully recognizing multiple viewpoints, and I engage with others online with respect and empathy.
* Informed: I evaluate the accuracy, perspective, and validity of digital media and social posts.
* Engaged: I use technology and digital channels for civic engagement, to solve problems, and be a force for good in both physical and virtual communities.
* Balanced: I make informed decisions about how to prioritize my time and activities online and off.
* Alert: I am aware of my online actions and know how to be safe and create safe spaces for others online.

Suggested strategies for educators grounded in the ISTE Standards for Educators to foster these competencies include the following:[[59]](#footnote-59)

* Hold a group discussion on what it means to be positive, socially responsible, and empathetic online. What does it look like? Brainstorm ways that students can practice these behaviors.
* Review your own social media and online footprint, and ask yourself how it might be perceived by various stakeholders, including your students.
* Identify an opportunity to model the use of posting to social media in front of your class and perform a “think aloud” as you craft your post.
* Provide students with a checklist to validate authenticity and validity of online resources. Older students can help develop the list or evaluate an existing list for gaps.
* Develop a lesson in which students compare news from varied sources to illustrate media bias.
* Ask students to find online articles about the same event that present different facts. Use this as an opportunity to discuss heuristics and fallacies, such as confirmation bias.
* Start conversations with colleagues about the online sources they choose to share with students and why.
* Encourage students to ask for sources when that information is not provided.
* Let students practice communicating and sharing with different tools, platforms, and modalities to build their media fluency.

The DigCitCommit coalition convened by ISTE provides additional helpful ideas and strategies for reinforcing each of these five competencies.[[60]](#footnote-60) Refer to chapters 4 and 10 for strategies on how these competencies, including media and information literacy skills, may be reinforced in the context of specific content areas.

Other digital citizenship resources from California include, but are not limited to, the following:

* *Succeeding in a Digital Classroom: A Parent and Student Guide for Distance Learning*:[[61]](#footnote-61) The Santa Monica-Malibu Unified School District shares several student behaviors that educators can model and promote. These include being mindful of tone, language, and gestures when communicating or sharing, as well as acquiring permission from others before recording or sharing images.
* CDE Digital Citizenship Web Page:[[62]](#footnote-62) In collaboration with Common Sense Education,[[63]](#footnote-63) CDE curates resources to reinforce various student skills, including managing online information, protecting privacy and online reputation, building positive connections, and evaluating online information, among others.
* CDE Media Literacy Resources Web Page:[[64]](#footnote-64) This web page provides a collection of media literacy resources for teachers to incorporate into their classrooms. The web page includes links to curriculum, lessons, professional development, and more.
* Los Angeles Unified School District (LAUSD) Digital Citizenship Web Page:[[65]](#footnote-65) LAUSD shares various resources that have been foundational to their district-wide digital citizenship initiative. This includes a responsible use policy where the “agreements” are framed to emphasize student empowerment and digital citizenship competencies,[[66]](#footnote-66) as well as other learning resources aligned to the DigCitCommit competencies.
* California School Library Association (CSLA):[[67]](#footnote-67) CSLA provides various learning modules that educators can use to learn more about digital citizenship and how to incorporate the topic into students’ learning experiences.
* Model School Library Standards for California Public Schools: Kindergarten Through Grade Twelve:[[68]](#footnote-68) The standards provide guidance for teachers related to information and media literacy for their students. The standards “help students to learn and work with twenty-first century skills and apply responsible research practices, be respectful to others when using digital devices, and continue to grow as lifelong learners.”

**Vignette: Digital Citizenship and Netiquette**

In schools with a strong culture of digital citizenship and media literacy, students think critically, behave safely, and demonstrate an understanding of the nature, techniques, and impact of media messages and productions – all while being responsible participants and creators in the digital world.

That sounds like a virtual space most educators would readily promote. But what does it take to get there?

Sonal Patel is the Digital Learning Innovation Coordinator for the San Bernardino County Superintendent of Schools (SBCSS). Laurel Aguilar-Kirchhoff is the SBCSS Digital Learning Project Specialist and the co-president of the ISTE Digital Citizen professional learning network.

They support teachers to embed digital citizenship and media literacy into what they are already accomplishing with their students, whether via distance learning, hybrid learning, or in-person instruction. They approach their work from multiple perspectives: 1) building digital citizenship learning and capacity in teachers, 2) making digital citizenship/media literacy relevant for students, and 3) reaching out to support families and caregivers.

For all of the aspects of digital citizenship and media literacy, SBCSS focuses on sound pedagogical practices from a variety of vetted, high quality, and reliable sources, such as the ISTE Standards for Educators, National Standards for Quality Online Teaching, and the Collaborative for Academic Social Emotional Learning (CASEL).

The following is an overview of the areas that are addressed.

**Media balance and well-being.** Generation Z students tend to see technology and media as an extension of themselves and may not consider the potential negative impact of technology. Using this perspective to frame the discussion of limiting media consumption can positively impact students’ health and well-being. The discussion can start early; Common Sense Education[[69]](#footnote-69) has lessons that address media balance for students beginning in kindergarten. Unplugging and finding balance with technology is equally important and should be broached in family engagement sessions.

**Privacy and security.** Patel and Aguilar-Kirchhoff spend considerable time working with teachers to ensure they are aware of state and federal laws surrounding student data privacy, as well as sound professional practices. Teachers can also use their district’s Acceptable Use Policies as a resource and teaching tool with their students.

There are many ways to engage students in the conversation surrounding guarding their online privacy. Google’s “Be Internet Awesome”[[70]](#footnote-70) gamifies digital citizenship for younger students with “Interland,” a free online game for students ages 7-12 that specifically addresses internet safety and privacy. Older students may enjoy CommonSense Education’s Digital Passport and Digital Compass free online games,[[71]](#footnote-71) which address multiple aspects of digital citizenship and online privacy in a fun, age-appropriate manner. Both are available in English and Spanish.

**Intellectual property.** “Teachable moments” related to intellectual property may begin with the youngest students and increase in both understanding and rigor in the upper grades. Patel and Aguilar-Kirchhoff use various resources to help teachers share grade-appropriate lessons on intellectual property with their students. They also work with educators to understand what materials and media are available under Fair Use Laws and what should be cited or not shared with students due to copyright laws.

Teaching students about intellectual property, copyright, and how to cite and give proper credit is an essential first step in creating multimedia projects and content. The National Archives has a collection of learning materials[[72]](#footnote-72) to help teachers and students utilize and vet materials and sources, as does the Library of Congress[[73]](#footnote-73) and Smithsonian Open Access.[[74]](#footnote-74) Learning for Justice also has teacher lessons and resources[[75]](#footnote-75) for assisting students in evaluating content. After evaluating sources, students need to know how to cite them–a crucial step in building a culture of digital citizenship that dovetails with the topic of academic integrity. Teachers must set clear expectations and instructions for students. BrainPop for Educators[[76]](#footnote-76) has a variety of resources that begin with lessons in 3rd grade.

**Academic integrity.** Teachers have found academic integrity to be a particular concern during distance learning. Patel and Aguilar-Kirchhoff have worked with teachers in San Bernardino County to bolster academic integrity and look at the reasoning behind a student’s choice to plagiarize or engage in academic dishonesty. Building trust, rapport, and a digital citizenship culture within the online classroom can encourage students’ positive choices. Consistent and fair policies to address academic dishonesty are also important.

**Digital footprint and identity.** Students can learn to guard their mental and social-emotional health by not creating a false persona or identity online. At the same time, they can be encouraged to curate a professional digital footprint (or digital tattoo). The “what to post” conversation can be as powerful as the “what not to post” conversation with students. Discussions with older students about social media may include topics related to who they are online, how they represent themselves through their actions (likes, comments, tagging, etc.), and how others may perceive them online.

**Relationship and communication.** In the distance learning world, nurturing relationships with students online can be difficult. Using learner engagement strategies and building a classroom community of trust and digital citizenship are vital components in helping students learn how to engage with others appropriately, known as “netiquette.” When working with teachers throughout the county, Patel and Aguilar-Kirchhoff have found that basic netiquette skills are essential for student understanding of the classroom rules in a virtual setting. By clearly communicating classroom expectations and netiquette, teachers may build a strong foundation for a digital citizenship culture.

**Cyberbullying, digital drama, and hate speech.** As early as 2nd grade and continuing through 12th grade, students may engage in free, age-appropriate lessons about these tough topics from Common Sense Education. The lessons are based on the ISTE Standards for Students, American Association of School Librarians, CASEL Practices, and Common Core ELA standards.

By creating the digital citizenship culture of trust and respect, students may be more likely to speak to their teacher if cyberbullying, digital drama, or hate speech is happening in the online classroom. According to Patel and Aguilar-Kirchhoff, conversations about cyberbullying and digital footprints are very much interrelated, and “teachable moments” about these topics are important, as “one-off” lessons rarely make a lasting impact on student behavior or understanding.

**News and media literacy.** Patel and Aguilar-Kirchhoff have high praise for Jennifer LaGarde and Darren Hudgins’ work on social and emotional learning and the emotional impact that news and media literacy can have on students. The *School Library Journal* published an article[[77]](#footnote-77) about the necessity of including SEL to complement news and media literacy, with questions for learners to think about when it comes to media literacy and their emotions and success criteria and evidence of mastery for students to work toward. There are many resources available to help both teachers and students tackle this topic.

Although the scope of work in building a digital citizenship program may feel daunting, Patel and Aguilar-Kirchhoff have helpful advice for schools or districts beginning the process.

**Consider the current status of a school or district regarding digital citizenship and media literacy.** Examine what role digital citizenship/media literacy plays in the current school culture in online, hybrid, and in-person environments. Identify teachers’ and staff beliefs regarding digital citizenship, media literacy, technology, and online/hybrid learning and practices. Identify the policies that are currently in place. Do the current policies match staff beliefs for the online school and digital citizenship culture? Where are the teachers and staff willing to start? Continue? Digital citizenship and media literacy are cross-disciplinary, so all educators have a stake in this and would benefit from incorporating it into their curriculum.

**Look for authentic and meaningful ways to provide professional development and training for teachers, students, and parents/caregivers.** There are many professional learning networks (PLN) opportunities for educators to collaborate, share resources, and learn from experts. The Computer-Using Educators (CUE) Media and Information Literacy Network is free to join for CUE members and offers a range of opportunities for collaboration, publicizing digital literacy work, and professional growth. The ISTE Digital Citizenship Professional Learning Network is free to join for ISTE members. They host quarterly webinars and professional development and networking opportunities, such as “watch parties” and social hours. There are also PLN groups geared explicitly toward digital citizenship and media literacy on Twitter and Facebook.

The digital world is here to stay. Creating a strong culture of responsible citizens in the virtual space can only enhance students’ journeys toward becoming the innovators and leaders of tomorrow.

##### Data-Informed Instruction

ISTE Standards for Educators Indicators

* Analyst: Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students, and inform instruction.
* Analyst: Use assessment data to guide progress and communicate with students, parents, and education stakeholders to build student self-direction.

National Standards for Quality Online Teaching Indicators

* Assessment and Measurement: The online teacher evaluates learner readiness and progress using formative and summative assessments and learner feedback throughout the course.
* Assessment and Measurement: The online teacher customizes instruction to personalize the learning experience based on performance and assessment data and learner needs.

Both the ISTE Standards for Educators and National Standards for Quality Online Teaching emphasize teachers’ ongoing use of data to inform their instruction. Adding to this, Thomas Arnett, senior research fellow in education for the Christensen Institute, recently shared how these practices can help educators individualize learning progressions to make the learning process more student-centered and personalized.[[78]](#footnote-78)

Various digital tools provide data analytics that allow educators to consider individual students’ understanding of specific concepts or skills, which additionally provide insights into specific supports a student or groups of students may need.

Suggested strategies to consider, grounded in the ISTE Standards for Educators,[[79]](#footnote-79) include the following:

* Explore a variety of digital formative assessment tools and strategies that measure student knowledge in real time or shortly after a lesson.
* Share results of a digital formative assessment with the students and ask them what they learned about themselves or other members of the class. Model for students how to use data and assessments to develop next steps.
* Identify and experiment with technology tools that provide personal feedback, such as recording, video, or commenting tools.
* Empower students to provide each other feedback or to gather feedback from people outside the classroom using checklists and rubrics, peer-to-peer conferences, and online forums.
* Draw student attention to embedded feedback mechanisms in digital tools, such as grammar and spelling flags, hints and support tips in online tutorials, search functions, and gamification feedback based on wins and losses. Work with students to set goals for how they will recognize and use these kinds of feedback.
* Use low-stakes assessments, such as exit slips, online quizzes, and games, to check in with students and provide formative assessments.
* Use checklists or online polls for students to self-assess and track their own progress.
* Develop a schedule to meet regularly with students to analyze and interpret assessment data, and work with students to set personal goals based on the data.
* Identify tools students can use to create personal tracking systems to track goals and progress.

More specific guidance on this topic, including types of assessments appropriate for a given context, can be found in Chapter 2.

**Voices from the Field: Chris Flores | Tewinkle Middle School | Costa Mesa, CA**

Most educators have been hearing about data-driven instruction for years. In plain terms, this is about gathering and using assessment data to determine what comes next in instruction. The data comes primarily from two sources: formative and summative assessments.

Chris Flores is an 11-year classroom veteran who currently teaches U.S. history at Tewinkle Middle School in the Newport-Mesa Unified School District. He spoke with us about using learning analytics embedded in educational technology to inform his instruction and support his students in real time, leveraging formative assessments as both a tool for comprehension checks and a means of deepening student engagement.

**What does data-driven instruction look like in your classes?**

Data-driven instruction means that I use data analytics to drive, change, and adapt instruction in real time—throughout the lesson or unit. I use multiple, mini-formative assessments throughout each day to know where my students are and how they are understanding the content and task. If we don’t know what our students know in real time, they will get frustrated and fall behind. If we don’t do this in class each day, they will also struggle outside of class.

It doesn’t have to be super “techy” or complicated. It can start with a simple thumbs up or thumbs down. That being said, tools, such as Google Forms [online polling tool], can be used to gather feedback to get all the responses in aggregate.

Another favorite is Answer Garden [a student feedback tool]. It’s quick, easy, and perfect for one-word summaries. We can look globally at the class Answer Garden and then, without singling anybody out, we can see the outliers—hearing different viewpoints and explanations.

I also use Quizizz [an online quiz creation platform] because of the quantity and quality of the data. I want to know where my students are struggling and how I can support them. It informs my instruction.

I have found that student engagement is even more challenging at home. I have had success with the tools that are gamified, such as Pear Deck [a formative assessment platform] and Kahoot [a learning game platform]. I’ve also been able to use Nearpod [a formative assessment platform] to support these efforts. Using these types of applications is the only way I am going to get over 90 percent engagement and participation—and also know that number in real time. I have to know when students are engaged or not.

**In what ways do you employ digital tools to enhance what may be done in a traditional classroom setting?**

It’s about the formative assessment and data I can gather in real time. I think both analog and digital are important here. Currently, it’s much more tech-focused. Other than discussion, analog activities are more challenging right now because I’m not able to make sure all students have access to hands-on activities or manipulatives. So, the technology really has to be maximized right now.

Students can now draw or use sticky notes in Pear Deck. They do lots of things digitally that they have traditionally done on paper. When we’re in person, I like to mix it up between digital and analog for engagement purposes. I might use sticky notes digitally, or I might use actual sticky notes on the wall. It may be challenging to do a think-pair-share in-person right now with the six feet of distance required, but we can do this in Flipgrid [video-based discussion software]. Another tool that I am using to facilitate some great discussions is Google Jamboards [collaborative digital whiteboards].

**How do you effectively balance synchronous and asynchronous learning experiences for your students?**

I have learned that my students appreciate video of my instruction to be used asynchronously. I’m also using the Chrome Extension Mote [a student feedback tool] that makes it easy for anyone to add voice notes and feedback to documents and assignments. I used to rely on written comments and suggestions for my students, but I can't really tell if they even read the feedback. Mote can track each individual comment, and I can manage the dashboard to see who has reviewed the feedback. This system is new to me, but I polled a few students, and they preferred hearing me rather than more reading.

#### Designing Meaningful Digital Learning Experiences

With expanding use of online and blended learning approaches, educators’ knowledge and understanding of how to best integrate active learning experiences into these unique environments is essential.

Four key areas that educators should consider as they design effective digital learning experiences include: 1) Aggregating Quality Synchronous vs. Asynchronous Instructional Time; 2) Developmental Considerations; 3) Accessibility; and 4) Engaging and Motivating Students. Each area is noted with direct connection to the relevant standards indicators within the ISTE Standards for Educators and the National Standards for Quality Online Teaching.

##### Aggregating Quality Synchronous vs. Asynchronous Instructional Time

ISTE Standards for Educators Indicators

* Designer: Use technology to create, adapt, and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
* Designer: Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

National Standards for Quality Online Teaching Indicators

* Learner Engagement: The online teacher designs learning experiences that use technology to efficiently engage learners.
* Instructional Design: The online teacher incorporates diverse media into online learning modules.

Both the ISTE Standards for Educators and National Standards for Quality Online Teaching call on educators to design learning experiences that are best suited for the context. In an online learning environment, one way to think about effective design is to appropriately aggregate time between synchronous and asynchronous learning opportunities. The CDE defines these two terms as follows:[[80]](#footnote-80)

* Synchronous learning takes place in real-time, with delivery of instruction and/or interaction with participants, such as a live whole-class, small group, or individual meeting, via an online platform or in-person when possible.
* Asynchronous learning occurs without direct, simultaneous interaction of participants, such as videos featuring direct instruction of new content students watch on their own time.

In general, research has found that keeping synchronous learning time short by chunking content in smaller amounts can prevent the learner from being overwhelmed and experiencing cognitive overload (Cavanaugh, 2001). Furthermore, when using synchronous sessions, educators can most effectively engage students by keeping learning active. For instance, synchronous sessions can be dedicated to engaging conversations, collaborations, and critical debates (Martin, Ahlgrim-Delzel, & Budhrani, 2017).

Other strategies to maximize the use of synchronous learning time include the following:

* Send lessons and/or materials to students ahead of time, and use the synchronous time for more active learning, such as discussion, questions, collaboration, and problem solving (Martin, Ahlgrim-Delzel, & Budhrani, 2017).
* Invite students to co-create the learning environment and the rules, empowering them to have agency and voice and to be part of the decision-making process.[[81]](#footnote-81)
* Do not recreate what is done in the in-school schedule online, as it is not sustainable.[[82]](#footnote-82)
* Use one-on-one and small group meetings, differentiating and meeting the needs of students based on where they are.[[83]](#footnote-83)
* Incorporate small group instruction with guided discussion (Cavanaugh, 2001; Means et al., 2010).

The balance of time between synchronous and asynchronous depends on a variety of factors, including students’ age and level of development, which is described in more depth in the next subsection. For example, in an EdSurge article, Stephen Noonoo identifies several strategies for engaging young learners, including limiting screen time whenever possible and engaging learners by limiting synchronous sessions to 15-minute segments.[[84]](#footnote-84)

For examples of how some California districts differentiated between synchronous and asynchronous time and activities, the California Teachers Association developed a resource entitled, *An Overview: Distance & Hybrid Teaching Practices.*[[85]](#footnote-85) Some strategies from this resource are shared below.

Synchronous learning activities might include the following:

* Whole-group instruction (e.g., live lectures, mini-lessons, explanations, demonstrations, modeling, teacher-led discussions, calendar time, feedback, and re-teaching)
* Small-group or individual instruction (e.g., live mini-lessons, explanations, demonstrations, modeling, teacher-led discussions, feedback, re-teaching, office hours, and two-way communications with students, parents, and/or guardians)
* Live learning application activities (e.g., classwork activities, including practice, applications, interaction, live student-led discussions, small-group work, and collaboration)
* Live formative assessment (e.g., live quizzes and polling and checking for understanding)
* Live comprehensive assessment (e.g., live quizzes, tests, writing prompts, and other tasks completed individually and unassisted for evaluation)

Asynchronous learning activities might include the following:

* On-demand instruction (e.g., student-paced recorded read-alouds, explanations, demonstrations, simulations, videos, audiobooks, podcasts, and virtual field trips)
* On-demand online application activities (e.g., student-paced work on learning software, online reading, word processing, audio and video recording, creating slideshows, digital art, online student collaboration, partner reading, small-group work, and peer review)
* On-demand offline application activities (e.g., student-paced paper and pencil work, journaling, reading printed materials, mathematics calculations, graphing, hands-on science, visual and performing arts practice, and physical activity)
* On-demand formative assessments (e.g., student-paced quizzes and polling, either as a check for understanding or for student self-assessment)
* On-demand assessment (e.g., student-paced quizzes, tests, writing prompts, and other tasks completed individually and unassisted for evaluation)

**Voices from the Field: Amanda Sandoval | Eleanor Roosevelt High School Corona, CA**

Amanda Sandoval—who currently teaches U.S. history at Eleanor Roosevelt High School in the Corona-Norco Unified School District—approaches her subject thematically, not chronologically. She uses technology and a focused look at the pressing challenges of our day as a means to engage and inspire her students about history and our collective future.

**What does good instructional design look like in practice?**

I think pedagogy is a priority over everything. Content and learning objectives are foundational. I continually ask myself, “What is the content, and how are the learners going to engage in it?” We always start with an essential question, and all we do has to relate to that. I’m going to continually break things down into smaller chunks for learners to synthesize.

I believe in quality visual elements. However, I try to emphasize pedagogy over pretty. I love educational technology. It does have the power to enhance learning; however, I think it’s about continually evaluating what my students are doing and learning.

**Across digital and analog tools, working synchronously or asynchronously, how do you promote student agency and ensure high-quality, authentic learning experiences at all times?**

The focus—whether for distance learning or in-school—is always about students being engaged in interactive and meaningful work. Prior to distance learning, I was able to walk around and check in with my students easily. But when I started this school year, it was hard to see the students working. So, I started using Pear Deck [a formative assessment platform] more in order to be able to see them work in real time. Now, I can see every student working, even with blank screens. I can give private feedback in real time. I can be synchronous or release them asynchronously.

I surveyed my students at the end of the first semester, and they evaluated my strategies and tools. Pear Deck by far was the most appreciated by students. I will continue to use Pear Deck when we return face-to-face. It’s really great for bridging that gap for all learners, especially EL students or those with special education needs. It’s good for building background, scaffolding, and support for all students' reading, writing, and speaking needs. It helps with close reading, annotation, and so much more.

I often use sketchnoting, too. Students don’t have to type everything. For example, they can listen to a podcast, and then they can sketchnote it. It works to have a notebook for many activities rather than everything on the computer. Sometimes, you can’t beat handwritten notes.

I use many of these more analog things to front-load; it gets students to start thinking about the content. I allow them to have choice, and they can always use technology. For example, my students watched a video today on propaganda, and they could take notes using their preferred method. Some used a notebook, some used their computers, and some even used their phones. I don’t want to dictate how. They can choose their medium. Also, for the semester final, they had to answer an essential question. They could choose to address the questions through a multiple choice test or an art project.

**What do you look for when selecting education technology for your classes?**

I like to learn new applications and resources. If it makes learning easier or more accessible for my students, then I am interested. It has to be user-friendly—for my students and me. If it requires one to create an account, my students won’t be interested.

I like it when technology makes things more equitable. For example, if an application translates, I will be more likely to incorporate it. If it has an immersive reader, then my students will more likely see the benefits. Immersive readers are really beneficial in terms of accessibility—for students who need text read to them, text translated, text enlarged, or even the background color changed.

##### Developmental Considerations

ISTE Standards for Educators Indicators

* Designer: Use technology to create, adapt, and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
* Designer: Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

National Standards for Quality Online Teaching Indicators

* Learner Engagement: The online teacher communicates frequently with stakeholders regarding learner progress and strategies for supporting learner engagement.
* Instructional Design: The online teacher is able to incorporate subject-specific and developmentally appropriate digital learning resources into online learning modules.

The ISTE Standards for Educators and National Standards for Quality Online Teaching note the importance of providing personalized support and learning experiences. This is especially critical when planning instruction for younger students, who typically need more guidance and structure to help learn foundational skills, such as autonomy and social skills (Rice, 2006; Vazquez & Straub, 2012; Cavanaugh et al., 2004).

As a first step, educators can ensure that young students have an opportunity to become familiar with online learning and related routines. Educators are encouraged to carefully and intentionally plan how to introduce the virtual environment, practice unfamiliar routines, monitor student progress, and consider modifications as necessary.

Furthermore, guidance from Policy Analysis for California Education (PACE)[[86]](#footnote-86) emphasizes four key considerations for practice when working with students in grades K–3 (Cottingham, 2020):

* Prioritize quality interactive synchronous learning over quantity of screen time.
* Maximize the number of available adults to support student learning at a distance through partnerships and increased funding for childcare providers.
* Communicate directly and regularly with parents to understand their needs and to adjust support over time.
* Develop ready-to-use curriculum and resources that help teachers and parents support students in distance learning.

As mentioned above, developmental guidance suggests that younger students spend more time in synchronous activities that feature intentional structure and support. Examples of this guidance in practice include the following:

* According to Rachel Barr, a professor of psychology at Georgetown University and director of the Georgetown Early Learning Project, it is important for early learners to have caregivers or parents present at the end of a lesson to help with the transfer of learning to real-world situations, as the translation between the screen and the real world may be difficult for learners aged 5 or younger.[[87]](#footnote-87) Barr identifies additional strategies for engaging young learners, including using video chat, focusing the screen on a single person at a time, and incorporating a variety of activities that promote activity or interaction.
* The National Association for the Education of Young Children (NAEYC) suggests that teachers create a distance learning toolbox for each student.[[88]](#footnote-88) This toolbox might include learning material for student use throughout the year, including such items as blocks, cut-out shapes, headphones, schedules, journals, laminated alphabet and number charts construction paper, stickers, markers, crayons, print books, charts, number cards, and mood meters.
* Edutopia suggests several strategies for engaging preschool students in synchronous learning sessions.[[89]](#footnote-89) Some ideas include asking students to take pictures or videos offline to share during synchronous time and building representations of what they are learning using non-digital materials.
* When thinking about asynchronous activities that do not require screen time, parents/caregivers might encourage students to be storytellers (using their home languages and/or emerging English skills), bringing a variety of characters to life as they share. Children can also be detectives in their house to find representations of topics they are learning. Music and dancing can engage students to move as well and step away from their devices.

In working with the youngest students, educators must work with parents/caregivers as critical partners for learning. Creating this collaborative relationship not only allows parents/caregivers to understand the “why” behind the pedagogical approaches, but this approach also more equitably provides students with a secure foundation as they participate in online learning. To this end, considerations for educators may include the following:

* Frequently communicate student progress to families/caregivers.
* Provide wraparound services, including those in the family's preferred language.
* Structure a schedule that is a predictable routine for families.
* Make sure activities are developmentally appropriate and can be done at home.
* Maintain records of communication.

There are many other resources available to support teachers and parents/caregivers of young students, including the following:

* The Early Childhood Technical Assistance Center at the University of North Carolina developed a series of short videos to share experiences of educators and families who are supporting preschoolers through online learning.[[90]](#footnote-90)
* Early Edge California provides a webinar series that features practical guidance in English and Spanish on reading books with preschoolers, infants, and toddlers; empowering families to develop oral language; and elevating assets-based online teaching for dual language learners in TK.[[91]](#footnote-91)

**Vignette: An Innovative Approach to Teaching Kindergarten Online**

The first few minutes of Ben Cogswell’s online kindergarten class at Bardin Elementary School in Alisal Union School District are always a surprise for students. One day, they may start with a video focusing on square-breathing, and the next day, it may be Alpha Bots or Number Bots, with an adventure into the world of numbers to kick off the lesson. Sometimes it’s a favorite: “We’re Going on a Letter Hunt,” a song that guides students through a study on commonly confused letters. And on Fun Fridays, music plays in the background, and smiling students bop their heads and sing along from the minute they log on.

The classroom introduction may be a daily surprise for students, but these educational moments are intentional for Ben. For example, the square-breathing exercise is a children’s meditation technique that involves slow, deep breaths intended to heighten performance and concentration. For an online classroom filled with young learners and a ‘no-mute’ rule (he doesn’t mute his students unless their learning interferes with others), starting with a mindfulness activity has been an effective approach for this teacher. “My selections are dependent on the kind of mood I want to set for the day or the focus for the day if I’m introducing a new concept. Sometimes the selection is for students to feel good and to help give them different ideas and techniques on how to deal with some of the emotions that have come with online learning,” says Ben.

For Ben’s part, success in the new online world comes down to three main factors: environment, excitement, and blending analog and digital. He doesn’t rely on a multitude of apps – he keeps it simple: Google Meet for live online classes (the background photo is his classroom) and Seesaw [portfolio-based learning application] for students to post their assignments and comment on their classmates’ videos. “Seesaw is a great tool for learner interaction, both as a teacher-to-student and student-to-student engagement tool.”

Creativity and expression are encouraged in Ben’s virtual classroom. By creating a fun learning environment, the students’ attention rarely waivers from the learning going on, especially when the teaching comes from “Bot,” Ben’s robot puppet. With a heavy Texan drawl, Bot uses the Addams Family theme song to sing “Days of the Week,” a lesson that guides students through weekdays, sight words, and sounds/phonics. “My puppets work for a few reasons. They give me someone to talk to and talk with when I need to model skills. I give the puppets personalities to make them more interesting for the students as well.” In this environment, play is planned and purposeful.

Using a document camera, Ben prerecords his lessons and uploads them to Seesaw, allowing students to go back and learn and relearn at their own pace. “I find students are most engaged when they are writing and drawing, and my videos let me model these skills.” On Seesaw, students interact with Ben when they're watching his videos and responding in their activity. Students record their Seesaw activity and receive teacher-to-student interaction asynchronously and student-to-student interaction by welcoming and giving comments on their classmates’ videos. “As for digital citizenship, there are so many positive impacts resulting from teaching kids from a young age how to comment and be kind to one another and leave kind comments,” Ben says.

An added benefit of the Seesaw app, Ben finds, comes in the form of monitoring student progress through the student video recordings. During a recent ABC sort lesson, Ben was able to gauge how fluent the students were with correctly sorting the alphabet by listening to their recordings and watching how they manipulated some of the pieces in the Seesaw activities as they recorded. “I can listen to every single one of my students because they all submit a video. This is different from the in-person classroom because I might not be able to do that just from a piece of paper. When I have a recording, it takes my understanding of student progress to the next level. Even though we're not face-to-face, all of this is useful data.”

Teaching small children on a computer can be extremely challenging. Ben makes sure that his KinderRockets’ needs are central to his approach to every aspect of the classroom environment, activity, and instruction. “I do my best to make both synchronous and asynchronous lessons as engaging as I can for students. Using puppets, bringing in manipulatives to class, writing, and drawing are all a part of it.” Importantly, Ben considers what interests the students and incorporates those interests in unique and exciting ways.

“I want to make sure kids are doing something on the other side of the screen. Creating creativity.”

##### Accessibility

ISTE Standards for Educators Indicators

* Designer: Use technology to create, adapt, and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
* Designer: Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

National Standards for Quality Online Teaching Indicators

* Diverse Instruction: The online teacher communicates with appropriate school staff regarding specific accommodations, modifications, or needs, and works in collaboration with others to address learner needs.
* Diverse Instruction: The online teacher recommends assistive technologies where appropriate to meet mandated needs and address learner preferences.

The ISTE Standards for Educators and National Standards for Quality Online Teaching emphasize that educators must design digital learning experiences that take individual learner differences into careful consideration. This includes paying close attention to and seeking guidance related to web accessibility.

An accessible online environment benefits all students in the classroom. According to the W3C Web Accessibility Initiative, “Web accessibility means that websites, tools, and technologies are designed and developed so that people with disabilities can use them.” In addition, the U.S Department of Health and Human Services requires 508 compliance for any online documents and web pages to ensure students with visual disabilities can use a screen reader and thus can hear what is on a page as well as a description of any images.

CDE’s Clearinghouse for Specialized Media & Technology (CSMT) offers instructional resources[[92]](#footnote-92) in accessible formats to students with disabilities in California at no cost to public schools, including Braille, large print, and audio materials.

While students with IEPs and 504s should have the support of their special education teachers in the online environment, the general education classroom teacher should aim to create an online classroom and lessons that are accessible to all students and families. There are some high-leverage considerations for supporting students with specific needs, that general education teachers can keep in mind when shifting their learning environment online to ensure that learning is accessible to all students. These considerations include suggestions for students who are deaf, students who are blind or visually impaired, and students with learning differences.

###### Individualized Supports for Students with Disabilities

While the strategies and considerations provided in this area are intended to assist in planning and delivering accessible learning, it is important to note that each student with a disability is unique and requires an individualized approach to their learning. Planning for more accessibility when building a lesson saves time, effort, and student frustration and will allow all students to be more included and engaged in online learning. Accommodations and modifications provided during in-person learning should be applied, as appropriate, to online learning and can serve as the foundation for discussing and identifying what a student will need when pivoting to an online learning environment. These may include physical supports, assistive technology, and augmentative communication, in addition to digital supports.

Determining when to revisit the IEP and how to make modifications as students come into and out of the online learning environment continues to be critical to ensure that students are receiving the support they need to be successful. Note that determining which accommodations work for individual students during online learning is also key in ensuring the reliability of assessments when students are using the accommodation.

###### Reducing Barriers to Online Learning for Students with Disabilities

Technology can be extremely useful in eliminating learning barriers for students both in-person and in online learning. Students who may experience challenges with executive function, math, reading, and/or writing can benefit from embedded accommodations in the online environment. For instance, a student can turn on and access the built-in accessibility features many digital devices have, such as text-to-speech, which provides the option to listen to text or to listen while reading.

Apple[[93]](#footnote-93) and Google[[94]](#footnote-94) are among some of the technology corporations that have added significant accessibility options as well as tutorials on how to use them. Microsoft[[95]](#footnote-95) has accessibility options and recommendations delineated by types of disabilities and needs. It is important to continuously evaluate and improve what accommodations work for each student. Teaching students to understand their learning needs and empowering them, when appropriate, with the knowledge necessary to use technology is also important. When students learn to use resources independently, including digital tools, they build educational equity for themselves and acquire life-long self-determination and self-advocacy skills.

###### Considerations for Students who are Deaf or Hard of Hearing

In a traditional classroom, students who are deaf or hard of hearing often use a sign language interpreter to access daily learning. This is also true in an online learning environment. Educators should partner with the student's speech language pathologist, Deaf and Hard of Hearing teachers and/or service providers to ensure maximum access to the curriculum and continuity of language acquisition skill building in the online environment. Ensuring that distance learning plans address these considerations is essential for continued access and progress in both the general curriculum and in language acquisition.

###### Supporting Students who are Blind or Visually Impaired

Visual disabilities tend to fall into one of three categories: blindness, low vision, or color-blindness. Students who are blind typically engage with web content with the help of a screen reader. Similar to students with motor or physical disabilities, students who are blind rely on tab order, which a screen reader will use to navigate through a web page. Therefore, teachers can set up documents and slideshows with proper titles and headers so that the screen reader will navigate through in a logical order. If these are not used properly, the screen reader may jump around on the page, leading to learner confusion. In addition to designing content to be navigated with a screen reader, teachers need to include alternative text or “alt tags” on all images. Alt tags describe what is in the image for the student. If there is important text in an image, that needs to be included in the alt tag.

Students with low vision may rely on screen readers, but many may also prefer to use magnifiers and zoom features. Therefore, it is recommended that teachers use true text rather than text in images; when they use text in images and a learner zooms in, that text becomes pixelated and hard to read. WebAIM also suggests, “When possible, horizontal scrolling should be avoided—it is especially difficult to read page content when the user must scroll or pan to read lines of text that extend off the screen.”

Lastly, color-blindness is the inability to distinguish certain shades of color. Many students experience color blindness, and teachers can provide necessary accommodations in the online learning environment. Teachers do not need to avoid color altogether; instead, they need to pay attention to color combinations and contrast. There are several contrast checkers available, including Accessible Colors or WebAIM Contrast Checker. WebAIM also suggests that “when colors are used to convey or differentiate information—such as a pie chart or bar graph, or using green and red text to indicate pass/fail or good/bad, etc.—this information should also be provided in another way.” By doing this, teachers can ensure that students are seeing the information that they need to see in order to be successful.

###### Accessibility for Students with Learning Differences

The continuum of learning differences resulting in individualized learning needs is vast. Teachers need to explore what types of accommodations would best meet the needs of the student. Learning differences include dyslexia, dyscalculia, auditory process, slow processing, coordination, executive function, Attention-Deficit/Hyperactivity Disorder (ADHD), and non-verbal learning disabilities. A comprehensive set of considerations and strategies is available at Understood.org, a website which provides comprehensive considerations and strategies for numerous areas of need.[[96]](#footnote-96)

In addition, as learners adjust to learning at home, they may need to share devices and learning spaces with siblings. Therefore, providing transcripts or closed captioning as well as headphones and microphones may make it easier for learners who have situational limitations that prevent them from watching a video, listening to an audio recording, or speaking. Learning more about how to make their classrooms more accessible will only enhance teachers’ abilities to meet the needs of all of their students with and without disabilities.

To learn more about how to make classrooms more accessible, educators can visit the following resources:

* WebAIM’s Accessibility Checklist[[97]](#footnote-97)
* WAVE: This resource will help highlight some of the errors on a specific web page.[[98]](#footnote-98)
* Screen Readers: ChromeVox[[99]](#footnote-99), NVDA for Windows[[100]](#footnote-100), or VoiceOver for Macs[[101]](#footnote-101)
* Alternative Text Basics[[102]](#footnote-102)
* DO-IT Center: Disabilities, Opportunities, Internetworking, and Technology[[103]](#footnote-103)
* National Center for Learning Disabilities and Understood: *Distance Learning Toolkit: Key practices to support students who learn differently*[[104]](#footnote-104)
* Apple Accessibility[[105]](#footnote-105)
* Google Accessibility[[106]](#footnote-106)
* Microsoft Accessibility[[107]](#footnote-107)

###### Building Accessible Lessons through a Universal Design for Learning Framework

The Universal Design for Learning (UDL) framework and guidelines[[108]](#footnote-108) were created by CAST, an organization that provides guidance on accessibility to eliminate barriers to learning and to make learning accessible for all students. UDL is a design model used to “improve and optimize teaching and learning for all people based on scientific insights into how humans learn”,... offer[ing] a set of concrete suggestions that can be applied to any discipline or domain to ensure that all learners can access and participate in meaningful, challenging learning opportunities.”[[109]](#footnote-109) UDL encourages educators to promote student engagement with content in multiple ways, to represent content in multiple ways, and to provide multiple ways of expressing what they know. Organizations like the DO-IT Center help promote inclusion and success for students with disabilities. They have a section on their website focused on Universal Design that provides resources for design and development of accessible distance learning environments.

What does UDL look like in an online learning environment? Educators might:

* “survey students about their interests, strengths, and needs” and “incorporate the findings into lessons;”
* clearly describe learning goals and create context by tying to real-life situations whenever possible;
* “use choice menus for working toward goals;”
* “make it easy for students to adjust font sizes and background colors through technology”;
* “provide options for engaging with texts, such as text-to-speech, audiobooks, or partner reading”;
* “provide calendars and checklists to help students track the subtasks for meeting a learning goal”;
* “allow students to show what they know through a variety of formats, such as a poster presentation or a graphic organizer”; and
* “provide students with access to common assistive technology and embedded accommodations, such as speech-to-text and text-to-speech.”[[110]](#footnote-110)

Online learning is optimized when educators intentionally design lessons that contain the elements of UDL which are universal. This allows students with a wide range of neuro-diversities and learning preferences to access learning and allows for general educators and special educators to build out supports on a foundation of high-quality first teaching. Ideally, general and special educators will co-lesson plan for students in order to teach and engage all learners in a classroom.

##### Engaging and Motivating Students

ISTE Standards for Educators Indicators

* Facilitator: Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
* Facilitator: Model and nurture creativity and creative expression to communicate ideas, knowledge, or connections.

National Standards for Quality Online Teaching Indicators

* Digital Pedagogy: The online teacher uses different types of tools to interact in online courses in order to nurture learner relationships, encourage learner interaction, and monitor and motivate learner engagement.
* Instructional Design: The online teacher designs learning experiences that use technology to efficiently engage learners.

From the perspective of the ISTE Standards for Educators and the National Standards for Quality Online Teaching, technology can serve as an effective tool to ensure that students are motivated and engaged in the learning process. Strategies aligned to this goal include Building Relationships; Providing Support Structures; Infusing Opportunities for Creativity; Encouraging Authentic Collaboration; and Empowering Learner Agency, Voice, and Cultural Connections, which are described in detail below.

###### Building Relationships

Building strong positive relationships with students of any age is essential for cultivating trusting and meaningful interactions and in turn increasing engagement and motivation. Educators use a variety of strategies to build relationships with students and their families/caregivers in online settings, including but not limited to the following:

* Send welcome letters or make welcome calls. These initial outreach strategies help to begin student-teacher and teacher-family relationships on a solid foundation.
* Provide orientations for students and parents/caregivers when students encounter a new class, a new content area, or a new technology (Lowes, 2014) . When teaching in an online environment, it is especially important for educators to communicate to students how to get started or how the online classroom is structured. If educators and students are switching from a traditional classroom to an online or blended classroom, Quality Matters suggests drawing comparisons between the two learning environments:[[111]](#footnote-111)
* Explain the structure.
* Provide directions for logging into synchronous sessions or other resources that may be used in the course.
* Provide directions on how to navigate the course, including how to locate and submit assignments.
* Deliver weekly personalized messages via email, phone call, or by mailed letter. The personalized component could be a mention of students’ interests or hobbies, which can provide students and parents/caregivers a caring touch point. These messages can also revolve around personalized goals that the student tracks and reflects upon. Personalized messages can also be part of students’ regular feedback on projects, which feature clear, actionable strategies.[[112]](#footnote-112)
* Offer online office hours for students and parents/caregivers. These office hours provide a consistent time when students and families can check in with educators if they have any questions about the technology, an assignment, or materials. This time might also provide an opportunity for a well-being check to ensure that the students and caregivers are well and that they have all of their basic needs. Furthermore, office hours can be a way for students to connect with educators for discussion-based assessments or reflections to ensure that a student is supported according to their needs.
  + Establish online work sessions where students work on their projects and pose questions among their peers or with the teacher as needed. When major assignments or projects are due, this shared work time can help motivate learners to complete their projects, receive feedback and support, and help others. This strategy also contributes to cultivating a productive learning community through group work and helps students feel supported by educators and peers.[[113]](#footnote-113)
  + Guide families/caregivers through supplemental instructional resources that they can use to support learning from home. Families in Schools has curated a library of free multilingual resources, ranging from subject-specific digital tools as well as tips for parents to build positive technology habits and skills with young students.[[114]](#footnote-114)

**Parent Voice: Family-School Partnerships Matter**

Parents and caregivers valued a strong positive relationship with their child’s teacher and school. In a distance learning environment, the family-school partnership was essential for parents/caregivers, teachers, and students to work together as a team. Ongoing, coordinated communication among all stakeholders supported collaboration and optimized student success in the virtual space. Digital communication hubs, such as ClassDojo and ParentSquare, facilitated communication and connected families to resources and information. Parents shared that access to multilingual instructional resources and orientation sessions on how to use technology (e.g., Chromebooks, hotspots, communication hub apps) were helpful as families transitioned to distance learning. Parents also appreciated workshops that focused on tips for how to support their child in a subject area and tools to cultivate social and emotional learning skills.

###### Providing Support Structures

In addition to relationship building, one of the most important features of quality digital learning is providing student support structures. Some states, like Michigan and Wisconsin, have required online learning mentors who offer encouragement and guidance in their online learning process (Borup, 2018).[[115]](#footnote-115) These mentors might be teachers, paraprofessionals, and other instructional support personnel who provide support for online learners around managing time; navigating the online learning environment; monitoring student progress; helping students advocate for themselves; encouraging academic success; providing a connection among the teacher, students, and caregivers as needed; and more. Michigan Virtual Learning Research Institute has done research into online mentor support, and programs that have a strong mentor program have high success rates for their online learners.[[116]](#footnote-116)

Other schools have engaged in a co-teaching model with state-level virtual schools, such as the Vermont Virtual Learning Cooperative. Schools access the state-level virtual school’s content, and the site-level teacher co-teaches with an online teacher. These models provide students with additional support that engages them and motivates them to persist in their learning.[[117]](#footnote-117) This co-teaching model also allows teachers more time to build trusting relationships with their students and families.

With such support strategies, educators can further ensure that students do not feel isolated, which can happen more easily when an online or blended learning environment is not designed with human elements of collaboration, interaction, communication, well-being, and support in mind. Additional strategies to minimize psychological feelings of distance (also known as transactional distance) include, but are not limited to, the following:

* Provide frequent, personalized feedback.
* Give students choice in how they represent and demonstrate their learning.
* Establish a learning community where relationships are highest priority.
* Incorporate support systems, such as wraparound services, wellness programs, and community collaborations.
* Ask students for feedback to continuously improve the learning experience.
* Be clear with students regarding who to contact for help.

###### Infusing Opportunities for Creativity

Sir Ken Robinson said of creativity: “Creativity is putting your imagination to work. It is applied imagination.”[[118]](#footnote-118) With its focus on learning by doing, educators can effectively infuse active learning opportunities into digital learning experiences by allowing students to express their creativity (Bernard et al., 2009; Rice, 2006; Cavanaugh, Barbour, & Clark, 2009). Furthermore, infusing the learning environment with opportunities for students to be creative can heighten student engagement and motivation.

For example, educators can incorporate makerspaces in online and blended learning environments, where students receive a packet of materials that they can use to create a representation of what they are learning and communicate ideas, knowledge, and connections. This creative approach can help students build on their prior knowledge and encourage them to reflect on their learning growth.

Other suggested strategies grounded in the ISTE Standards for Educators to nurture creativity[[119]](#footnote-119) include the following:

* Ask students about digital tools they already use and include those as options to demonstrate mastery.
* Set aside time with students during project work to conference about their learning goals and which digital tools are the best fit to share their learning.
* Gather feedback from beyond the school for a student project.
* Have students share their thinking and solutions with their classmates through blogging and online forums.
* Design and facilitate a project where students have to incorporate something overtly creative with content area knowledge (for example, using coding to create digital art; embedding an animated simulation with original, resonant music; creating a digital assemblage to illustrate a historical event), and have them reflect on the process and its value.

###### Encouraging Authentic Collaboration

When educators teach in an online environment, they need to consider deliberate and intentional strategies to engage students collaboratively, thereby cultivating relationships and creating a networked learning community.One approach is to create opportunities for cooperative group work where students engage with smaller groups of peers.[[120]](#footnote-120) This can be done by creating small group discussion forums in a learning management system, within project- or problem-based learning contexts (including career and technical education[[121]](#footnote-121)), or via breakout rooms in synchronous sessions held within video conferencing tools.

Teachers can also provide ways to increase students’ active engagement through live small group sessions, where they can actively seek ideas, perspectives, and assistance from other students in developing solutions. Reflecting on technology’s capacity to foster authentic collaboration, Bhavini Patel, information technology TOSA for Palm Springs Unified and former fifth-grade teacher, wrote in a 2020 California Teachers Association blog, “When it comes to fostering engagement, I love that video conferencing tools have whiteboard features to annotate on screen share. Breakout rooms allow students to communicate and collaborate on projects. I like how the host (teacher) can jump in among the different breakout rooms during their session to monitor student progress and answer questions.”[[122]](#footnote-122)

Kelly Keane, director of the Educational Technology Program at the Loyola University Maryland School of Education, further explained in a 2021 EdSurge article, students “shouldn’t be sitting in front of their screens watching or listening to someone talk at them for several hours. They need to be interacting and participating with their peers and what is being learned. An entire group can be responding to questions, sharing their viewpoints, drawing on a slide, or playing an interactive game. Giving students the opportunity to feel involved, valued, and appreciated is critical, especially in the online classroom.”[[123]](#footnote-123) Refer to Chapter 3 to learn about more strategies for *Fostering Healthy, Equitable, and Inclusive Digital Communities*.

###### Empowering Learner Agency, Voice, and Cultural Connections

Finally, another way to foster motivation and engagement in any learning environment, but particularly in online and blended settings, is by empowering students to take ownership of their learning (Cavanaugh, 2001; Vazquez & Straub, 2012; Hasler-Waters, Barbour, & Menchaca, 2014; Pulham & Graham, 2018; Arnesen et al., 2020). When students have a sense of agency, they have more investment in their learning outcomes, thereby reinforcing their executive functioning, perseverance, self-awareness, and tolerance for ambiguity, among other critical skills.

As a start, educators might provide students with choice in how they may present themselves in an online environment and be sensitive to their circumstances. Dr. LeeAnn Lindsey from Edvolve published a helpful resource that educators can use to help students make such decisions for themselves.[[124]](#footnote-124) Educators can also invite students to co-create their learning goals, pace, and trajectories to allow them to take control of their learning, foster their interests, and further personalize their learning.

Quality Matters suggests using an introductory discussion to engage students as they first meet one another.[[125]](#footnote-125) Most learning management systems have discussion forums where teachers can create a discussion assignment for students to introduce themselves and share something, such as their favorite musical artist or a personal hobby or interest. These introductions can help students feel connected in authentic ways to their teachers and peers. These activities can also give students a voice and provide a way for them to incorporate their cultural context in their learning process.

In Fullerton Joint Union High School District, students shared concerns about how difficult it would be to attend live synchronous sessions for every class period. Therefore, the district allows teachers to use a range of options on how to deliver instruction to their students. A 2020 EdSource article reports that “many are now doing a mix of live video sessions, pre-recorded lectures, hands-on projects and other ideas as they come up.” Also, with this newfound flexibility, Fullerton’s teachers are actively listening to student concerns to co-develop solutions. For example, Greg Platt, an English teacher at Troy High School in Fullerton, recognized the need to be flexible around due dates or late work, as his students may be supporting younger siblings with their own learning or dealing with other issues from home.[[126]](#footnote-126)

Other suggested strategies grounded in the ISTE Standards for Educators to foster student agency[[127]](#footnote-127) include the following:

* Find ways to share responsibility with students (e.g., helping in developing project rubrics, establishing class norms, and defining individual learning goals).
* Teach students how to use a self-assessment rubric to focus on their responsibilities, goals, and learning preferences.
* Use group roles to allow students to manage their own learning, contribute productively in teams, and experiment with different leadership and collaboration styles and roles.
* Seek online projects to promote global collaboration.
* Conduct a student strength inventory at the beginning of the school year to assist in the creation of collaborative groups.
* Guide groups in developing collaboration contracts to help divide tasks so that everyone makes a unique contribution.

**Student Voice: Interactive and Engaging Learning Activities are Critical**

Students expressed that, at the start of the 2020 pandemic, teachers had limited time to prepare for online teaching and even less time to carefully consider the type of digital tools to use in their virtual classrooms. This situation often resulted in technical problems and student confusion about how to use the digital tools to best support their learning. To address this issue, students recommended that teachers focus on a limited number of quality digital tools that make the learning experience more interactive and engaging. For example, some students enjoyed the incorporation of tools like Desmos [a mathematics lesson building software], EdPuzzle [interactive video-based lessons], and Pear Deck [a formative assessment platform], which immersed them in the learning process and reinforced student interest in the topic.

Other students shared that the use of interactive and engaging learning activities helped them navigate issues associated with adjusting to digital learning. For example, students who typically took handwritten notes found it difficult to type them out during synchronous lectures. Recorded sessions and the use of digital tools, such as voice typing, alleviated some of their challenges and enabled students to engage using different modalities. For instance, students who require more time in understanding concepts during synchronous class sessions were able to review asynchronously (e.g., recorded sessions) on their own time.

## 

### Chapter 2: Assessing Student Achievement in Digital Learning

Regardless of the format of school—remote, blended, distance, hybrid, simultaneous, or traditional—assessment continues to drive instruction and intervention. Quality assessments allow teachers to identify unfinished learning and unrealized potential and to take action. As referenced in Chapter 1, according to the ISTE Standards for Educators,[[128]](#footnote-128) effective assessment strategies that leverage technology feature several key characteristics that are explored throughout this chapter:

* Educators provide a variety of pathways for students to demonstrate their competency.
* Educators leverage different assessment types to meet learner needs, provide timely feedback, and inform their instruction.
* Educators use assessment data to drive communication with students, parents, and other stakeholders to reinforce student ownership of learning.

It is clear that some approaches to digital learning have stood the test of time, and new ones have emerged as a result of the technology that is available. For example, collecting and analyzing students’ writing is an effective way to understand students’ thinking. Writing samples can be used to determine content knowledge, as well as control of language. Students can write at home, on paper, and take photos of their work to submit via a learning management system. In this case, the difference is simply the location and submission format. Past practices such as this remain effective strategies for determining what students have learned and for identifying misconceptions or errors in a timely manner. Of course, students might have written in a collaborative document and shared it with their teacher, but not everything needs to be digitized.

Newer tools useful in assessing learning might include video responses submitted via an online platform, such as Seesaw [portfolio-based learning application] or Flipgrid [video-based discussion software]. In this case, students can plan their response to a specific prompt and then record it for their teacher. They might have access to a rubric, such as a retelling rubric, to guide the content of their submission, and the teacher can use the rubric to determine what students have learned and what they still need to be taught.

In both cases, data are collected, analyzed, and acted upon. That is what teachers have always done and will continue to do. In the past, many educators clearly differentiated between formative and summative assessments. It is important to realize that formative and summative assessments are not discrete categories. The label attached to the assessment tool does not define its use. Most assessments may be used to gather either data or information which can be used in formative or summative ways. This may not seem like an important distinction, but the false dichotomy between formative and summative assessments has resulted in confusion and conflict in many schools and in the broader educational community. Educators collect data from students and use that data to make adjustments to their instruction and report progress and mastery to a variety of stakeholders, including the students themselves, their families, and the community as appropriate.

This chapter focuses on the **use** of assessment information (see Figure 2.1), which occurs along a continuum. It is important to understand the differences between assessment *for,* assessment *as,* and assessment *of* learning*.* When assessing *for* learning, the emphasis is on collecting information about a student’s progress toward a learning goal with the intent of validating or revising the instructional experiences students have. When educators focus on assessment *as* learning, they provide students with opportunities to consider the criteria for success and self-assess their progress. In this case, the assessment itself is a learning experience for students. Lastly, there is assessment *of* learning, which allows students and teachers to make judgements about the students’ performance at a specific period of time, often at the end of the unit.

Importantly, when teachers engage in assessment *of* learning, there may still be changes in the next unit or lesson based on the proficiency levels attained by students. Assessment *of*, *as*, and *for* learning are not necessarily discrete and separate. Assessments *of* learning can be designed also to serve as assessments *for* and *as* learning.

**Figure 2.1. Assessment *for*, *as*, and *of* learning**

| *ASSESSMENT TYPE* | *DEFINITION* |
| --- | --- |
| Assessment *for* learning | Collecting moment-by-moment and day-by-day data aligned with learning goals with the goal of improving learning and informing instruction |
| Assessment *as* learning | Engaging students in self-assessment of the learning goals often using success criteria |
| Assessment *of* learning | Analyzing information about learning to make judgments about student performance and achievement at the end of a period of instruction |

Many school systems have moved to restorative and equitable grading, which allows students to improve their grades as they demonstrate mastery across the year, rather than at a specific moment in time. In those cases, teachers hold the learning goals constant and allow time, instruction, and practice to vary. Without restorative and equitable grading practices, time, instruction, and practice are held constant, and success in meeting the learning goals (and thus grade) varies.

It is also important to note that some of the tools described in this chapter might fit into more than one category, recognizing that the use of the tool can change. CDE has developed guidance on how LEAs can use California’s approved assessments to evaluate where students are academically at the beginning of and throughout the school year. The state-approved assessment programs also provide additional resources and assessment tools, including the Smarter Balanced assessment system. In California, the Smarter Balanced assessment system includes assessments *for*, *as,* and *of* learning in an integrated manner consisting of three components: (1) Summative assessments; (2) Interim assessments; and (3) Tools for Teachers, a website designed to support classroom-based formative assessment practices.[[129]](#footnote-129) To align with the state guidance, this chapter will primarily focus on assessment *for* learning.

#### Assessment *for* Learning

Educators assess *for* learning in order to find out what students know and are able to do. The primary purpose for doing so is to make instructional decisions about what to do next, especially in prioritizing the teaching—and learning—that needs to occur. Many assessment-*for*-learning events are conducted throughout a lesson. They are usually brief in nature and give educators an opportunity to check for student understanding in the moment. They answer questions that are vital to the acceleration process:

* Where might I quicken the pace of my instruction because my students understand this concept or skill?
* Where do I need to slow the pace of my instruction in order to address misconceptions or partial understandings?

The answers to these questions assist teachers in improving the level of precision in their teaching. The evidence related to the use of instructional minutes suggests that there is time to ensure students are learning more and better. Nuthall’s 2007 innovative study of the classroom conversations between children unearthed a startling statistic; approximately 40 to 50 percent of the content being taught is already known to the students (Nuthall, 2007). The reality is that different students already know different things. Assessment *for* learning offers opportunities to identify what needs to be taught and who needs to learn it. This is accomplished through close monitoring of student learning and feedback that informs teaching.

Reciprocal feedback between student and teacher promotes student learning. These checks for understanding are first and foremost feedback to the teacher about the current status of learning. Assessment *for* learning, when used to its fullest extent, provides the opportunity for teachers to think about their teaching and make responsive adjustments based on current needs. In doing so, they strengthen the positive impact on student learning. While assessment *for* learning practices are ongoing, they are not chaotic. Consider three assessment cycles: minute-by-minute, daily lesson, and weekly.

The chart in Figure 2.2 provides an overview of strategies. By providing students with multiple means of demonstrating their learning, such assessment types also help further support practices called for in the ISTE Standards for Educators.

**Figure 2.2. Types and Uses of Assessments within Assessment Cycles**

| *CYCLE* | *METHODS* | *INFORMATION* | *SAMPLE DIGITAL LEARNING STRATEGIES* |
| --- | --- | --- | --- |
| Minute-by-Minute | * Observations * Questions (teachers and students) * Instructional tasks * Student discussions * Written work/representations | Students’ current learning status, relative difficulties and misunderstandings, emerging or partially formed ideas, full understanding | * Radio talk * Positive and nurturing learning climate that invites participation * Teacher noticing to determine next steps |
| Daily Lesson | * Observation * Questions (teachers and students) * Instructional tasks * Student discussions * Written work/ representations * Student self-reflection (e.g., quick write) | Students’ current learning status, relative difficulties and misunderstandings, emerging or partially formed ideas, full understanding | * Interactive videos * Asynchronous exit slips * Synchronous entrance slips * Universal responses (hand signals, interactive whiteboard) * Polling |
| Week | * Student discussions and work products * Student self-reflection (e.g., journaling) | Students’ current learning status relative to lesson learning goals (e.g., have students met the goal(s) or are they nearly there? | * Video retellings * Interactive digital notebooks |

##### Minute-by-Minute Assessments for Learning

Much of the informal assessment data gathered occur organically throughout a lesson. Teachers observe the verbal and nonverbal signals of students and listen closely for questions that arise. In distance learning, these observational opportunities are somewhat different than those available during in-person learning. Digital instruction provides more limited visual information to rely on, as students are seen only from the shoulders up, in small digital boxes, and often with their microphones muted. If a student’s camera is off, some of these cues are further reduced.

It is important to ensure that the learning climate is supportive and positive and provides opportunities for students to ask questions during the lesson. Discussion can be awkward in a virtual environment. Students are often reluctant to interrupt, and the unintended result might be that teachers engage in extended monologues rather than true discussion. Teach students “radio talk” so that they feel more comfortable inserting themselves into conversation. A radio talk sequence begins with a student saying the teacher’s name followed by their name: “Ms. Ramirez. This is Deja.” This alerts the teacher to who is speaking and gives the student the floor to comment or pose their question.

Another technique is to remind students at the beginning of each lesson to use the chat function throughout the lesson. Teachers can monitor the chat and actively incorporate students’ names and comments into their teaching. Teachers can listen carefully to the questions and observations students make. Student discourse is often reflective of what they know and do not know in that moment. When a student poses a comment, teachers can engage in teacher noticing and try to note concern(s), and consider what students know and what they need to learn next or clarify. The focus here is not just deciding whether a student is correct or incorrect. If their response is incorrect, teachers can take the time to speculate about what may have led the student to that answer. For younger students, emoji checks can also be useful. Students can use the reaction buttons to respond yes/no or put their thumb up.

##### Assessment for Learning in Daily Lessons

Spontaneous interactions with students provide one type of opportunity to assess *for* learning. These should be coupled with intentional intermittent checks for understanding. This is especially important during asynchronous learning when the teacher is not directly present to gauge progress. Interactive videos have the potential to spur on student learning while providing valuable feedback to the teacher. Interactive videos are short recordings made either by the teacher or commercially prepared. The instructional video is segmented into parts, and the video pauses while a multiple-choice or short constructed response question is posed to the viewer. The video cannot advance until the question is answered. In the event of an incorrect response, some interactive video software provides the option to take the student back to the relevant portion of the recording. Interactive videos increase the accountability for students to view and respond during asynchronous learning. Importantly, the data report provides the teacher with valuable information about which students encountered difficulty and where they did so. Responsive teachers follow up with these students to provide further instruction.

Exit slips submitted after the conclusion of a lesson provide another opportunity for asynchronous assessment. A Google Form, interactive digital notebook, or online discussion board can be used to capture student learning, while also providing closure to the lesson. For instance, teachers can ask students to name something that surprised them in the day’s lesson, or pose a more specific content-related question (e.g., “Based on today’s discussion of the protagonist’s internal characterizations, how would you describe her conflict with the antagonist?”). Younger students can video record their response on Seesaw or another platform.

Entrance slips during synchronous learning alert the teacher to the current level of learning. Teachers can invite students to post their wonderings using a Padlet [a multimedia bulletin board tool] divided into three sections: Certain, Possible, and Uncertain. After introducing the lesson’s intention, teachers can ask students to consider what they already know or can speculate. For example, a fourth-grade class learning about the role of 19th century communication technologies in transforming the California economy were asked to respond to this opening question: “How could a recently arrived person in 1850 Sacramento communicate with her family in Ohio to let them know she had arrived safely?” Students’ postings on the Padlet alerted the teacher that the class already knew some things about the telegraph but thought that mailing a letter would be an easy thing to do. Students in a first grade class used Mentimeter [an online, real-time polling tool] to respond to an entrance question that the teacher read to them.

These beginning- and end-of-lesson assessments *for* learning might bracket other assessment opportunities that frequently arise throughout lessons. These additional embedded assessment opportunities are intentional, planned in advance, and may also be adapted to provide data in minute-by-minute learning situations. In a distance learning format, these might occur about every 10 minutes in order to maintain high levels of cognitive and metacognitive engagement. Many of these strategies involve the use of universal responses, which are micro-assessments that allow the teacher to check for understanding efficiently across the entire group. These provide more feedback opportunities for the teacher and gather additional data because they are soliciting responses from 30 students, rather than two or three. Simple universal response opportunities include nonverbal ones, such as using hand signals. Thumbs up/thumbs down gestures, as well as fist-to-five signals, enable the teacher to quickly scan to see where students of all ages are in the moment. The teacher is able to assess whether students need more time or are ready to move to the next part of the lesson. Hand signals often provide an intuitive way for younger students to respond.

Many schools supply students with small whiteboards and dry erase markers to show their work. The bright surface and bold lines made by the marker make it easier for the teacher to see student responses. For instance, a teacher might pose a mathematics problem to students and ask them to draw a mathematical model of it on their whiteboard. After students have had sufficient time, they hold their boards up to the camera, and the teacher reads their responses. Teachers can consider taking a screenshot of the students’ work so that the teacher can analyze it later. A kindergarten teacher teaching consonant-vowel-consonant words, such as *mat*, *hat*, and *sat*, had students hold up their personal whiteboards after repeating the target word several times.

When students are hesitant to keep their camera on, teachers might let them know when they will need to provide a visual response to a question. Students can show their thinking on paper, personal whiteboards, or using response cards, such as those with yes/no, A/B/C/D, or other items written on them. Teachers can give students a count when teachers are ready to have “cameras on” for their screenshot. Teachers can remind students that their thinking needs to be visible, not necessarily their faces. When teachers need cameras on, respectful lead times may increase the responsiveness of students.

Polling is a universal response technique that does not require a camera. Polling strategies can be deployed throughout the lesson or used as assessment at the beginning or end of a lesson to gauge student understanding. Many learning management systems have a built-in polling function. In addition, there are popular add-ons, such as Mentimeter, Kahoot [a learning game platform], Formative [a formative assessment platform], and Socrative [a formative assessment platform]. Polls can be set to ask about a mathematics concept, such as identifying when the solution to a problem is an example of a property. When there is widespread disagreement about the answer, teachers might consider resisting the urge to tell students immediately which response is correct. Instead, teachers might invite students into breakout rooms to discuss the possible answer with peers, justifying why they believe their particular response was the correct one. Students then return to the main room and repost the poll again. Most likely, teachers will see more correct answers the second time around because students have had the opportunity to test their assumptions in the company of their peers. In doing so, those who were initially incorrect gain insight into the thinking of others.

Polls do not need to be confined to questions with a single correct answer. Teachers may use opinion polls to spark discussion. Programs, such as Pear Deck [a formative assessment platform], provide students with the ability to place their icon on statements that reflect their opinion. For instance, teachers can create a virtual version of a “four corners” debate activity to solicit opinions and form breakout rooms. A high school class reading a short story about a crime of passion can be asked by their teacher if they believe the main character planned the murder in advance. Students could respond using Strongly Disagree, Disagree, Agree, or Strongly Agree. Their teacher can then open breakout rooms for them to discuss the point with like-minded peers. The students can then return to the main room for a hosted discussion. Methods such as this can be used to approximate the small-group table conversations that are used intermittently during whole group discussion. As with other universal responses, this approach provides a distinct advantage in that all students participate, rather than relying on the handful of students willing to respond to individually-posed questions.

##### Weekly Assessment for Learning Opportunities

Weekly assessment opportunities provide teachers with information about progress toward meeting unit learning goals. Weekly assessments are often accomplished asynchronously by individual students. Teachers might remember that these assessments do not all need to be assigned on Friday. Teachers can consider a rotating schedule in which 20 percent of the class is responding each day. A rotating assessment schedule ensures that teachers are far more accurately informed about the progress of the class and where adjustments need to be made.

Strong lesson design is grounded in stated learning intentions and success criteria to provide students with a clear sense of what they are learning and how they will know they have learned it. Clarity related to the purpose and intended use of assessment is an essential dimension and is manifested when the goals of instruction, the design of the lessons, and the assessments used are aligned. In other words, it does not stand apart from instruction; it is woven within it.

Teachers might consider designing no-stakes assessments *for* learning that are linked directly to stated learning goals. Students can respond in a number of ways. For example, students can record short video responses that address the lesson goals currently being taught. A student can submit a retelling of a story they have read. Retelling is a well-documented method of teaching and assessment for promoting reading comprehension (Schisler et al., 2010). An added advantage is that the teacher is able to view the recorded retelling using a retelling rubric and review segments as needed in order to check for understanding.

Interactive digital notebooks provide teachers with a “one-stop shop” for reviewing students’ written products. These notebooks are actually digital slides, and teachers can continually populate them with writing prompts and other assignments. Because they are stored in a virtual environment, materials and student products can be safely stored in one place. Teachers can assign a reflective writing prompt and then examine students’ efforts. As with retelling, consider spreading these digital writing prompts across the week so that they create a rolling record of how learning is progressing. For instance, a Biology teacher can ask students about Alhazen, a Muslim scientist whose early experiments on light, more than 1,000 years ago, made contributions to the field of optics for hundreds of years. The teacher can populate students’ digital notebooks with questions (e.g., “What were Alhazen’s methods for his experiments?”) and provide written or voice feedback inside these same notebooks.

#### Assessment *as* Learning

Assessment *as* learning practices and strategies provide students with an opportunity to learn more about themselves. Students might use a variety of assessment tools to monitor the progress they are making toward specific learning intentions. Consider changing the role of educator from that of arbiter and decider of students’ learning to the role of validator and challenger, based on students’ self-assessments. Given that educators are responsible for monitoring student learning, adjusting instruction to address assessed student needs, and for providing stakeholders with evidence of student progress, consider the opportunities distance learning might provide for improving students’ ability to monitor their own progress. Furthermore, the ISTE Standards for Educators calls on teachers to empower students with lifelong skills through actively engaging in monitoring their own learning, recognizing when they are not meeting their learning goals, and seeking and responding to feedback from others.

The value of teaching students to self-assess is reflected in the examples that follow. Among a wide variety of self-assessment strategies are know/show charts, single point rubrics, and ipsative assessments. All of these tools can be made more readily available to students through the use of digital formats. Consider beginning by asking students to self-assess the quality of their breakout room conversations. Teachers can share the learning intentions and success criteria for the day or week on the learning management system and then invite students to rate themselves on each in terms of current knowledge or skill during asynchronous learning prior to live instruction. By creating opportunities for students to use assessment information, they extend their own learning.

The use of know/show charts engages students in self-assessment. A simple chart, as shown in Figure 2.3, can be built using Google Forms [an online polling tool] for students to complete.

**Figure 2.3. Learning Intention and Success Criteria**

| *KNOW* | *SHOW* |
| --- | --- |
| What do I know, relative to the learning intention and/or success criteria? | How can I show what I know? |
| (Students complete.) | (Students complete.) |

In this case, students reflect on what they know at the time and record it in the left column. As they do so, they consider the range of ways that they might demonstrate, to themselves and others, what they currently know or understand. Imagine a group of students learning about the ways in which a poem’s structure or format influences the meaning. They might have learned to recognize various types of poems, the structures that poets use, such as rhyme schemes and meter, as well as aspects such as line length or repetition. Recognizing that the point of that standard is to focus on meaning and how structure and function contribute to understanding the poem, the second column invites students to consider how they might show where and how the author’s use of structure contributes to their understanding of the poem. This strategy also introduces the element of student choice into the assessment picture. Know/show charts also provide the teacher with the opportunity to review each student’s submission and determine which piece of evidence the student might be asked to expand upon.

Another self-assessment opportunity comes in the format of single-point rubrics or checklists. These tools focus on one level of achievement, usually whatever it means to be proficient. These differ from analytic rubrics that contain various levels of performance. Students can use these tools to analyze their own performance and identify areas of additional growth. As such, they become an assessment *as* learning when students’ come to understand what they still need to learn by engaging in the assessment itself. For example, a student who has submitted a recording of a retelling of a story, as explained in the previous part of this chapter, might self-assess their own performance using a single point rubric, record a revised and improved retelling, then submit both to the teacher. As shown in Figure 2.4, teachers can consider a single point rubric for constructing a viable argument in mathematics.

**Figure 2.4. Sample Rubric for Constructing a Viable Mathematics Argument (Almarode, et al., 2021)**

| *GROWS* | *CRITERIA AND DESCRIPTORS* | *GLOWS* |
| --- | --- | --- |
| How can I strengthen my work? | My stated assumptions are mathematically accurate. | What are strong aspects of my work? |
| How can I strengthen my work? | My argument draws upon mathematical definitions and previously established results. | What are strong aspects of my work? |
| How can I strengthen my work? | My conjectures build a logical progression. | What are strong aspects of my work? |
| How can I strengthen my work? | I justify my conclusions, communicate them to others, and respond to arguments of others. | What are strong aspects of my work? |
| How can I strengthen my work? | My argument involves the use of multiple representations (e.g., objects, actions, drawings, diagrams, and labeled equations). | What are strong aspects of my work? |

Notice that the student can use the middle column as the criteria. It is assumed that there would have been lessons related to each of the rubric elements before students engaged in self-assessment. Using this tool, students could consider their work and determine where they still needed to grow and where they had already met the criteria for success. In doing so, they focus their attention and learning on areas of need. Teachers can engage students in conversations about their self-assessments and the evidence used to make those judgements, reviewing the evidence to validate and challenge students’ thinking.

A third example of assessment *for* learning is known as ipsative assessment. These assessments invite students to compare their current performance to their own past performance (Isaacs et al., 2013). Of course, teachers can engage in ipsative assessment of students’ learning, but inviting students into the process can be a learning experience for them. Essentially, the idea is that students set a goal to improve their performance. It is analogous to athletes who focus on their personal bests or personal records (PRs). Of course, athletes and students are eventually compared with others, but the focus on improving self-performance can be motivating.

As teachers consider ways to accelerate learning and ensure that students have the opportunity to demonstrate improved performance, ipsative assessments have a lot of potential. Through ipsative assessment, students can set personal, realistic goals based on their current performance and then monitor their progress using the assessment tools that their teachers provide them. The specific tool is less important here. The critical point is to focus students’ effort and attention on improving their own performance and not comparing themselves to others.

Consider these examples:

* Imagine a group of third graders working on fluency. The teacher knows the fluency norms and the evidence about words correct per minute, as well as the risk of focusing only on fluency such that reading rate increases but word knowledge does not. Taking an ipsative approach, the teacher would invite students to self-assess their own fluency. The students video record themselves and then analyze their reading. The students then meet individually with their teacher during a video conference to set goals together. They can discuss goals, including both rate and prosody (the use stress, intonation, pauses, and emphasis). When students understand their current performance and have a goal, they are more likely to allocate their time and attention to accomplish that goal. In this case, students engage in deliberate practice aligned with their goals because they understand what they are trying to accomplish. It becomes much less teacher-directed and much more student-directed.
* Similarly, a group of Algebra teachers can organize their curriculum by big ideas. For each big idea, they develop performance tasks aligned with those concepts. They ask students to score their own assessments. Students then analyze their results, develop plans, and set a goal for improvement. Each student uses the following frame to analyze their performance:

Students are encouraged to participate in additional assessment opportunities and update their analyses. The teachers provide lessons, peer teaching opportunities, practice, and feedback. They also conference with students about their analyses and goals. In doing so, teachers share responsibility for learning with students and invite students into the process. Assessment opportunities that engage students in their own assessment are also valuable tools to utilize during virtual parent-teacher conferences. A student can discuss their progress and goals using the data they have collected during the grading period.

#### Assessment *of* learning

The final type of assessment focuses on students’ demonstration of proficiency or mastery of the standards. Teachers use a number of different tools in the summative assessment *of* learning. Teachers should be aware of the vulnerability of test items to simple internet searches, which requires alternate ways to know what, and how much, students have learned. Such methods are critical to alignment with the ISTE Standards for Educators, which calls on educators to communicate that data on a continuous basis to students, parents, and other relevant stakeholders further guide instruction and learning strategies.

Performance assessments provide an alternative to traditional tests. The key feature of performance assessment is that it requires the student to produce an artifact, such as a report, experiment, or performance, which is evaluated against specific criteria. The range of performance assessments is wide, from speeches and presentations to projects and debates. Examples of performance assessments teachers have used to assess mastery of the content standards include, but are not limited to, the following:

* Physics students were provided materials to make a vehicle powered by a mousetrap. They constructed these devices at home under the guidance of their teacher. They then had to collaborate in small groups to experiment with various designs that met the established criteria, which included propelling the vehicle 10 feet forward and at least three feet backward. They had to record various attempts and document the changes they made each time as they worked toward success. In their final reflection, they were asked to apply principles of physics to the experience using their digital interactive notebooks. Students were assessed as a group on their scientific skills and individually on their written products.
* Middle school history students were given debate topics and randomly assigned pro or con positions. They conducted individual research asynchronously and worked with their groups during synchronous learning to prepare for debate day. They had been taught debate structures, and the teacher used video conferencing to have students share their screens and make their points.
* Students in fifth grade were tasked with creating reports of information. They were invited to select a topic from a list or propose a similar one. They knew that the written report needed to meet specific criteria in terms of organization and voice. They read their drafts aloud and recorded them for asynchronous peer feedback. They revised their drafts based on the feedback received and submitted them using a collaborative writing tool. In breakout groups, they provided feedback to each other and then finalized their submissions for the teacher.
* Second grade students were given a rich mathematical task to complete. They were tasked with solving the problem and recording a presentation of their findings for their teacher. They understood that they needed to use mathematics terminology and explain their thinking.
* Kindergarten students generated a list of questions based on specific topics and then interviewed people to find the answers. They had been taught to start and stop the recording, and their teacher helped them assemble the various answers before sharing their collective podcast on Spotify [an online streaming platform].

Another assessment *of* learning approach allows teachers to focus on confirmative assessments. These assessments serve to confirm that learning has occurred. This might include formal tests, with some modifications for distance and online learning. Most learning management systems provide an option to randomize questions and response options and can be set as a timed test. This helps ensure that students are answering the questions and not just sharing answers with their peers. Again, this strategy is vulnerable to internet searches for solutions. Therefore, teachers may consider including skills related to consulting resources directly in the assessment. This strategy requires ensuring that the questions are robust enough so that students searching the internet can still demonstrate their learning.

The format of the test itself may require fundamental changes. For example, teachers can provide students with a mathematics test completely finished with all work shown and then ask students to analyze the responses for patterns of errors. Searching the internet will provide only minimal help with this task. Students will need to apply their conceptual understanding as they identify errors and consider the faulty reasoning behind the errors.

Other educators use triangulation of tests to increase their validity. Teachers might interview students about randomly selected items following the test. Alternatively, students might write a justification for selected items. For example, if students choose item b for question 10, they would write a brief justification for their response. Each student could be assigned different questions and responses to justify.

Finally, there is evidence that having an honor code, a public commitment ceremony, and frequent reminders of this before each assessment can reduce dishonest behavior fairly significantly (McCabe et al., 2010). For example, the first question a teacher might ask on an assessment might be, “What does it mean to you not to ‘cheat’ on this assessment?” The last question presented might be, “Did you live up to the expectations you set for yourself in question 1? Is there anything you need to tell me?” Reminding students about who they want to be can help them focus on what they have learned and show you that authentically. This is especially true when they know that it is never too late to learn and that there are multiple opportunities to demonstrate success.

#### Conclusion

There are a number of tools educators can use to guide their instructional decisions as well as the information they report back to their community of learners. For distance learning to be effective, educators must maintain the link between assessment and instruction. As educators have noted, there are a number of ways to use assessment information, and some tools can be used for multiple purposes. Knowing what students need to learn, aligning instruction with those learning goals, and collecting evidence of learning are the hallmarks of effective educators, regardless of the location in which learning occurs.

### Chapter 3: Fostering Healthy, Equitable, and Inclusive Digital Communities

Students need to develop both academic and social emotional skills to be successful in the 21st century world, where technology, access to information, and work/school routines are rapidly changing. Skills such as critical thinking, problem solving, application of knowledge to novel situations, and the ability to self-direct will become increasingly important as today’s students move into their future. At the same time, students need to develop empathy and compassion to connect with others and build cultural competence to navigate a complex and diverse world.

Traditionally, educators have supported the development of these important skills within in-person classroom settings. They now have the opportunity to reinforce these life skills through virtual environments. Creating a healthy, equitable, and inclusive digital space, where deeper learning and meaningful relationships can take place, does not happen spontaneously. Educators need to *intentionally* create the social and emotional conditions that support the development of these skills, attitudes, and relationships in *all* students as they mature.

Social emotional learning (SEL) is the process through which all people acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions, achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.[[130]](#footnote-130) Through effective and ongoing SEL instruction and support, educators can provide the safe and supportive digital communities for students to thrive.

California is committed to ensuring that SEL instruction is a part of every student’s school experience, as exemplified by the state’s participation in the Collaborating States Initiative hosted by the Collaborative for Academic Learning and Emotional Learning (CASEL) and the creation of California’s SEL Guiding Principles[[131]](#footnote-131) and SEL Resource Guide.[[132]](#footnote-132) In 2020, the Advance SEL in California Campaign was launched to gather large-scale input from educators, school leaders, and families and share best SEL practices to support students dealing with the impact of the COVID-19 pandemic and beyond. The work culminated with a final report that includes recommendations for advancing transformative SEL in California.[[133]](#footnote-133) Considering how to strategically integrate SEL practices and programs in online and blended spaces is a critical priority for educators as they reimagine the future of students and education.

The 2020 global pandemic brought to light the persistent inequities affecting the income, education, and health infrastructures in the United States, which disproportionately impact Black, Indigenous, and People of Color (BIPOC), individuals with visible and non-visible disabilities, and those living in poverty or experiencing homelessness. As schools work to strengthen their distance learning and blended programs, SEL becomes an essential tool not only for supporting student mental health, engagement, and resilience through the development of essential SEL skills, but also to “foster community-level responsibility and empowerment”[[134]](#footnote-134) through centering systemic efforts in collective well-being and the pursuit of a more equitable and socially-just society.

In developing the *California Digital Learning Integration and Standards Guidance*, a focus group of students were convened in partnership with Californians for Justice to discuss their reflections after a year of technology-infused learning in 2020 and 2021. The students shared that a priority of teachers should be to build a supportive and genuine relationship with their students. Several students shared how challenges in their personal lives impeded their learning process. The challenges they faced included having to care for siblings and helping them with their schoolwork, being the primary caretaker of ill family members, and experiencing the loss of loved ones. They found that managing these unforeseen circumstances made them feel “out of control,” which sometimes led to difficulties in focusing, procrastination, and declines in academic performance.

Other students expressed that in a face-to-face classroom environment, they may have found it difficult to speak directly with teachers about these circumstances. However, in a digital learning environment, students were able to use private-messaging functions built into various video conferencing tools or even text their teachers directly. Some teachers responded by providing flexibility with assignments, while others were open to hosting one-on-one conversations remotely to check in with the student and hear their concerns. “Treating your students like people, I think is...a start to building a relationship,” one student emphasized.

Students suggested strategies to help foster supportive and genuine student-teacher relationships, including mental health checks, such as those sent privately to the teacher through Google Forms, and setting aside a day to place less emphasis on academics, thereby providing a safe, open space for students to discuss the world around them. For example, teachers can provide opportunities for students to discuss issues and current events that may cause trauma and stress.

Creating equitable and inclusive digital communities requires schools and districts to purposefully center their SEL efforts in nurturing these authentic relationships in service of equity and social justice also known as transformative SEL. According to CASEL, this form of SEL is aimed promoting social justice through increased engagement in school and civic life. It emphasizes the development of identity, agency, belonging, curiosity, and collaborative problem solving.[[135]](#footnote-135) After 20+ years of growth in the SEL field, a need has arisen to shift the focus from individual-level skills, which prioritize individual responsibility, to developing these skills in service of collective healing and shared responsibility. Within a digital space, adopting a transformative SEL approach prompts educators to consider not only students' equitable access to technology, but also centers students' lived experiences and views their identities as an asset within the learning process. Advancing transformative SEL implementation in service of educational equity means that cultural integration is a core principle in distance learning environments.

SEL is not just about the students; it is also about the adults: “the social and emotional competencies of the adults in the building matter, and they matter a lot” (Martínez Pérez, 2021). In fact, a report collecting lessons learned from six years of systematic SEL implementation in some of the largest urban school districts in the U.S. found that SEL initiatives were more successful when schools consider teachers’ own social and emotional competencies.[[136]](#footnote-136) Educators cannot teach what they do not understand, practice, or intentionally model. In addition, adults need support to explore their unconscious bias and develop assets-based mindsets to their work with underserved students. To create healthy and supportive digital communities, consider the SEL strengths and needs of the adults supporting children, and engage them in a continuous process of reflection about their values, views, assumptions, and biases.

This chapter provides background information related to the impact of emotions on learning and well-being, the importance of relationships in digital spaces, and adult SEL competencies. Then, CASEL’s five social and emotional dimensions are presented through an equity lens, and strategies are offered to teach and infuse SEL in distance learning.

#### Cultivating Educator and Student Well-Being

Educational practices and programs that promote SEL have a positive impact on students’ academic performance, classroom behavior, ability to manage stress and depression, and attitudes about self, others, and school (Durlak et al., 2011). Although the research connecting distance learning and SEL is still emerging, there is a broad consensus among parents, educators, students, and scientists that SEL matters and has an impact.

When teaching remotely, teachers can create safe and supportive environments that improve students’ ability to engage and learn, where students’ identities are affirmed, and a sense of belonging is nurtured. In digital spaces, educators *can* feel competent, purposeful, show compassion towards themselves and others, and work to create partnerships with families and community organizations.

When educators teach and promote SEL in a virtual environment, they are building individuals’ capacity to integrate their thoughts, emotions, and behaviors to accomplish important tasks in daily life, acquire the tools for digital citizenship, and increase their well-being.

##### Emotions Impact Learning

**Class Spotlight**

Maria, a Kindergarten student enrolled in distance learning, rushes to open her tablet when she realizes that her device has no power. She calls for help, but her parents are both in virtual meetings and cannot help her. She becomes increasingly frustrated as she tries to find the charger, which she finally finds under her notebooks and folders. When she accesses the link for her morning class, it takes her teacher what feels like an eternity to let her in the virtual room. By the time she can see her teacher and classmates, she feels agitated and keeps tapping the raise-hand-icon so she can share with her teacher why she is late to the morning meeting. When it is Maria’s turn to greet the teacher, she has her head down on the table.

Maria’s teacher realizes right away that something had made her very upset and asks her about it. During the virtual morning meeting, Maria has an opportunity to share why she was late and is encouraged to name her feelings. She feels better after that and is able to engage with the day’s lesson.

Emotions are an important part of human life, and they greatly influence students’ readiness for learning, including in digital spaces. Emotions drive a person’s attention; they influence one’s ability to process information, learn new concepts, and make decisions. If this teacher had not recognized Maria’s emotional state and helped her to process these feelings through the digital morning meeting, it would have been difficult for Maria to pay attention that morning. Students need a space where they can process their feelings, refocus if needed, and prepare for learning.

In recent years, new knowledge about human development from neuroscience and the science of learning and development has demonstrated that emotions and social relationships strongly influence learning (Darling-Hammond & Cook-Harvey, 2018). Dr. Immordino-Yang, affective neuroscientist and human-development psychologist, states that “emotions form a critical piece of how, what, when, and why people think, remember and learn” (2015). These findings have important implications for teaching and learning in virtual spaces because young people need to understand and process their emotions in order to engage in complex thought or make meaningful connections about new concepts. Learning is impaired when students are fearful, traumatized, or overcome by challenging emotions. Therefore, educators play an important role in creating an emotional environment that is conducive to learning in virtual spaces.

Educators might reflect on their own experiences with online meetings. They may have felt excited to see their colleagues, curious to get new information, or accepted by a supportive community. If teachers experienced any of these feelings, they were probably attentive, focused, and receptive to new information during the meeting. However, if they felt unseen or dismissed in an online space, they were more likely focused on these feelings than on the content of the meeting.

The same is true for students—pleasant emotions, such as curiosity, acceptance, and excitement—support meaningful learning. While other emotions, such as rejection, dismissal, or fear, hinder students’ ability to pay attention, follow directions, or authentically engage with the material presented to them. In summary, the emotions children and youth experience originating *in* the distance learning environment influence students’ engagement and performance.

It is critical to consider the impact of Adverse Childhood Experiences (ACEs), which are stressful or traumatic events children experience before age 18 that negatively impact the nervous system and the ability to regulate emotion. Virtual spaces do not immunize BIPOC, neurodiverse students, or children from low-income backgrounds from experiencing stress and microaggressions. It is critical for educators to understand the emotions students bring from life outside of the classroom, as well as those originating in the virtual space, and how they impact their ability to engage, perform, and thrive in online environments. Once teachers are familiar with the critical role that emotions play in learning, they can design educational experiences that support students as they navigate the demands of their diverse contexts and engage with instructional content.

##### Strategies to Incorporate Emotions in the Virtual Classroom[[137]](#footnote-137)

* **Give students choice.** Choice, when provided in a structured manner, can motivate students and instill a sense of ownership over the learning process. Educators can make it possible for students to choose their research topic, ways to complete a task, or how to show mastery of a standard.
* **Help students relate the materials discussed in class to their life and personal interests.** The brain does not pay attention to things that are irrelevant and not of interest. Students will be able to pay more attention and focus for longer periods of time when the material presented in their virtual classroom is meaningful to them. Educators can get to know their students by using surveys or personal inventories, in which students share their likes, dislikes, their hobbies, special interests, and/or people in their lives.
* **Create opportunities to solve open-ended problems.** Highly prescriptive activities most likely provide little opportunity for emotional engagement. Engaging students in activities, such as classroom discussions, work groups, or project-based learning, in which students can wrestle with problems that do not necessarily have a right/wrong answer, provide opportunities for meaningful engagement. This engagement in virtual or blended settings allows or encourages students to establish the emotional connections that are important for cognitive learning.
* **Offer a variety of tasks and activities.** Educators can use different platforms and strategies to engage students in diverse ways. During synchronous and asynchronous time, educators can use tools such as digital manipulatives, instructional videos, interactive tools, or have students record mock-ups or engage in discussion boards. Providing this variety helps students build confidence with certain tools and grow their ability to use others.
* **Include regular check-ins with students (beginning, during and/or at the end of the day/class).** Regular check-ins might include engaging with mood meters during virtual classroom meetings, starting class with a song, or asking students to share how they are feeling using chat or a digital whiteboard. The goal is to create a welcoming environment for students to check-in with each other and build a sense of community. It also provides the opportunity for teachers to note students who are unusually quiet or visibly upset. As an active participant in the check-in, the teacher models how to name and express feelings appropriately.
* **Create space and/or provide time in the virtual classroom to refocus.** Teachers can schedule quiet time or a peaceful breakout room for students to take a breath or do free drawing. The idea is to help students refocus and de-stress, so they can get ready for learning. A short time devoted to these strategies may support sustained focus in the long term.
* **Incorporate “brain breaks,” “energy boosters,” and physical movement.** Brains are wired for novelty. Educators can enhance virtual learning by providing short activities to refresh students’ thinking, breaking up predictable and repetitive processes, and moving students away from their devices. Regular physical activity improves memory, concentration, and positive outlook. Physical movement can be easily incorporated in online learning through free platforms, such as Go Noodle, where students dance and move their bodies following instructions from a recorded video. It can also be done during asynchronous time, where students log physical activity, create and share games that involve physical movement, or record themselves playing or dancing.

##### Nurturing Positive Relationships in Digital Spaces

Children’s relationships with adults are an essential ingredient for learning and healthy development. When positive relationships exist between students and teachers in the classroom, students are more likely to use their teachers as resources to solve problems, actively engage in learning activities, and better navigate the demands of school.

According to research in developmental science, positive relationships create not only the developmental pathways for lifelong learning, adaptation, and integration of social, emotional, and cognitive skills, but also make qualitative changes to a child’s genetic expression (Osher et al., 2018). Brains change in response to the experiences, relationships, and environments encountered from birth into adulthood.

Positive relationships also foster resilience, and reduce the impact that negative factors, such as ACEs, may have on children’s healthy development. In other words, positive relationships are a protective factor for all students, but especially young people dealing with chronic stress, trauma, and impact of ACEs.

It is important for educators to examine their biases when considering how to build trust and foster positive relationships with students and families who are ethnically, culturally, and linguistically diverse. By developing cultural competence, educators can gain awareness of their own cultural identity and how they perceive differences with their students and families. Differences in social and cultural background and circumstances make it more difficult for some people to trust others. This trust gap may hinder students’ ability to meaningfully engage with peers, teachers, and classroom content. To further foster productive, positive relationships, educators can learn about and build on the rich cultural and community assets of students and their families.

In digital spaces, it is critically important that educators intentionally design and implement practices that create a sense of emotional and identity safety, belonging, and connection. Teachers can create virtual spaces that intentionally cultivate trusting relationships, affirm and celebrate students’ backgrounds and assets, and foster a sense of belonging and community. Teachers who build classroom cultures that prioritize mechanisms of support and focus on cultivating relationships are likely to be less reliant on traditional punishment when challenges inevitably arise.

Strategies to Nurture Positive Relationships in Digital Spaces

* **Engage in personal reflection.** Educators can examine their teaching philosophy, beliefs and values, and the way culture has influenced their lives. They can reflect on their identity and learned biases[[138]](#footnote-138) and how these may impact their expectations and relationships with students and families.
* **Learn about each student.** Educators can invest time learning about their students and their cultural identities and history. Students can create identity artifacts museums[[139]](#footnote-139) with items from home that are important to them or complete an inventory of their likes and dislikes. Educators can incorporate what they learn about students in their lessons and during interaction with students.
* **Create intentional routines that nurture emotional connection.** Distance learning does not need to mean disconnected. Educators can create circles of gratitude for students to share something they appreciate about themselves or their online learning community. Invite students to share about non-academic topics (i.e., their favorite sports or TV shows). Educators may encourage positive emotional connections with students by sharing appropriate personal information (i.e., show a picture of their pet, share a favorite song, mention a new skill that they are trying to learn, etc.). It is important for students to connect with the adult behind the screen.
* **Routinely engage students in team-building activities**. Team-building activities may be used either as a whole group or in breakout rooms. Educators might let students choose their groups based on personal interests and hobbies, or partnering students so they can get to know each other and discuss topics related to distance learning or their lives outside of school.
* **Co-create norms and expectations with students.** Allowing students to create ground rules of how the group will function enhances students’ ownership and accountability over the learning process. Students can remind each other when they stray from the group’s plan and discuss how to get back on track. This also shows that educators trust students to self-organize and co-regulate.
* **Communicate to students a belief in their ability to learn.** Effective teachers hold high expectations for students, while providing the appropriate amount of support. As students navigate learning in a virtual space, it is important that educators build their confidence while continuing to challenge them to do their best work.
* **Offer unconditional positive regard for each student.** Unconditional**,** positive regardis not contingent on compliance, finishing work, or good grades. When students feel that they are worthy of care, they are more likely to seek help, be motivated to finish schoolwork, or pay attention during virtual meetings.
* **Build partnerships with families.** Educators can learn about students’ families, their beliefs, hopes and dreams, and traditions. Consider inviting family members to the classroom in-person or remotely to share information about special celebrations, careers, or appropriate community activities. Regularly communicate with families through multiple methods, such as phone calls, virtual meetings, mail, and emails.

##### Educator Well-Being

As schools and districts strengthen distance learning programs, their SEL initiatives should include supporting the social and emotional capacity of educators and staff working with children and youth. Adult SEL skills not only support educators as they build their resilience and face the emotional challenges that come with teaching, but also positively impact the learning environment:[[140]](#footnote-140)

* **Teachers’ social and emotional competencies influence the quality of teacher-student relationships.** Teachers who are calm, positive, and content are likely to be better equipped for teaching students warmly and sensitively, even when students behave in challenging ways.
* **Teachers model SEL skills, intentionally or not.** Students pay attention to how teachers navigate stressful situations. They learn from how their teachers deal with conflicts or respond to challenging behavior, and whether or not they foster a prosocial classroom environment.
* **Teachers’ social and emotional skills influence classroom organization and management.** Maintaining a sense of calm, being organized, and cultivating social trust can promote a supportive distance classroom.

Teaching is a highly demanding profession, physically, emotionally, and cognitively. Prior to the pandemic, almost 60% of teachers reported being under great stress. Before COVID-19, 200,000 teachers left the profession, with nearly two out of three for reasons other than retirement.[[141]](#footnote-141) This teacher turnover is estimated to cost $7 billion per year in the U.S.[[142]](#footnote-142) However, there can be a perception that educator burnout is the individual responsibility of each teacher, rather than looking at the systemic organizational issues that are often responsible for teacher burnout and attrition. Although any teacher can take steps to develop their social and emotional capacity, having support from school and district administration is essential in increasing educators’ effectiveness, building adult connections, and maintaining their well-being in the long term.

##### Organizational Strategies to Nurture Educator Well-Being

* Collect and analyze data from teachers and school personnel using online surveys to identify their strengths and current social and emotional needs with tools, such as the Educator Resilience and Trauma-Informed Self-Care tool from the Center on Great Teachers & Leaders.[[143]](#footnote-143)
* Establish space and time for staff to come together with the goal of strengthening their relationships, and problem solve together ways to build a healthy school community. Schools can hold virtual circles, where staff can share their feelings, challenges, and how they would like to be supported.[[144]](#footnote-144) This can also be an informal check-in at the end of the meeting, where teachers share in the chat how they feel.
* Examine how the distance work conditions and school structures and resources support online educator well-being. Consider providing support for educators to develop a self-care plan and have a well-being buddy, and alternate video conference meetings with other types, such as walk-and-talk meetings. Support educators as they reflect on their values, views, assumptions, and biases when working with BIPOC, neurodiverse individuals, or those coming from low-income backgrounds.
* Ensure access to trauma and mental health support for staff.
* Include well-being goals or activities in professional development plans to facilitate the development of adult SEL skills, and consider tools to effectively deal with stress. Incorporate virtual mindfulness, yoga, or journaling in staff meetings. Consider providing teachers with different choices for their professional development plans.
* Check-in with teachers and school personnel on a regular basis, communicate and celebrate individual and group accomplishments, acknowledge challenges, and be open to feedback. For instance, administrators can host virtual office hours or remote coffee with the principal.

#### Infusing Social and Emotional Learning (SEL) in Online Teaching and Learning

Effective, deep learning is dependent upon trusting, meaningful, and supportive relationships between educators and students. Motivation, engagement, and a sense of belonging are established and maintained over time through these relationships. The screen necessary for virtual learning may become a barrier to connecting with students and an obstacle for learning unless educators *intentionally* plan to teach and infuse SEL in their online instruction.

Educators can infuse SEL in virtual environments by using the five broad, interrelated areas of competence established by CASEL known as the CASEL 5. The definitions presented below are grounded in transformative SEL and have an equity lens:[[145]](#footnote-145)

**Self-awareness**: The understanding of one’s emotions, personal and social identities, goals, and values, including the ability to accurately assess strengths and limitations, having positive mindsets, and possessing a well-grounded sense of self-efficacy. High levels of self-awareness require the ability to recognize one’s own biases; understand the links between one’s personal and collective history and identities; critically self-analyze; and recognize how thoughts, feelings, and actions are interconnected in and across diverse contexts.

**Self-Management**: The abilities to manage one’s emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations. This includes the capacities to delay gratification, manage stress, and feel motivation and agency to accomplish personal/collective goals. Perseverance and the ability to proactively address personal and group-level challenges to achieve collectively defined goals are indicators of high levels of self-management.

**Social Awareness**: The abilities to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts. This involves having the critical historical context to practice perspective-taking with individuals of various backgrounds and cultures. It also involves understanding social norms for prosocial behavior in diverse interpersonal and institutional settings and recognizing family, school, and community resources and supports for personal and collective well-being.

**Relationship Skills**: The abilities to establish and maintain healthy and supportive relationships and to effectively navigate settings with diverse individuals and groups. This includes the interpersonal sensibilities needed to establish and maintain healthy relationships and to effectively navigate settings with differing social and cultural norms. Active listening, clear communication, constructively negotiating conflict, offering leadership, seeking help, working collaborative, and resisting social pressures are all indicators of competence in the relationship skills domain.

**Responsible Decision-Making**: The abilities to make caring and constructive choices about personal behavior and social interactions across diverse situations. This incorporates the cultivation of knowledge, skills, and attitudes to make caring, constructive choices about personal and group behavior in social interactions within and across diverse settings that prioritize collective health and well-being. It requires the ability to critically examine ethical standards and behavioral norms while making realistic evaluations of benefits and consequences for one’s actions.

##### How Can SEL Be Infused in Virtual Classrooms?

These important social and emotionalskills can be enhanced by using three key implementation strategies in the virtual classroom:

**Explicit instruction**. This strategy refers to teaching the specific SEL skills and attitudes in developmentally, contextually, and culturally-responsive ways. When starting to teach SEL in the online classroom, explicit instruction is very important because it provides students and teachers a common language to communicate and discuss daily issues and routines.

**Teaching practices that enhance students’ SEL skills**. Teachers intentionally plan and organize activities in the virtual environment to provide students with the opportunity to practice, apply, and extend SEL skills. Teaching practices, including activities such as cooperative learning, project-based learning, asking students to understand another person’s perspective, guiding students to accept and act upon feedback, or allowing students to make choices about their own learning, all require students to use their SEL skills.

**Integrate SEL with academic content**. By integrating SEL with content, teachers can connect the content and vocabulary of their SEL instruction with their English language arts, English language development, mathematics, science, social studies, and health instruction.

In addition, SEL instruction is most effective in nurturing environments among students and teachers who have positive and caring relationships. Establishing emotional connections, creating trust, and developing educator social and emotional capacity are essential conditions to creating these healthy and inclusive digital spaces. A supportive environment is created when:

* expectations, norms, and routines are co-created and represent the diverse perspectives of students and educators with the goal of creating psychological safety and belonging;
* identities and cultures are uplifted and promoted by the school community, and inequitable practices are challenged and dismantled;
* relational trust drives the learning environment, and students and teachers are supported to learn from mistakes with a restorative approach to discipline;[[146]](#footnote-146)

The five broad, interrelated areas of competence established by CASEL serve as a framework for infusing SEL in a virtual environment. Strategies include the following:

##### Self-Awareness

**Incorporate emotional check-ins daily.** Educators can support students’ self-awareness skills by starting lessons with an emotional check-in. This is a time when teachers and students come together to connect and reflect on how things are going. It sets the tone for the day or that particular class. To help students communicate their feelings, educators can use a scale, such as, “On a scale of 1-10, how bored are you feeling?” or “Are you feeling a little lonely, somewhat lonely, or very lonely?” In addition, teachers can use apps like Mood Meter, Padlet, or Mentimeter to help students name their emotions and thoughts, and create a visual representation of the data. This is an opportunity for educators to model, so they should also share their feelings, while gathering important information about their students. If most students are overwhelmed, sad, or frustrated, educators may need to support students to process these feelings before starting to address any academic content.

**Encourage students to express their feelings in non-verbal ways.** Educators can model and normalize expressing emotions by giving students opportunities to express themselves in nonverbal ways. This may include drawing a picture on a digital whiteboard about how their lesson or day is going or showing the most important thing that happened to them that day. Teachers can complete this exercise first and share with students to model how to share with others in a way that feels safe and helps them feel connected.

**Support students in exploring their multiple identities.** An important part of helping students develop self-awareness is supporting them to explore their cultural values, consider their sense of belonging to different groups, and develop their self-efficacy. Lessons plans on identity from Learning for Justice can support educators in elementary, middle, and high school and can be easily adapted for the virtual classroom.[[147]](#footnote-147)

**Help students identify their strengths and assets.** Students who can identify their strengths will be more likely to build on them to face academic challenges and improve their areas of growth. Educators can support students in exploring their strengths by having students complete a personal inventory,[[148]](#footnote-148) or by providing feedback about what they observe in the virtual classroom. Students’ assets can be related to academics, but they can also incorporate students’ character strengths or skills that students have in other areas, such as music, art, or cooking.

**Acknowledge and help students identify their emotional reactions to different online learning activities and topics presented in the virtual space.** Students may display different emotions depending on their prior experience in distance learning. For example, students who may have been bullied or felt unsafe in online spaces may be hesitant to turn on their cameras, participate in breakout rooms, and engage in whole-class discussions. Furthermore, different subjects can also generate a variety of feelings: certain students will feel excited about science projects, while others may be uninterested. Explicitly bringing these emotions into the virtual conversation can help teachers know their students better and normalize the fact that individuals have different feelings.

##### Self-Management

**Teach and incorporate mindfulness and self-soothing exercises to help students navigate their feelings.** When educators notice their students come to the virtual space agitated, they can encourage self-regulation by teaching simple breathing techniques, such as four-corner breathing. This exercise involves inhaling deeply and exhaling deeply four times. Students can complete this breathing exercise by standing up and taking one inhale and exhale breath while facing each of the four corners in a home room. There are several free apps that educators can use in their classrooms, such as Insight Timer, Calm, or Smiling Mind with guided meditations for children and youth.

**Teach students to recognize the physical signs that indicate the body is going into stress mode.** This is very important in online environments since teachers are not in the same physical space with students and may miss information. When students are able to identify these signs, they can more effectively choose a strategy to avoid a meltdown. Educators can use the “Hand Model” of the brain to help students understand how brains react to stress.[[149]](#footnote-149)

**Identify the stress and discrimination that students experience inside and outside the virtual classroom.** When teaching students to navigate their emotions and respond constructively to their virtual environment, educators should acknowledge how the sociopolitical context impacts students' emotional experiences and their ability to cope with stress.[[150]](#footnote-150) Violent and discriminatory events may influence students’ emotional health and increase their stress levels. Educators can support students by creating a safe space where students can express and regulate their emotions, acknowledging these societal challenges, and working with students to pursue collective solutions.[[151]](#footnote-151)

**Support students’ executive functioning skills.** During distance learning, it is important to support students to develop effective ways to manage their time and get organized. They can benefit from using tools that help them stay on track, such as using timers as well as digital calendars embedded in LMS. Choosing an accountability buddy or closing all tabs when they are in a virtual classroom will support students’ executive functioning skills. The goal is helping students stay engaged and aware of the distractions they may face.

**Discover negative self-talk.** Many times, when individuals make an error, they tell themselves negative things when they discover their mistakes. This is true for both educators and students. These negative thoughts can limit individuals’ ability to be present and do their best work. Teachers can describe a time when they made a mistake, the negative things that they told themselves, and encourage students to come up with alternative thoughts that would have been more helpful and supportive for that situation. Students can create a virtual collage using Padlet or Jamboard of positive statements that everybody can use when they feel stuck or overwhelmed by a situation, or when they make a mistake. This collage can help support students in developing an optimistic mindset.[[152]](#footnote-152)

**Student Voice: Support students with developing skills for digital learning**

Students discovered that they needed new skills to manage and organize their learning in a virtual environment. Students had to learn how to stay organized and keep track of their progress in a digital space. Students needed support in developing executive functioning skills. Students shared that various functionalities built into learning management systems, such as a digital calendar, helped them to keep up with and understand their progress. Students also appreciated when teachers focused on a common or limited set of digital tools and provided an introductory lesson for each tool, as this scaffolded their learning.

##### Social-Awareness

**Teach and learn about other people’s perspectives.** Transformative SEL can help educators increase their awareness about how other people—especially those from culturally, ethnically, and linguistically diverse backgrounds—experience life in virtual and in-person environments. Educators can help students develop empathy by discussing current events, using tools such as Newsela, and how these events impact their own or other communities.

**Monitor caring moments.** Students pay attention to those things that educators emphasize on a daily basis. When educators notice and acknowledge student support for each other, students learn that those moments are important. Teachers can keep track of this by tallying when they observe students helping each other with an assignment, providing comfort when something difficult happens, or encouraging others to do their best. Teachers and students can collect and share this data with the classroom and monitor how it increases or decreases over time.

**Role play.** Role playing is a learning structure in which students take the role of a real or imaginary character and act it out. It creates an opportunity for students to take on a different persona (one that may have different values and experiences) and connect with the kinds of emotions and thoughts this person would have. This activity can be done in the virtual classroom by organizing students to prepare their characters in breakout rooms and then bring them together to role play as a whole class. The role-playing situation can be adapted to students’ grade and the current or historical events they are studying.

**Create social justice art.** Artists have historically used their creations to communicate injustice and highlight social challenges. Art can be a powerful vehicle for educators and students to examine students’ multiple identities, the assets that ethnically, culturally, and linguistically diverse students bring to the classroom, and the challenges they face. Creating self-portraits or a virtual classroom mural, using music and dance to express injustice, or making a documentary film can be ways to bring the arts into the virtual classroom, while addressing important social justice topics.[[153]](#footnote-153)

##### Relationships Skills

**Focus on building connections with students.** Although virtual educators have less informal opportunities to connect with students, there are still ways to establish meaningful relationships in a virtual space. Teachers can regularly communicate with students one-on-one or as a class via email, audio message, virtual office hours visits, and check-ins. The goal is for students to know that educators genuinely care for them as people. Questions that educators can use to build relationships with students.

* What helps you feel welcomed?
* How would you like to be greeted?
* What goals do you have for yourself?
* What can you tell me that helps me better understand you as a person?
* How can I support you and be the best teacher for you?
* How can our school and virtual classroom be a place where you feel affirmed, connected, and excited to learn?

**Practice gratitude.** Gratitude is an important aspect of building resilience. When students and educators focus their attention on the positive aspects in their lives, they can gain energy to face challenges. Educators can set up virtual or long-distance appreciation or gratitude circles and encourage students to write one thing they appreciate about themselves or their classmates. Teachers can also share written or oral appreciation for each of their students.

**Use collaborative structures**. Educators might create opportunities in the virtual classroom where students can work together to meet a common goal. Group projects help students to know each other better and appreciate the different talents in the group, while enhancing students’ SEL and academic skills. While individual activities may be easier from a management perspective, learning is a social process. Strategies, such as group problem-solving, think-pair-share, or jigsaws, are also possible in the digital space with some preparation.[[154]](#footnote-154)

**Develop cultural humility.** Differences in the understanding of norms, social roles, and other rules can cause students and adults to misinterpret each other’s attempts to share and collaborate in the virtual classroom.[[155]](#footnote-155) This can cause disagreements to become conflicts that may end up being addressed through discipline, instead of a restorative approach. Cultural humility can help educators effectively negotiate the cultural differences that may exist between them and their students and then support students to do the same.[[156]](#footnote-156)

**Use students’ interests, diverse identities, and cultures to enrich academic content.** When students have an opportunity to know each other and learn from their varied perspectives, they are able to establish stronger bonds and be more engaged in learning. Readings in the virtual classroom should be connected and reflect students’ life experiences; authors should represent students’ cultures and ethnicities, and the diversity of the human experience—from joyful and proud moments to challenging and painful times. Platforms, such as Epic or Storyline Online, have diverse libraries that can be accessed online. In addition, educators can invite students to share their favorite musicians, artists, and authors, and use this information as a vehicle to build meaningful content for students and with students.[[157]](#footnote-157)

##### Responsible Decision-Making

**Teach and learn about civic action.** There are many examples of youth and adults involved in making their communities a better place by identifying inequities, and affecting positive change. Students should investigate and evaluate a variety of approaches to civic action. Through this approach, teachers can help students examine how SEL skills are put into practice, including ethical considerations in the decision-making process. Learning about civic action can also expand students’ awareness about the challenges facing communities and responses to address those challenges.

**Promote student voice and autonomy.** When students feel empowered to contribute to their classroom community, they are more likely to stay engaged even when things are difficult. Fostering students’ autonomy and engaging their voices is a great way to teach and practice responsible decision making. Students could make decisions about how to complete an assignment or select a topic of interest for a project. Students of all ages can lead parent conferences and share their work.[[158]](#footnote-158) Conferences give students an opportunity to use their voice, ask questions, and feel heard. Educators should promote varied opportunities for youth voice across all grade-levels. Teachers can use this information provided by the students as feedback to enhance their teaching and strengthen the learning community.[[159]](#footnote-159)

**Create leadership opportunities**. Students generally have great ideas about how to improve their schools or what teachers could do better. Educators can design leadership opportunities for students to improve things that are important to them and/or support the classroom community.[[160]](#footnote-160) These can range from simple to more complex opportunities, such as leading an online game, contributing to a student club and organizing a student council event. The use of videoconference tools can help students to bolster, along with teacher support, important skills, such as public speaking, mediation, or decision making. By recognizing students’ voices and supporting their leadership development, teachers can encourage students’ civic engagement and recognize their value in becoming change makers in their communities.

##### SEL as a Lever for Equity: Principles and Reflection Questions[[161]](#footnote-161)

As educators integrate transformative SEL, they can consider the following principles and reflection questions to guide their instructional decisions and the strategies they use to build nurturing relationships and a supportive virtual space for growth and learning.

Principle 1: Centering Students’ Lived Experiences and Identities in SEL Instruction

* Reflection question: During SEL instruction, how am I affirming my students’ identities, drawing on their lived experiences, and addressing their urgent needs?

Principle 2: Using SEL Discussions to Validate Student Experiences of Oppression

* Reflection question: During SEL instruction, how am I acknowledging and supporting students’ emerging understanding of oppression as well as its emotional toll?

Principle 3: SEL Instruction as a Space to Encourage Youth to Use their Voice for Social Justice

* Reflection question: During SEL instruction, how do I encourage and provide opportunities for students to engage in developmentally-appropriate and community-connected civic and political activities or projects?

**Vignette: Infusing SEL in Blended and Online Learning**

“Social emotional skills can be fostered in any environment – virtual or in person,” Valerie Sun, a teacher specialist at Glendale Unified School District, says. “It is any moment the educator intentionally creates to help students feel welcome, connected, and heard in their environment. In making these connections and developing relationships, students have the opportunity to build their skills in all five categories of SEL in CASEL’s framework.” Doing this work remotely presents unique challenges, but for this Los Angeles-based educator, at the heart of any endeavor to bring SEL into distance learning is the underlying need for students to feel safe in order to learn.

“I can’t stress the importance of genuine check-ins,” says Valerie. “We need to give our students the feelings that they belong and are connected to their peers and to us.”

When teaching online, Valerie recognizes participants with virtual kudos in the form of Google SlidesMania and SlidesGo certificates in her slide deck [online presentation tools]. She takes note of character-building moments from previous classes and highlights one or two students who displayed admirable qualities, such as being a Fearless Questioner (for not being afraid to ask questions) or Persistent Learner (for those who say they’ve been trying hard and the results don’t show it).

“It’s small, but the recipients are always surprised and feel really proud,” she says. “My favorite part is always when students email me to see if they can nominate another person for the award. I have teachers who told me they started doing this in their own classes and saw great success in building their classroom environment and community.”

Another way to connect with students – and help them connect with themselves – is through breathing and meditation. Valerie talks her students through a quick three-minute guided meditation that she adapts to their needs of the day, especially when she feels their anxious energy. For teachers who are not comfortable reading from a script, there are many age-appropriate apps and videos to guide students through this process, such as MyLife.

The challenges of connecting through a screen can be overcome with creativity. Valerie suggests that teachers make connections through a phone call or a letter. The key is to remain student-centered. “Ask them open-ended questions regarding their activities, games, movies, etc.” she says. “If it is a student who has not been attending class, the last thing they want to respond to is why they haven’t been attending class. If we ask about their hobbies and demonstrate genuine interest, with some persistent calls, they may feel inclined to join our class.” Valerie believes the power of students receiving a letter from their teacher is immeasurable. Even if the message is similar for each child, it helps them see the effort the teacher has made to connect. “My preference is a short, handwritten letter,” she says. “However, because time is precious and if the message is long, then type it, and add a handwritten part like, ‘We miss you!’ or ‘You are appreciated!’”

Making genuine connections and developing relationships is a critical foundation for teaching and learning. The SEL framework gives educators the structure to put that into action to advance students’ development. With a little creativity and extra care, teachers can provide meaningful moments throughout each student’s day to make their in-person or virtual classroom a space in which they can feel safe to learn and grow.

##### Infusing SEL as a Schoolwide Approach

Online and hybrid learning experiences create a great opportunity for schools to respond to students’ individual needs through existing systems of student support. SEL goals and practices can be integrated with universal, targeted, and intensive academic and behavioral supports offered virtually to best accommodate students’ assets and areas of growth.

In addition, partnerships with families can be strengthened in online spaces by inviting parents to share their expertise, cultural norms, values, and traditions in classrooms or school-wide virtual events. It is also important for schools to maintain open and regular communication with families focused on mutual goals and building connections. These efforts can support families in developing trust and a sense of belonging, and experiencing the value of developing socially and emotionally competent children and youth.

SEL implementation requires a systemic approach to include collaboration across all stakeholders in a variety of settings, including classrooms, schools, families, and communities, to ensure supportive and equitable learning environments for students as they continue to grow. These coordinated efforts have the potential to foster youth voice, agency, and engagement; establish supportive classroom and school climates and approaches to discipline; enhance adult SEL skills; and establish authentic family and community partnerships.

*Note: Digital tools and resources to support the implementation of the strategies and considerations identified in this section are included in the Appendices. Please also note that digital tools referenced in Appendix B include free and premium options, and their inclusion in the guidance are largely derived from interviews with California educators. LEAs exercise local control when selecting digital tools and resources. Resources and digital tools included in the guide should not be considered endorsements by the CDE.*

California Department of Education, June 2021

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