



DRIVING K-12 INNOVATION

2022
HURDLES +
ACCELERATORS



Challenge

Technology is an essential element of learning, yet the use and application of it is inequitable.

Vision

CoSN is a community of visionary technology leaders empowering every learner to achieve their unique potential in a changing world.

Mission

CoSN provides current and aspiring education technology leaders for PreK–12 with the community, knowledge, and professional development they need to create and grow engaging learning environments.

CoSN is vendor-neutral and does not endorse specific products, services, or solutions.



INTRODUCTION

CoSN's Driving K-12 Innovation initiative proudly convenes an international Advisory Board of more than 100 education and technology experts to select the most important Hurdles (challenges), Accelerators (mega-trends), and Tech Enablers (tools) Driving K-12 Innovation for the year ahead.

The Advisory Board engages in online discussions and surveys to select the top themes in each category that are transforming teaching and learning. This year, the Advisory Board's work took place over approximately 10 weeks and involved both synchronous and asynchronous discussion opportunities.



METHODOLOGY

STEP 1: INITIAL SURVEY

The Advisory Board completed an initial survey to select the topics for subsequent discussion. This survey narrowed down the original list of Hurdles from 35 to 17, Accelerators from 24 to 13, and Tech Enablers from 30 to 12 — including five new Hurdles, one new Accelerator, and one new Tech Enabler.

STEP 2: DISCUSSION

Six weeks of thoughtful conversation followed the initial survey. Each week, the Advisory Board responded to prompts and engaged in conversation focused on one of the lenses of the initiative (Hurdles, Accelerators, and Tech Enablers). Discussion opportunities were offered via the online forum and a synchronous Zoom call each week.

STEP 3: FINAL SURVEY

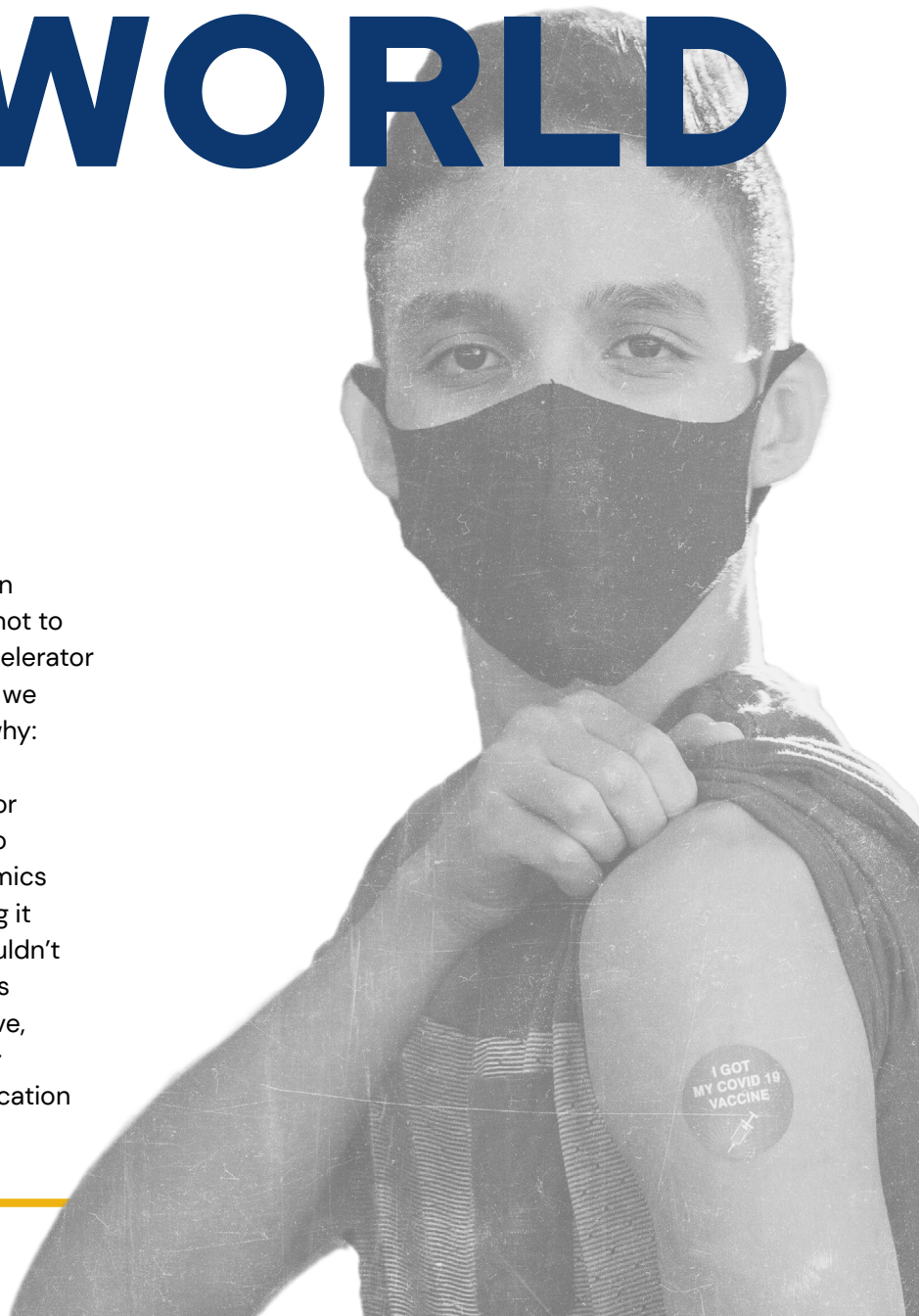
Finally, the Advisory Board voted on the top Hurdles, Accelerators, and Tech Enablers. Of the many important and impactful topics considered, nine rose to the top as key considerations for driving innovation in 2022. The survey also helped describe the nature of each topic — the surmountability of Hurdles, the intensity of Accelerators, and the timeliness of Tech Enablers.

THE PANDEMIC: A STATE OF THE WORLD



Just as we did in the 2021 Driving K-12 Innovation Reports, the Editorial Team ultimately decided not to add the COVID-19 pandemic as a Hurdle or Accelerator but to consider it a "state of the world" in which we work, part of the sea in which we swim. Here's why:

COVID-19 has been, and continues to be, a major part of the context in which we innovate (akin to shifts in international politics and global economics or climate change), and we feel that categorizing it as a Hurdle or Accelerator in our framework wouldn't do it justice. Our aim in making this distinction is not to ignore the intense impact of this pervasive, nuanced global situation, but rather to keep our framework focused on enabling actionable education innovation given the current societal context.



"Conceptualizing the pandemic as a state of the world is crucial to moving the discussion forward. Like global climate change, **this is not a singular event to be overcome with simple adaptations of existing frameworks, tools and processes: it both highlights the need for long-postponed innovations, and additionally defines a 'point of no return.'** Attempts to return to variants of the 'old normal' are not just futile — they are also likely to be actively harmful" (Ruben Puentedura, Hippasus, Massachusetts, U.S.).

The COVID-19 pandemic (and global climate change) are imperative problems facing our global society — and we fully believe that educators and IT professionals have something valuable to contribute to addressing them. With this in mind, we are challenged to hone in on what our Advisory Board is uniquely positioned to contribute: actionable insights and recommendations to drive concrete change and innovation in K-12, with awareness of the current context.

"In a few short months, work and learning pivoted in ways no one could have imagined. **Capturing the moment, capturing the optimism and embracing the opportunities to change in order to truly use technology in ways to meet the needs of every learner and every citizen of the world is now a realistic and achievable goal**" (Sheryl Abshire, Ph.D., Retired CTO, Calcasieu Parish School Board Texas, U.S.).

Alongside this pivotal opportunity for change lies a very real exhaustion and tension between the desire to return to a more familiar state and the necessity to adapt and create a different future for learning.



A graphic facilitation image created live during one of the Advisory Board's synchronous discussion calls.

"The pandemic has been, and will continue to be, a disruption like no other. Understandably, we all would like to return to some level of 'normalcy.' Yet it's important to remember that what has been 'normal' has not, in fact, adequately served all students. **We should not aim to simply return to the previous imperfect state of education; rather, we have an opportunity to learn from the last two years and make our education systems better than they have ever been before**" (Jim Vanides, Vanides2.com, California, U.S.).

That is precisely why the Advisory Board's perspectives on the pandemic, and its relationship to this year's Top Topics, will be woven throughout this report and its companion, *Driving K-12 Innovation: 2022 Tech Enablers*¹.

¹ *Driving K-12 Innovation: 2022 Tech Enablers* is scheduled for publication in mid-February 2022. For more information, visit <https://www.cosn.org/k12innovation>.



DRIVING K-12 INNOVATION

STATE OF THE WORLD (Context)

- Covid-19 Pandemic



HURDLES (Barriers)

- 01/** Scaling Innovation & Inertia of Education Systems
- 02/** Attracting & Retaining Educators and IT Professionals
- 03/** Digital Equity



ACCELERATORS (Mega-trends)

- 01/** Personalization
- 02/** Building the Human Capacity of Leaders
- 03/** Social & Emotional Learning



TECH ENABLERS (Tools)

- 01/** Digital Collaboration Environments
- 02/** Untethered Broadband & Connectivity
- 03/** Analytics & Adaptive Technologies

BRIDGES (Themes)

- Embrace this opportunity to change K-12 education for the better



2022 TOP 3 HURDLES

01/ SCALING INNOVATION & INERTIA OF EDUCATION SYSTEMS

Whether it be practices for effective teaching and learning, organizational business processes, or technology usage, school systems are challenged to engage in and effectively scale innovation — adapting what is working well and scaling it out across a school, district, or state/country. During the pandemic, the education system as we knew it experienced seismic opportunities for change when learning went fully remote; yet, in many school systems, there is now an even greater pull back to the familiar pre-pandemic models of education. This highlights inertia in education that resists change: a complex system that reinforces past practices and discourages innovation. This Hurdle reflects both the resistance to change present within many schools and the education and social systems that permeate schools and exert pressure against change, as well as the need to expand what is working to a larger scale.

02/ ATTRACTING & RETAINING EDUCATORS AND IT PROFESSIONALS

Outdated hiring practices and keeping school staff are significant problems for school systems and countries. Many educators and IT staff are exhausted. Contributing factors for educators include the absence of serious professional development opportunities, limited growth paths, and low salaries. For IT professionals, there are the added stressors like limited IT leadership and staff support, longer hours, and minimal IT leadership preparation programs — in addition to low pay compared with private companies who can offer higher salaries, flexible work schedules, and more time off.

03/ DIGITAL EQUITY

Digital equity includes three interrelated components: digital foundations, conditions for learning, and meaningful learning opportunities. This Hurdle encompasses more than equitable access to quality digital technologies such as high-speed internet and powerful computing devices both inside and outside school. It also includes ensuring that:

- students have the knowledge and skills to use technology in the service of learning;
- they interact with robust and accessible content and programs;
- students and their identities are represented with and by the technologies themselves;
- and that they experience meaningful opportunities that empower them as learners.



2022 TOP 3 ACCELERATORS

01/ PERSONALIZATION

Personalized learning happens when the learner directs aspects of learning. This includes teachers shaping the teaching and students directing the learning in ways that honor the variability of learners' needs, interests, assets and strengths, including pace, pathways, strategies, and demonstration of mastery of comprehensive knowledge/skills. It encompasses a constellation of strategies that collectively ensure that learning focuses on whole child development, is personalized to each child's unique needs and interests, and takes a mastery-based approach.

02/ BUILDING THE HUMAN CAPACITY OF LEADERS

When leaders — formal and informal, regardless of title or rank — take action to strengthen the professional community of their schools and lead with a strategic vision, they open the door to innovative practices that can enhance student experiences. It is essential to provide educators and all K-12 professionals with opportunities to learn and master new skills, and to actively craft a culture that recognizes and fosters leadership across the organization.

03/ SOCIAL & EMOTIONAL LEARNING

A core function of education is building skills and understanding for mental, social, and emotional wellbeing, including empathy, grit, persistence, flexibility, and adaptability. These qualities shape mindsets and enhance successful learning, collaboration, problem-solving, and civic responsibility. Yet, in the face of remote learning and the adaptations necessitated by the COVID-19 pandemic, many learners, families, and educators are experiencing tremendous anxiety, loneliness, mental stress, trauma, and grief. In this moment, educators are challenged to think about how Social Emotional needs are enhanced or diminished with varying uses of technology and reimagine school norms to better enable the wellbeing of staff, learners, and parents/guardians.

EXPLORING THE 2022 HURDLES

... BY IMPORTANCE

Top 3 most important Hurdles for education systems to address in 2022 (74 respondents):

38% Scaling Innovation & Inertia of Education Systems*

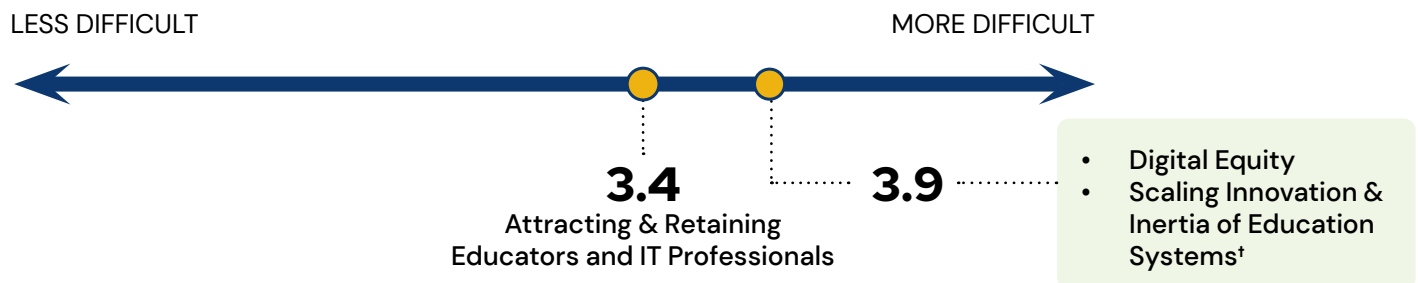
35% Attracting & Retaining Educators and IT Professionals

24% Digital Equity*



... BY DIFFICULTY

Top 3 Hurdles in order of degree of difficulty to surmount, as ranked by the Advisory Board (Scores reflect the average score out of 5, with 1 being the easiest to surmount and 5 being the most difficult; 74 respondents):



*Two topics were tied for the #3 spot (Inertia of Education Systems and Digital Equity) and there was significant overlap between the #1 Hurdle and one of the tied Hurdles. The Editorial Team considered the Advisory Board discussions, the timeliness of each topic, and the relationships between topics in breaking the tie. The #1 Hurdle for 2022 is Scaling Innovation & Inertia of Education Systems — a combination of Scaling & Sustaining Innovation (38%) and Inertia of Education Systems (24%) — with the noted percentage. The #3 Hurdle for 2022 is Digital Equity.

†Two topics were combined by the Editorial Committee to form this topic: Scaling & Sustaining Innovation (4.0) and Inertia of Education Systems (3.9). The surmountability score for the new combination topic is the average of the scores for these two topics, calculated before rounding, with the result then rounded to the nearest tenth.

EXPLORING THE 2022 ACCELERATORS

... BY IMPORTANCE

Top 3 most important Accelerators for education systems to address in 2022 (74 respondents):

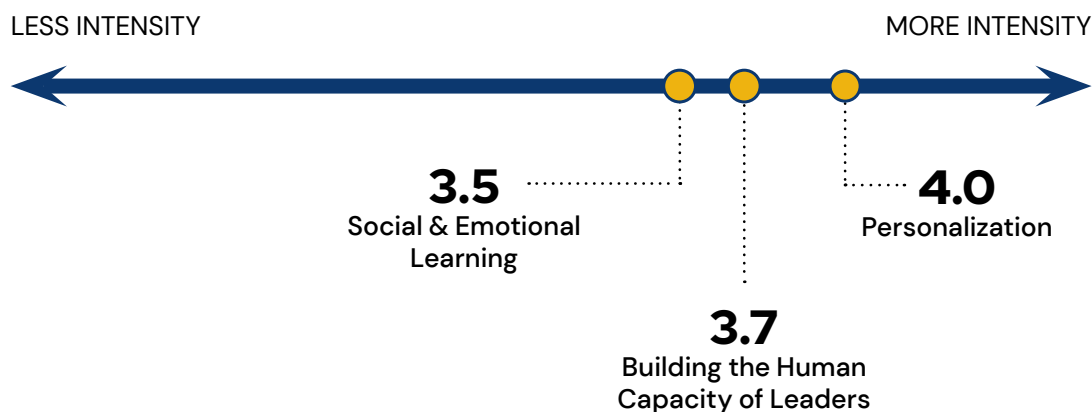
Personalization **35%**

Building the Human Capacity of Leaders **32%**

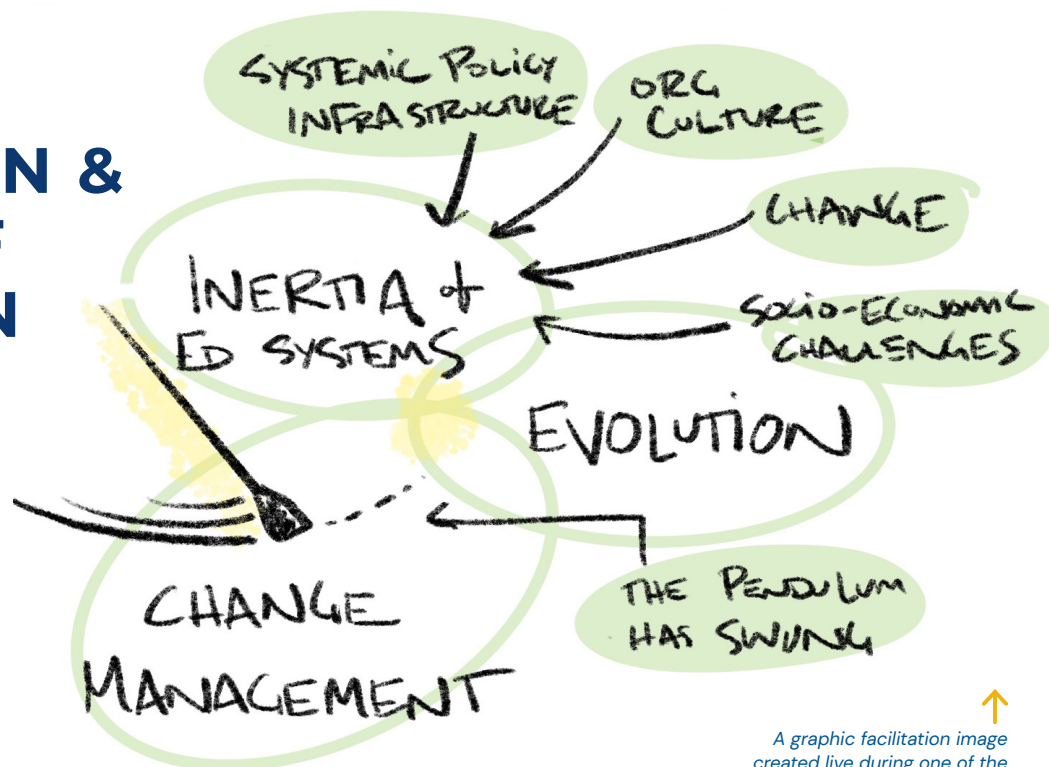
Social & Emotional Learning **28%**

... BY INTENSITY

Top 3 Accelerators in order of degree of intensity of K-12 impact, as ranked by the Advisory Board (Scores reflect the average score out of 5, with 1 being the least intense and 5 being the most intense; 74 respondents):



SCALING INNOVATION & INERTIA OF EDUCATION SYSTEMS



A graphic facilitation image created live during one of the Advisory Board's synchronous discussion calls.

In March 2020, education systems around the globe were forced to pivot, adapt, and scale to continue educating K-12 students during a global pandemic. And while the effects of this ongoing, monumental disruption — and the exceptional work of educators who rapidly adapt to meet the challenges it presents — will be felt for years to come, many school systems are eager to return to familiar pre-pandemic models of education. This shines the spotlight on inertia in education — a system that drags its feet when it comes to change, reverting to the familiar and halting innovation in its tracks.

More than anything, education leadership, teachers, IT professionals, and many others are just tired and ready to get back to "normal." But Advisory Board member Mike Trucano (Education Global Practice, The World Bank) explains that the desire to get back to the way things were pre-pandemic may pose unanticipated challenges for some innovations that emerged during COVID. "Not everything will stick, and not everything will disappear — but whether something 'worked' or not may not be the factor that determines whether a new tool, approach, or practice continues post-pandemic. Inertial forces will be important, but so will political and cultural imperatives."

To fight this inertia, educators must consider what our goals are and how they align with an innovative mindset. "We can speak to the importance of innovating education, to personalize it to individual student needs, but if our goals remain focused on standardized assessment results, then taking chances with new approaches to learning will be difficult," said Douglas Casey (Connecticut Commission for Educational Technology, Connecticut, U.S.). "Really we are addressing the education 'system' that reinforces past practices and can often discourage innovation. It is easy to criticize schools' inertia, but that insinuates a lack of desire for change. **The real barriers may well be the restrictions within which they operate.**"

☀️ "The fact that we are in our third school year of a pandemic and the majority of schools are going backward shows that sustaining innovation is a huge hurdle for our schools."

—Lindy Hockenbary, InTECHgrated Professional Development, Montana, U.S.



TIPS & RECOMMENDATIONS FROM THE ADVISORY BOARD

FOCUS ON THE LEARNING PROCESS

"The learning process deserves as much, if not more, attention than the learning objectives. It is also important to consider future-ready competencies of students. Classroom instruction should be learner-centered and equity-based by design. Focusing on a growth mindset helps ensure that progress is made and monitored. Developing a learner mindset is aided by providing learners with feedback and the opportunity to reflect on learning" (Kelly May-Vollmar, Desert Sands Unified School District, California, U.S.).

LEVERAGE EXISTING WISDOM ABOUT CHANGE

Design changes and rollouts in your school system that support your population. Consider leveraging:

- professional learning that is effective, experiential, and actionable;
- data analytics to explore what is working, where, and for whom to determine how to best scale out exemplar practices;
- participant design that includes teacher and student voice, enabling agency and increasing engagement;
- and existing assets and strengths of teachers through dynamic communities of practice supported with digital collaborative platforms.

DEVELOP A PLAN FOR INNOVATION SUSTAINABILITY

School systems must **be prepared with an evidence-informed, data-driven iterative plan** to:

- scale out innovation so that it becomes sustainable programmatic elements of schooling;
- provide ongoing professional development opportunities around innovation;
- define ways to measure the impact of innovations so there is support for sustaining them;
- and maintain the edtech items and infrastructure of innovation projects, and plan for the ownership and future funding of these components.

Additionally, revisit your existing strategic planning approaches and move away from the usual annual rote exercise. For example, learning that can build the capacity of distributed leadership with futures thinking, data-aware scenario planning and user-centered design.

CONTINUE TO MAKE INFRASTRUCTURE CHANGES

Michael Lambert (True North School, Hanoi, Vietnam) suggests **making small-scale changes to your infrastructure on a yearly basis**, which allows you to stay current with the new tech devices. "Try to keep at a 'prototype' scale," said Lambert. "There are drawbacks, but we see this as a viable solution."

ATTRACTING & RETAINING EDUCATORS AND IT PROFESSIONALS

"An IT admin tends to wind up with more than just one job...sometimes two or three...but the paycheck remains the same. Even an IT teacher gets stretched: demands are made for support and other assistance that would never be expected of other-subject educators."

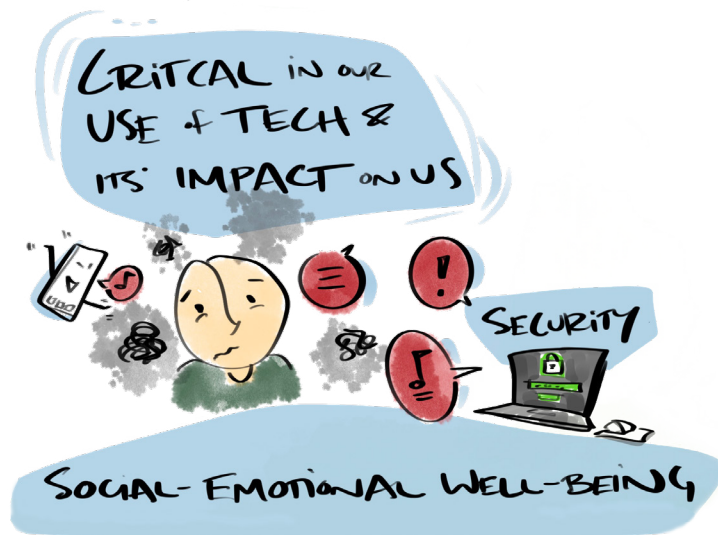
—David Deeds, *American International School of Egypt, Giza, Egypt*

The pandemic has been hard on all involved in the education system, from leadership to parents to students. For educators and IT professionals, the mental, physical, emotional, and financial burdens endured have been great. This has resulted in a number of teachers considering leaving the profession more than pre-pandemic years² and more educators entering school systems with fewer certifications.³

"Students, teachers and staff are all burnt out and are recovering from (and in some ways, still in) the trauma of the pandemic's impact on education," explained Liz Miller Lee (ISTE, Washington, DC, U.S.). "We must address teachers' well-being in addition to students'. I've heard a comparison to the order in which we put on oxygen masks on a plane: in order to be able to support students, teachers need to have their own support in place first."

2 Loewus, L. (2021, June 4). *Why Teachers Leave—or Don't: A Look at the Numbers*. Education Week. <https://www.edweek.org/teaching-learning/why-teachers-leave-or-dont-a-look-at-the-numbers/2021/05>

3 Buttner, A. (2021, April 20). *The Teacher Shortage, 2021 Edition*. Frontline Education. <https://www.frontlineeducation.com/blog/teacher-shortage-2021/>



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A graphic facilitation image created live during one of the Advisory Board's synchronous discussion calls.

Additionally, IT professionals are expected to do more with less while making less money than IT colleagues at private companies. "Typically, educational IT professionals carry a broader spectrum of responsibility within their job roles than in other industries with unique needs. It can be difficult to compete with market rates for more narrowly focused job-roles in other industries" (Richard Platts, CETL, Allegheny Intermediate Unit, Pennsylvania, U.S.). Advisory Board member Lisa Gustinelli (St. Vincent Ferrer School, Florida, U.S.) adds that at her school in Florida, they will have difficulties hiring an IT professional because they are unable to match the level of pay candidates are receiving in the private sector.

The pandemic's shift to remote work allowed tech companies to adjust their hiring practices to reach beyond their prior geographic boundaries and hire top talent from schools who did not previously have to compete with those firms.

Advisory Board members mentioned that it would be beneficial for CTOs to have the flexibility to negotiate contracts with IT professionals. These employees are often undercompensated and lack flexibility, like working remotely, that is often offered in similar positions in the private sector. Maintaining in-person work requirements for roles that can be successfully fulfilled remotely exacerbates the challenge of hiring and retaining IT professionals.

TIPS & RECOMMENDATIONS FROM THE ADVISORY BOARD

CONSIDER A GROWTH PATH FOR STAFF

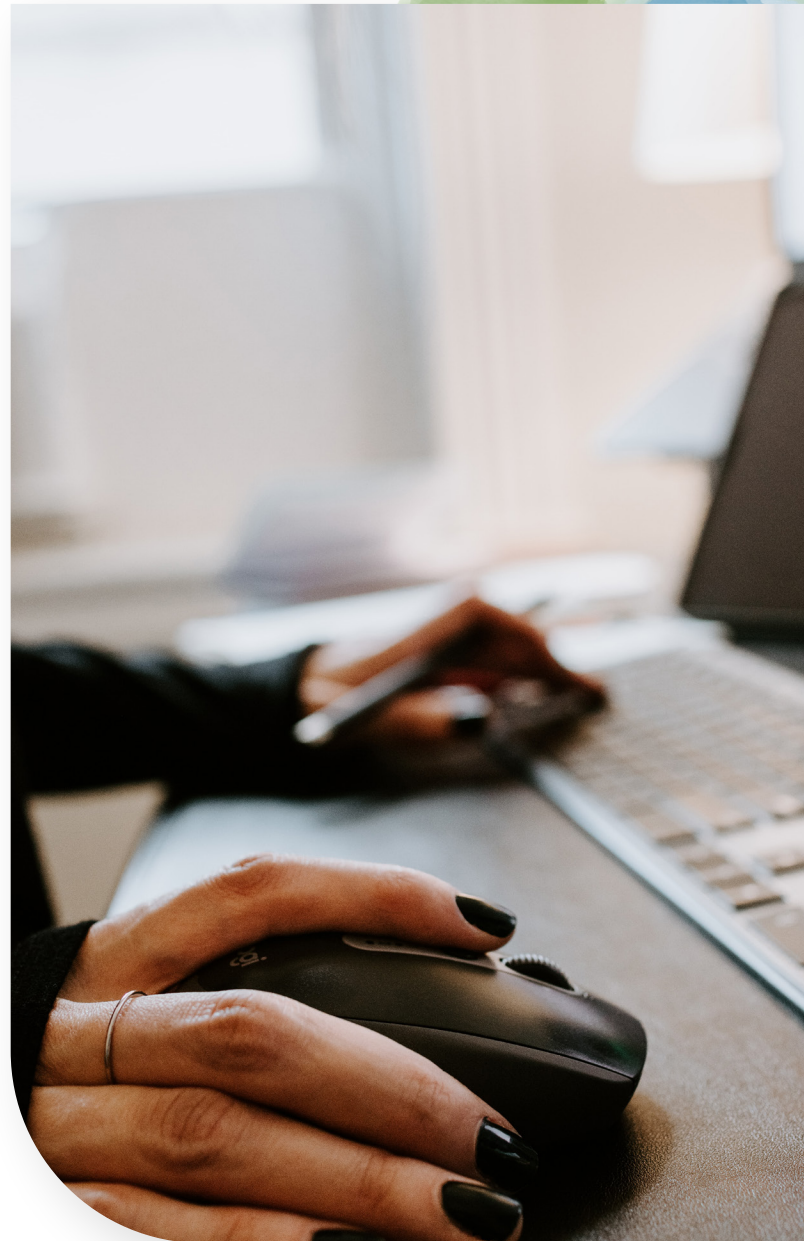
Provide staff with opportunities for growth. "We allow them to explore areas of interest in the tech sector and engage with those types of projects during their day," said David Quinn (Mendon-Upton Regional School District, Massachusetts, U.S.). "We also actively discuss their growth trajectory, providing internal pathways when possible and encouraging them to explore other positions if they better meet their career goals. We want our district to develop a reputation where people we hired speak well of their experience and grow professionally due to being here." Vince Humes (Northwest Tri-County Intermediate Unit, Pennsylvania, U.S.) adds that while creating a growth path wouldn't guarantee that every IT staff person hired will stay forever, it will likely **help extend the length of time on staff, as well as increase enjoyment of work, motivation, productivity, and innovation.**

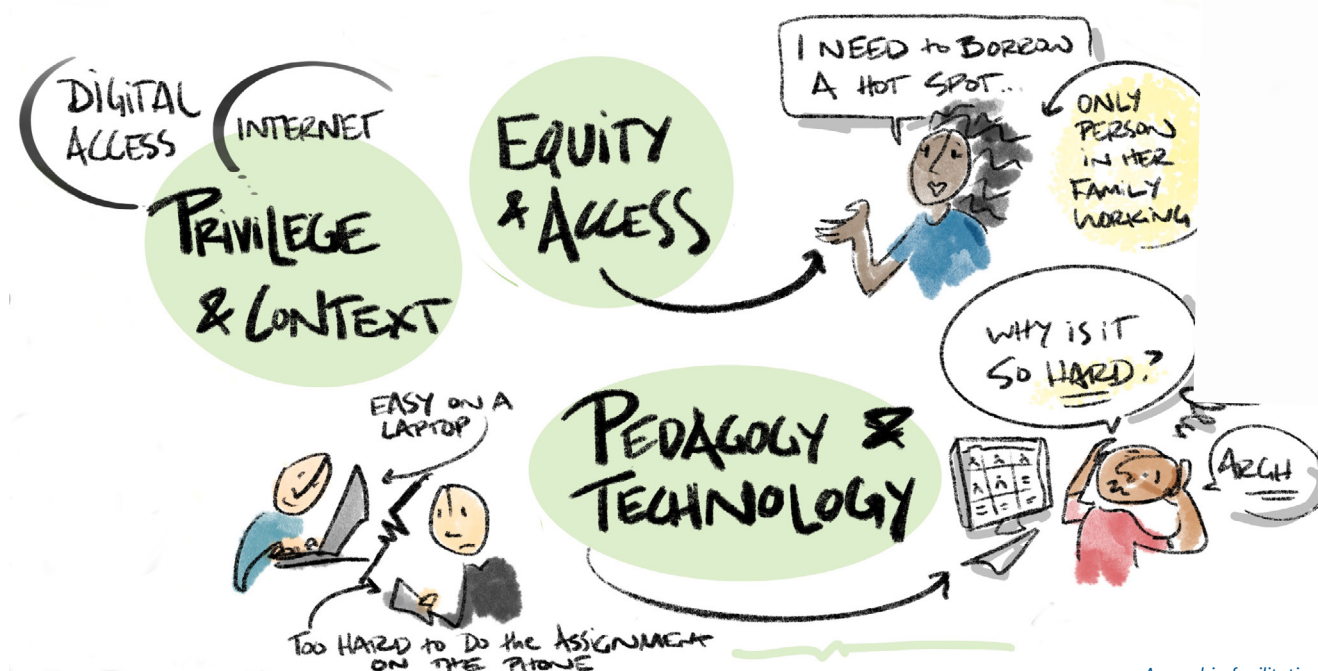
CREATE A POSITIVE ORGANIZATIONAL CULTURE

A positive internal culture does wonders: **educators stay when the culture is dynamic, safe, and encouraging**; when the work is missional; and when there are opportunities to innovate in impactful ways.

HAVE A TECHNOLOGY PLAN

The creation of a technology plan helps IT professionals to better understand what their role is and the budget is for the plan's implementation. In alignment with your organizational strategic plan, create a system-aligned, regularly-tuned portfolio of programs, initiatives, and services to prioritize work and ensure the best use of peoples' talents and time.





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A graphic facilitation image created live during one of the Advisory Board's synchronous discussion calls.

DIGITAL EQUITY

"Since the pandemic, 20–40% more students [in the United States] now have access to high-speed internet and a device.⁴ While this signifies great progress, millions of students remain both unconnected and also UNDER-connected⁵....We have to keep reiterating that 'back to normal' was not equitable for so many students. We instead have a chance to think of a new normal that benefits all students" (Beth Holland, Ed.D., The Learning Accelerator, National, U.S.).

Even though we've made strides this year in achieving Digital Equity globally, we are still only at the beginning of this journey — and achieving digital equity globally is an enormous challenge. In Montevideo, Uruguay, while students have their own devices, they don't have the conditions to stay on track when it comes to virtual learning.

"Most of the vulnerable homes do not have connectivity. Most of these homes do not have enough room for all the kids living there to have their own quiet space, and, finally, parents had to keep on working in some way or another. There were no adults taking care of these kids. Virtual education needs much more than just getting devices and connectivity. We still have a long way to go."

—**Laura Motta**, Rural Areas Godparents Project of Uruguay, Uruguay

In Johannesburg, South Africa, it has become even clearer that internet accessibility and data affordability are basic rights — in South Africa and beyond. "From a South African perspective, inequitable access to the internet and data during the pandemic exacerbated already existing gaps and set children from underserved communities further

4 Common Sense, Southern Education Foundation, & BCG. (2021, February). *LOOKING BACK, LOOKING FORWARD: What it will take to permanently close the K–12 digital divide* (No. 1). https://www.common Sense media.org/sites/default/files/uploads/pdfs/final_-_what_it_will_take_to_permanently_close_the_k-12_digital_divide_vfeb3.pdf

5 Katz, V., & Rideout, V. (2021, June 24). *Learning at Home While Under-connected*. New America. <https://www.newamerica.org/education-policy/reports/learning-at-home-while-underconnected/>



behind. Public and private institutions in all countries should prioritise a partnership that would ensure, at a minimum, that infrastructure exists to deliver these necessities to all children" (Bailey Thomson Blake, Johannesburg, South Africa).

☀️ In the United States, the pandemic highlighted the access challenges faced by students within low-density rural areas and urban areas with higher poverty, including availability, affordability, and accessibility. We must remember that, in an ideal world, layers of access would be available throughout students' daily journey, including at schools, on buses, at community centers, in houses, and apartment complexes. Internet access, devices, apps, digital literacy, and more are required to improve digital equity in the United States.

The reality is that the COVID-19 pandemic will not be the last international crisis that the world faces and education systems need to be better prepared — digital equity is a must. "Schools have to remain agile and plan for any circumstance. There also needs to be renewed commitment to ensuring access to education and digital learning for the less resourced parts of the U.S. and the world, in general" (Lucy Gray, Lucy Gray Consulting, Illinois, U.S.).

It's important to note that this is the fourth year that Digital Equity appears as a Hurdle in this report; in 2019, Digital Equity was the #2 Hurdle; in 2020, Digital Equity was the #5 Hurdle; in 2021, Digital Equity was the #1 Hurdle, and, in 2022, it remains a Hurdle in the #3 spot.

TIPS & RECOMMENDATIONS FROM THE ADVISORY BOARD

GO BEYOND CONNECTIVITY TO DIGITAL EQUITY

While the spotlight currently shines bright on technical online connectivity, remember that digital equity is more than devices and connectivity and includes digital foundations, conditions for learning, and meaningful learning opportunities⁶. "Education leaders need to continue to **look for gaps and opportunities to increase digital equity for students**" (Stacy Hawthorne, EdD, Davidson Academy, Nevada, U.S.).

☀️ LET KNOWLEDGE IGNITE CHANGE

"The pandemic showed many of us what is possible with innovation and learning. It also showed us some of the most glaring concerns concerning equity and opportunity. **What we do with that information will be key to our own growth** — or will we race back to what 'was' simply to maintain comfort" (Ryan Cox, St. Cloud Area School District, Minnesota, U.S.).

LEVERAGE NEW OPPORTUNITIES

With expanding digital equity initiatives and funding opportunities catalyzed by the pandemic, this is a pivotal moment in which to improve digital equity. For students in the United States, **there is promise with the Digital Equity Act** — part of the Infrastructure Investment and Jobs Act — which plans to provide digital skills training and education to low-income populations, improve online accessibility of social services for individuals with disabilities, and empower rural communities to measure and address their own broadband needs.

COLLABORATE TO CLOSE THE DIGITAL DIVIDE

IT professionals need to reimagine cross-sector collaborations that cut across municipalities, schools, and hospitals because each of these stakeholders offers digital services that are dependent upon internet access. For example, can we use new models of solving internet access issues like offering Wi-Fi on buses and LTE networks?

⁶ For more on these three elements of digital equity see *Driving K-12 Innovation: 2021 Hurdles & Accelerators* at cosn.org/k12innovation

PERSONALIZATION

In a face-to-face classroom, it can be challenging to tailor education to meet the needs of individual children – and even more difficult to do so at scale. However, when the COVID-19 pandemic necessitated remote and hybrid learning in school systems around the world, educators used this opportunity to personalize learning, enabled by technology in these digital modalities.



"We were in a crisis mode, and educators and schools focused on the resources they had available to implement remote and hybrid education scenarios in an effort to support all learners and their families. It led us to a better understanding of what is possible with digital integration and remote learning for teachers and for students," explained Dr. Julene Reed (Lamar University and Arizona State University, Tennessee, U.S.). "Collectively, we can build a better, progressive education system that allows for personalization, differentiation, digital integration, blended learning, and innovative instructional strategies that promote learning outcomes and student growth."

Ken Zimmerman (Lancaster-Lebanon Intermediate Unit 13, Pennsylvania, U.S.) confirmed that personalization is the number one Accelerator in his local region, focusing on providing personalized learning opportunities and environments for their learners and for the teachers' professional development. They use IU13 Personalized Learning Academy⁷ as a service and support for their districts who are focused on Personalized Learning (PL). "We learned that we needed to begin working with Administration first in Phase 1, teacher leaders in Phase 2, and finally classroom teachers in Phase 3 as a deliberate approach to scale innovation into sustainability," he said.

Jackson Vega (Colegio Roosevelt, The American School of Lima, Lima, Peru) added that personalization is a school-wide decision that aligns with cultural transformation. "Schools need to be in the right mode and time to understand that they can do things in a different way."

⁷ *Personalized Learning Academy*. (2019, December 4). IU13. <https://www.iu13.org/educators/instruction/instructional-technology/pla/>

TIPS & RECOMMENDATIONS FROM THE ADVISORY BOARD

☀ BUILD OFF OF WHAT WE'VE LEARNED DURING THE PANDEMIC

"As educators, we need to transfer all the good we know about when and how and why students learn then integrate this educative capability within the connective capability of the technology tools. The question is **how do we combat the inertia of returning to pre-existing practices once back in the classroom in order to leverage the best of both learning worlds** — our expertise in pedagogy plus the mass availability of personally-owned devices?" (Karen Swift, James Nash High School, Queensland, Australia).



USE PEDAGOGY STRATEGIES TO PERSONALIZE LEARNING

"To realize a vision for personalized learning, **instructional practices should be targeted and relevant** (i.e., differentiated, culturally responsive, adaptive, standards-aligned, etc.), actively engaging, socially connected, and growth-oriented. While personalization may manifest in different ways within different contexts, this constellation of strategies holds constant" (Beth Holland, Ed.D., The Learning Accelerator, National, U.S.).

EMBRACE ONLINE LEARNING RESOURCES TO PERSONALIZE EDUCATION

Consider using online learning resources as a way to personalize and individually pace learning. Whether students are learning in the classrooms or remotely, with 1:1 devices educators can individualize the pace of learning for their students in ways that they never could before.



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A graphic facilitation image
created live during one of the
Advisory Board's synchronous
discussion calls.

BUILDING THE HUMAN CAPACITY OF LEADERS

"Building the capacity of human leadership is essential to moving forward in educational change. Without leadership's ability to implement long-term efforts that focus with fidelity on leading organizational change, the school district will see lots of change but little improvement. Growing the next generation of educational leadership with the skills to successfully implement and sustain effective change will be a foundational cornerstone to any Accelerator to be effective."

— **Tom Ryan**, K-12 Strategic Technology
Advisory Board, New Mexico, U.S.

☀ With the pandemic came immense change in all facets of education, and leaders, educators, and IT professionals had to pivot in order to deliver a quality learning experience to their students. Which brings us to a turning point for leaders in education: Are we prepared for next year? For the next monumental disruption?

In order to build the human capacity of leaders, some Advisory Board members recommend taking a systems thinking approach. "Systems need to recognize that distributed leadership is more capable of agility than rigid top-down hierarchies," said Kim Flintoff (Peter Carnley Anglican Community School, Western Australia, Australia). "Leadership is a process not a product. Once it's packaged and formulated it begins to decline."

Mary Lang (Los Angeles County Office of Education, California, U.S.) agreed. "Until leaders understand their value is not in their ability to control and command that which can neither be controlled or commanded, but rather in their skill at envisioning and always planning for the future, preparing their organizations to withstand the wicked challenges of education and building resilient teams and organizations, we are doomed to run backwards with every major shift," said Lang.

"Leadership is about inspiration and influence: Inspire people to develop a thirst for the future which outweighs their nostalgia for the past and then influence forward action facing hope and renewal."

Advisory Board member Ed Snow (Wisconsin Department of Public Instruction, Wisconsin, U.S.) believes we need to start investing in our human infrastructure. "If we want change in education, and we want more of a partnership between educators and students, then we must invest in human infrastructure. The pandemic has obviously forced schools into a new and uncomfortable place. Thus a ton of time is being spent across my state 'training.' As we move forward, we must transition this training time into meaningful growth."

In addition to changes in organizational structure and human infrastructure, we must consider what ecosystems are in place and how beneficial they are to all. "Teaching morale is at an all-time low with nearly half of teachers thinking about leaving their jobs. As leaders, we must create systems that are targeted, simple to implement, and sustainable," said Betty Garcia-Hill (HP, Texas, U.S.). "Instead of thinking about the fragmented pieces of technology, we must think about how to bring key pieces into a robust ecosystem that can simplify the workflow for students and teachers so they can focus on meaningful collaboration and learning. We, as leaders, can ensure the ecosystem is safe, interoperable, and deeply integrated."

TIPS & RECOMMENDATIONS FROM THE ADVISORY BOARD

RECOGNIZE EDUCATORS FOR THEIR ABILITY TO DRIVE EDUCATION

☀️ **"The pandemic has demonstrated the capacity of educational systems and individual teachers to rapidly adapt and innovate with educational technologies, generally without significant support, and upturned decades of belief that teachers need to be managed into adopting edtech by edtech experts"** (Jason Zagami, Griffith University, Gold Coast, Australia).

FOCUS ON SUCCESSFULLY ACHIEVING ADAPTIVE, RESPONSIVE CHANGE

Provide school leaders with training and support in change management and systemic transformation. Collaborate with project managers or skilled community members who know how to keep moving the needle with proper planning, iterations, and forward action. Develop an organizational structure that best supports agility and iterative improvement, shifting from discrete change initiatives to ongoing adaptation and adjustment.

CREATE TIME AND SPACE FOR STRATEGIC THOUGHT LEADERSHIP

"Educators and school system leaders are overwhelmed and bogged down in the day-to-day details needed to support students and instruction" (Frankie Jackson, Texas Education Technology Leaders, Texas, U.S.). **School systems need to create space for educators to engage in the deep work of leadership.**

CULTIVATE ONLINE COMMUNITIES OF PRACTICE

Educators can use collaborative digital platforms to connect within schools, across systems, beyond subject and grade level, and around the globe. Using collaborative platforms to engage, connect, and catalyze, educators can continue to find ways to share novel, effective practices.

SOCIAL & EMOTIONAL LEARNING

"Connecting learning to the whole child has, for years, not always been a top priority. With the pandemic, however, we are seeing real attention paid to student and educator well-being, with plenty of federal funding to support it. **The healthier our kids are, the more successful they should be academically, thus accelerating learning**"

—**Douglas Casey**, Connecticut Commission for Educational Technology, Connecticut, U.S.

There is no doubt that the pandemic has forced us to address the social and emotional well-being of students and teachers. Nearly all students have experienced some challenges to their mental health and well-being during the pandemic⁸ and many have lost access to school-based services and support. One study found that during the pandemic, teachers reported higher levels of anxiety (34%), feeling more stressed (52%), and burned out (52%) than other state and local government-sector employees.⁹

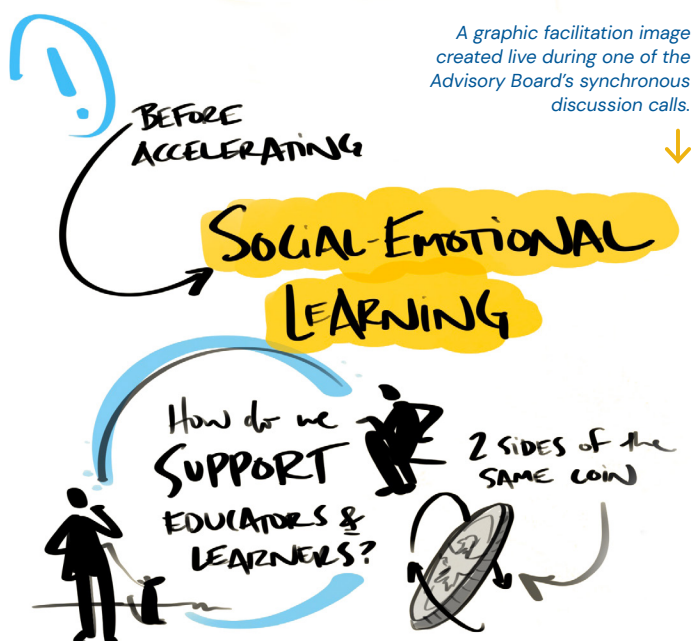
When educators and students are so exhausted and overwhelmed by the disruption, "back to normal" can be the most tempting and assuring path, explained Liz Miller Lee (ISTE, Washington, DC, U.S.), but we need to address the social and emotional well-being of

8 U.S. Department of Education. (2021, June). *Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Students*. <https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf>

9 MissionSquare Research Institute. (2021, September). *K-12 public school employee views on finances, employment outlook, and safety concerns due to COVID-19*. https://slge.org/assets/uploads/2021/09/k-12surveyfindings_sept21.pdf

students and teachers. "We can (and must) address both [student and educator well-being] by continuing to evolve what teaching and learning looks like through policy interventions to better support and retain teachers, meaningful professional development to help teachers use their new skills and tools to support students' well-being and learning, and improved infrastructure to help educators better understand where their students are and what they need."

While human interaction is critical when addressing social and emotional learning, technology can also assist in supporting students and staff. Kelly May-Vollmar's district in La Quinta, California, has a strong Multi Tiered System of Support (MTSS). "This allows us to focus on the whole child and not simply academics. With the pandemic, the social-emotional needs of our students have grown rapidly. We are working hard to provide a variety of resources for our staff and students. We implemented daily SEL lessons for the first few weeks of school, added counselors, created wellness Wednesdays for a year long focus on the social emotional." While May-Vollmar thinks that not all social emotional needs should be met with technology, it has helped in the district's efforts, including sharing SEL online resources with families, providing students with teleconferencing for counseling support, and utilizing VR and infographics for learners who need visual support for learning.



☀ Daniela Silva (Education in Motion, Singapore) agrees that technology can help. In Asia, where countries are still facing lockdowns, inbound travel restrictions, and going back and forth with online learning (as of the discussion phase of the Driving K-12 Innovation initiative in October 2021), the pandemic has paid a huge toll on educators and students. "One of the approaches that we have tried to slowly embrace is the use of technology for SEL," she said. "Microsoft Teams released an app called 'Reflect' where teachers can have daily check-ins with their students, sense the SEL temperature in the classroom, and plan properly."

Although social and emotional learning is being addressed because of the magnitude of the global pandemic, caring for our educators and students must be ongoing. For DeKalb CUSD428 in Illinois, social and emotional learning are the core components of its new strategic plan: a very focused approach to SEL with enhancements to already existing MTSS systems. "In our medium-sized district outside of Chicago with 6,800 students and 1,000 staff with a 60% free reduced rate, we are seeing many social emotional issues," said Ben Bayle. "Students and staff burned out, outwardly expressing trauma, and suicidal idealization, to name a few."

What does research tell us about social-emotional skills? Advisory Board member and educator Beatriz Arnillas (IMS Global, Florida U.S.) would list the following:

- Negative behavior is more contagious than positive behavior.
- Rude, insensitive behavior, and bullying have a domino effect. Unfortunately, kids are typically on the receiving end, and they pass it on to other kids.
- Periods of general distress (for example, the pandemic) increase stress levels for all, making us more susceptible to being reactive.
- Becoming aware of how these mechanisms work helps us interrupt the behaviors.
- Joyful experiences and disseminating stories about compassion can improve the group culture.
- Trust is critical. If you lose trust, it is harder to get it back.

TIPS & RECOMMENDATIONS FROM THE ADVISORY BOARD

SEL NEEDS TO BE PART OF THE CULTURE

"SEL should be part of our school culture and not just another initiative. At one of my previous schools we were able to embed a particular SEL framework in our daily practice, within our classrooms and also with our parent community. It is good to have some middle level leaders involved in a particular SEL training, test it out (planting the seeds) and later maximize its implementation within the school (including the parent community)" (Daniela Silva, Education in Motion, Singapore).

TECHNOLOGY SELECTION CRITERIA SHOULD INCLUDE SAFETY AND WELLNESS

In addition to prioritizing security and privacy, the pandemic revealed the need to **consider student safety and wellness in vetting and using technology.** Also, increased use of technology that supports well-being requires more rigor in the handling and sharing of data.

SEL FOR ALL

"In a world returning to 'normal' there is a tendency to think about learning gaps and forget that social and emotional needs come first. Learners don't have the capacity to address academic challenges without a sense of safety and well-being. We also need to think about our educators. **Most of the SEL work has been addressing the student, but not looking at the entire system.** What about parents? What about teachers? What about the educational leaders? The issue is systemic" (Norton Gusky, NLG Consulting, LLC, Pennsylvania, U.S.).



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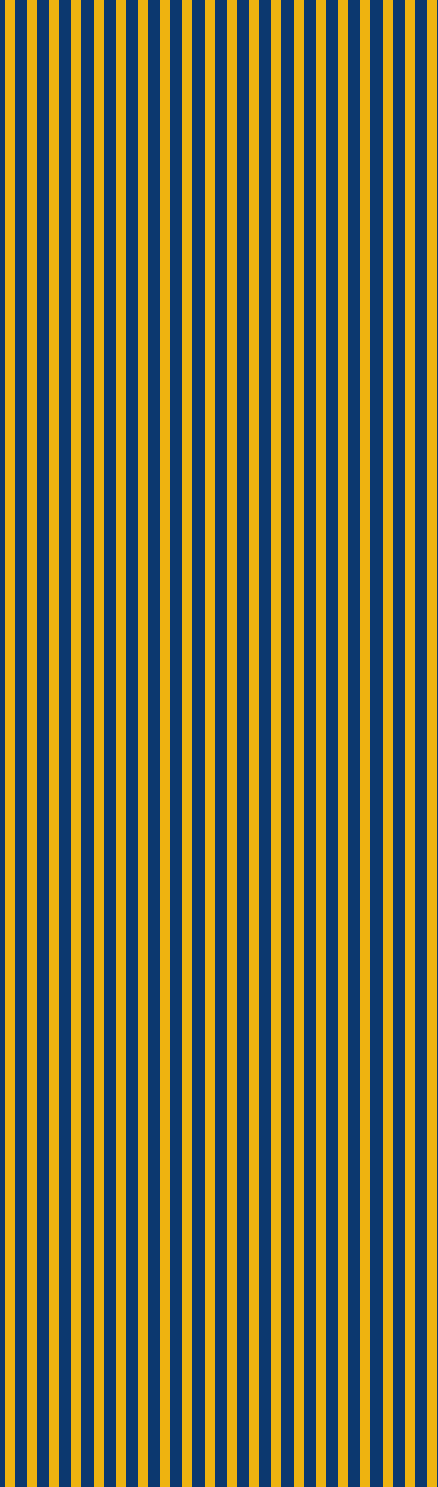
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