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LEARNING FOR THE FUTURE with digital leadership

Change is not coming – it's already here. While Edtech has gone through a period of over-hype, the time is ripe for disruptive innovation that improves learning outcomes for students. It's also necessary because education is behind the curve, preparing students for an industrialized world and jobs that won't exist for much longer.

A tough job

The rapid pace of technological change, especially in the areas of robotics and artificial intelligence, will mean that the job landscape will change over the next decade.

The on-demand model that we're starting to see today will become more prevalent, with shorter contracts geared towards specific skills and projects. Some current trends are likely to result in new careers in the 2020s. Examples include personal brand managers, urban farmers, remote healthcare specialists, smart

home technicians, and VR experience designers. Other emerging work opportunities, like neuro implant technicians, may result from advances in technologies that are now in their infancy, while traditional professions are poised to take on a greater IT and data emphasis. An example is the legal profession, where instead of lawyers we might see positions like legal knowledge engineer, legal technologist, project manager, risk manager, and process analyst.

Using tech the right way

Changes in technology are forcing schools across the

world to adapt. This is good news for students, as digital transformation can deliver authentic learning experiences that provide relevance, value, and tangible skills in an unpredictable world. But we need to ensure technology is geared towards learning and achievement.

Future-proofing by educators can create new areas of study and exploration. Revamped programs should afford students the opportunity to use real-world tools, for example, in makerspaces, to engage in meaningful work that aligns with a future-focused vision.



Re-envisioning learning spaces and environments

Research shows that classroom and school design impacts student learning. Leaders must have the vision and strategic plan to enable schools to create innovative learning spaces and environments such as BYOD, blended learning, flipped classrooms, gamification,

makerspaces, and virtual learning.

Digital infrastructure sits at the heart of many of these innovative education modes. Flipped classrooms, for example, depend on tech that a few years ago would have been a challenge – things like broadband access; processing power in devices; and multi-media production for sound, image, and film.

Today, we're seeing more institutions

investing in cloud solutions for their IT infrastructure. As well as email and calendaring, other functions are heading towards the cloud, including collaboration, enterprise resource planning, and learning management systems. However, there are few solutions that specifically target education institutions and new learning methods such as MOOC (Massive Open Online Courses). Examples that do so include Huawei's education cloud, smart campus





Applying Tech to Classrooms

What it is	What it does
BYOD	Lets students and teachers use their own devices in the classroom to access information on the school's cloud networks. Students are more likely to work outside of school on their own devices, schools don't have to invest in tech catch-up because students usually have relatively new devices, and apps can allow greater teacher and student interaction than ever before.
Blended learning	Mixes traditional classrooms and digital learning. Possible modes include face-to-face driver , where a teacher augments classroom learning with digital tools; online-driver , in which courses are primarily online with teacher check-ins; and rotation that rotates between f2f classroom time and online learning.
Flipped classroom	Prioritizes learning through activity. Instruction and lectures are delivered outside the classroom via, for example, short videos and podcasts. Homework is then done in the classroom to ensure concept mastery through group work and discussion.
Gamification	Applies video game design and mechanics to learning. Examples include Ribbon Hero 2, a game that teaches users how to use Microsoft Office 2007 and 2010; the World Peace Game; and Class Dojo, a game designed to connect teachers, students, and parents.
Makerspaces	Delivers a platform for students to design and make things. Examples of equipment and ideas that can be utilized include 3D printers, programming zones, computer repairs, and robotics.
Virtual learning environments	Uses a web-based platform to deliver the digital aspects of courses. Benefits include economizing teacher time, overcoming time and location restraints, and enabling instruction to be networked between different campuses.

and smart classroom solutions.

Education in 2020 and beyond

By 2020, digital infrastructure will enable cloud-based learning to become a dominant force in education. Cloud will ease the burden of knowledge transfer and underpin an education ecosystem that will expand beyond teachers, parents, and students, to include hardware and software vendors and teacher trainers.

We will begin seeing different learning forms emerge, including

learning simulations that supplement teachers, true mobile learning, seamless transitions between face-to-face and online learning, and personalized learning algorithms where data analytics hones a truly personal study experience.

The next decade should see some exciting innovations – biosensing tech that can measure things like heart rate and eye position will provide valuable data for educators, with AI able to look for patterns like whether exercise scheduling and duration might, for example, influence math

performance. Cloud VR will be heading towards creating fully immersive virtual environments and collaborative possibilities that we've never seen before.

It's not just about the tech

It's important not to get too sucked into the transformational aspects of the technology itself. We must focus on the transformation of teaching, learning, and leadership.

Placing a device in the hands of students and hoping for



learning miracles to happen will always be a letdown.

True digital leadership uses advances like ubiquitous connectivity, open-source technology, cloud computing, mobile devices, and personalization to empower learners through collaboration, communicating, reflecting, and engaging with their peers anywhere in the world. It lets them share work and demonstrate conceptual mastery in a variety of ways.

Access to information, tools, and people can now provide students with endless opportunities to grow like never before and own their learning.

Digital transformation in action: New Milford High School, New Jersey, the US

I wasn't always an evangelist for innovative change – I was the school leader who ran around taking devices from students, enforced no tech zones, and wrote policies to block social media.

It took a student in 2009 who had the

guts to tell me that school was like jail for me to finally begin to think about the error in my ways. Then shortly after I discovered Twitter. Once connected through cloud technologies I saw opportunities and where my school could be. We then embarked on a digital transformation that radically improved the learning culture of the school.

We were the first school in New Jersey to implement a BYOD policy. We expanded our Wi-Fi network, so students could access the free Internet from outside of the building, and partnered with local businesses to give students additional places to get online for free.

But digital leadership isn't about flashy tools – it's a strategic mindset that uses technology to improve what we do and cultivate a school culture focused on authentic engagement and achievement.

Student engagement and learning

Billions of dollars are spent on technology without regard to how

and if teaching and learning are changing. Digital learning requires a uniform pedagogical shift. Learning must always be relevant, meaningful, and applicable, and foster higher-order thinking skills. *The Rigor Relevance Framework* ensures that technology is integrated effectively. It lets educators look at the learning tasks that students are engaged in and redesign them in ways that move away from telling us what they know and instead showing whether or not they actually understand.

Grounded in rigor and relevance, instruction and learning with digital tools are limitless. This is the foundation of uncommon learning and a move to competency-based learning. While skills are an important part of learning and career paths, they're not rich or nuanced enough to guide students towards true mastery and success. Skills focus on the "what" in terms of the abilities a student needs to perform a specific task or activity. They don't provide enough connection to the how. Competencies take this to the next level by translating skills into behaviors that demonstrate what has been learned and mastered, relying less on time



as the measure for completion. Computer-mediated instruction gives us the ability to individualize learning for each student, reflecting the fact that students learn at different rates. The faculty moves from “sage on the stage” to “guide on the side.”

Professional growth and development

With the rise of social media, schools no longer have to be silos of information and educators do not have to feel like they are on isolated islands that lack support and feedback. The power of learning anytime, anywhere, and with anyone can motivate every person to be a life-long learner.

Educators can form their own Personal Learning Network (PLN) to meet diverse learning needs, acquire resources, access knowledge, receive feedback, connect with both experts in the field of education as well as practitioners, and discuss proven strategies to improve teaching, learning, and leadership.

Communication

Educators can provide stakeholders with information in real time through a variety of devices. Static, one-way methods such as newsletters and websites no longer suffice. Information can be communicated digitally through free tools and simple implementation strategies

to meet stakeholders where they're at in the digital age, and engage them in two-way communications.

Branding

Businesses have long understood the value of branding and its impact on current and potential consumers. A brandED mindset focuses on telling, not selling, to build powerful relationships with the education community. Educators can leverage digital tools to create a positive brand presence that emphasizes the positive aspects of school culture, increases community pride, and helps to attract and retain families when looking for a place to send their children to school.

Opportunity

Digital leaders leverage connections made through technology and increase opportunities to make improvements across multiple areas of school culture.

Educators need to be catalysts for change and the pillars identified above provide the guidance. Each is critical in its own right to transform learning and sustain a positive school culture. So what does this digital and learning convergence look like? *Learning Transformed* sets out eight keys to drive change:

- Leadership and school culture lay the foundation

- The learning experience must be redesigned and made personal
- Decisions must be grounded in evidence and driven by a Return on Instruction (ROI)
- Learning spaces must become learner-centered
- Professional learning must be relevant, engaging, ongoing, and made personal
- Technology must be leveraged and used to accelerate student learning
- Community collaboration and engagement must be woven into the fabric of a school's culture
- Schools that transform learning are built to last as financial, political, and pedagogical sustainability ensures long-term success

The way many of us were taught and assessed has little value in today's world, let alone the future. The new world of work presents a wakeup call of sorts. A business- as-usual model based on efficiency, repetition, and knowledge acquisition will only prepare students for a world that no longer exists.

This shift will not be easy, but the outcome could pay off tenfold. 