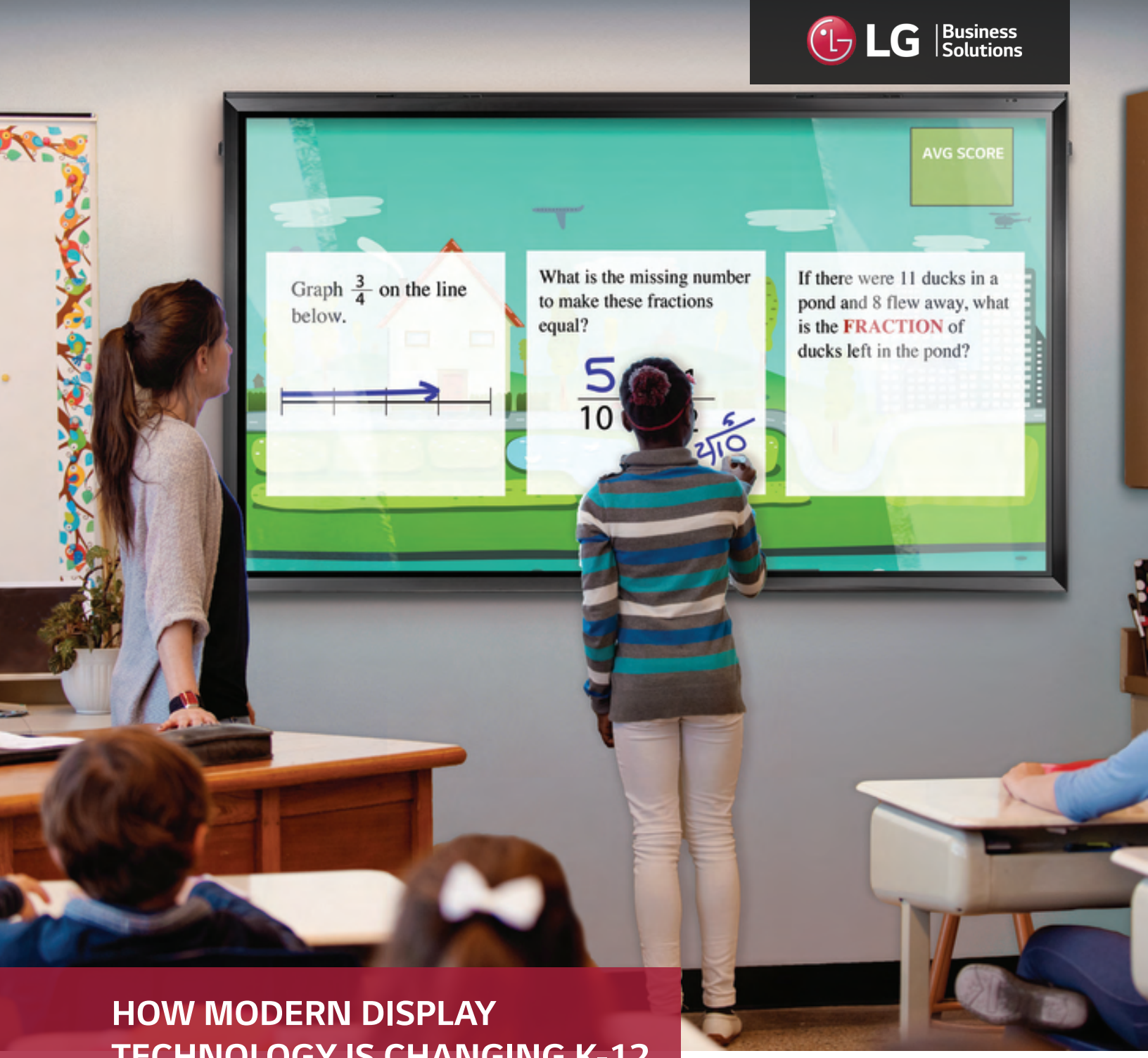

HOW MODERN DISPLAY TECHNOLOGY IS CHANGING K-12 EDUCATION SPACES

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K-12 school districts and service providers throughout the country have stepped up heroically to try and facilitate remote learning during the pandemic. And despite hardships, giving teachers access to online learning platforms for creating and organizing lesson plans has begun opening the door to new pedagogies and innovative software tools that improve learning outcomes both in and out of the classroom.

As students begin to re-enter classrooms this fall, much of the focus is now on addressing learning loss, mental health, and socialization needs that have developed over the last year. Federal funds distributed to schools are focused on addressing those key themes, as well as making sure the school is safe—with wellness kiosks, cleaning robots, HVAC systems, air purifiers, and more.

All told, through such necessary technology initiatives, schools have also begun to prepare students for a future in which digital literacy is crucial. One-to-one computing initiatives have caught on in a big way. Efforts to give individual students laptop computers with which to learn, access online resources, and complete schoolwork have been embraced enthusiastically by millions. Putting the power of discovery in the hands of students, as well as access to cloud-based productivity tools, has proven to be a positive investment of precious budget dollars.

The next evolution in K-12 edtech will take these one-to-one computing models and make them one-to-many or many-to-many experiences, from the classroom to a school's common spaces. It will unlock what's on a laptop or tablet screen and make it so everyone in a classroom can learn from it, and it will create immersive visual experiences that more accurately reflect the digital lives people live away from school. By integrating new display technologies into learning spaces and common areas, K-12 schools can begin to create a more engaging, collaborative environment, while at the same time preparing students for the technologically enhanced, active-teamwork models that await them in the labor force or higher education.

INTERACTIVE WHITE BOARDS IN CLASSROOMS

In recent years, schools have dipped their toes into the waters of digital presentation technology — digital whiteboards, short-throw projection systems, etc. But the future isn't about presentations; it's not defined by teachers showing on a screen what students need to learn. It's about students and teachers actively and easily engaging with what's on a screen — manipulating it, collaborating over it, even determining what "it" is.

Modern display technology allows for this classroom engagement. Interactive digital boards (or Interactive white boards)— large-format displays with integrated touch functionality — serve two important purposes. Touchscreen technology allows elementary school students to interact with learning material, while boards with screen-sharing capabilities allow upper classes to see the work that a single student performs on her personal computing device — she's able to wirelessly share what's on her screen via the interactive white board.

One size does not need to fit all. Technology purchases need to be strategic and support specific user cases. For example, early grades may benefit more from touchscreen technology that allows students to discover the material and gamify the learning experience, much as they've grown accustomed to with educational tablets and other touch devices found in the home.

In later grades, screen-sharing and "casting" — the process of sending information from a one-to-one device to a group digital board — can support more advanced project-based learning. For example, LG's 86TR3DJ interactive digital boards enable screen sharing with laptops and mobile devices, while all are connected to the same network, regardless of the operating system, to enable incredibly immersive class environments.

What's more, depending on a school's policy and where it stands on BYOD (bring-your-own-device) initiatives, interactive white boards that support casting can also receive and display information from students' personal devices, reflecting their digital lifestyle and as such further enhancing the learning experience.

Interactive white boards can also support the growing field of active-learning pedagogies. Learning spaces can still be designed to be modular and reconfigurable, promoting group and ad hoc collaborations. That's because unlike traditional presentation systems, which are usually anchored to a spot in a room, displays can be mounted or placed on a mobile cart that students or teachers can place anywhere – even embedded in movable furniture. They can be shared among workspaces and be rolled down the hallway to a cafeteria or empty room if the classroom requires multi-purposes rooms for social distancing purposes. And because they often come with their own wireless connectivity and processing power, they often offer anywhere access to cloud-based learning tools and resources.

CUSTOMIZABLE SIGNAGE FOR ANYWHERE & EVERYWHERE

Beyond the classroom, display technologies can engage the many — students, teachers, administrators, parents — on an even larger scale, motivating students to engage in their learning and establishing a modern, tech-savvy environment that stretches from a school's front door to its classrooms. Whether it's digital menu boards in school cafeterias, wayfinding and informational touchscreens in lobbies, or video wall installations in media centers or public spaces, new display technology is used increasingly to extend the classroom footprint beyond four walls and communicate a school's vision.

One such display technology is DVLED (direct view LED), which can be designed to fit nearly any specific school need, resulting in virtually unlimited size and viewing distance. Whether a school needs a sharp, curved display to serve as a digital 'bulletin' board in a hallway, or a bright, immersive scoreboard for an outdoor football field, DVLED can do that. It offers flexibility both indoors and outdoors and can be wrapped around columns or fitted to curved walls.

In addition to obvious customization options such as size, shape, and brightness, the LEDs themselves, the tiny diodes that emit colored light, have advanced so far that millions of them can be packed onto single displays, offering custom resolution and pixel count. The cost of LED packages goes up as they shrink in physical size, so buyers can maximize the value of their spending by determining the exact required resolution, size, aspect ratio, and even curvature to meet their needs. With industry-wide LED costs falling reliably year-over-year, DVLED is now an affordable option for K-12 environments.

ENGAGING STUDENTS AND FACULTY ALIKE WITH TECHNOLOGY

Sherlock Elementary in Cicero, Illinois, is one of many committed to using to technology to enhance the learning environment. To underscore that point and build excitement among students, faculty, and parents, it adopted some of the most cutting-edge display technology available from LG to create bright, architecturally unique video walls in the school's lobby. Video displays based on OLED (organic light-emitting diode) technology actually curve and wrap around columns, displaying vibrant content that attracts people to the school's mission and sends the message that Sherlock School is serious about preparing its students for a technology-rich future.

Display technology for common spaces comes in many shapes and sizes to support a school's unique needs, infrastructure and strategies. Digital signage displays, for instance, can be implemented on a very targeted basis or throughout a building as a dynamic, easy-to-use method of conveying up-to-date information, messaging, and more pro-active security alerts. For example, LG's UL3G series can be leveraged as a teaching tool in addition to an emergency takeover tool for IT directors. The more intricate or pervasive a digital signage network becomes, the more it's advisable to seek smart, networked, commercial grade displays that are reliable and manageable from a central location.

Studies show up to 80 percent of K-12 administrators are quick to recognize the education benefits of technology and two-thirds say using technology to boost engagement in schools and classrooms is a priority. Today's display technology forms the foundation of engagement. As Cicero School District 99 Chief Information Officer Cao Mac, puts it, "Technology changes drastically, but if we don't expose our kids to these types of environments, they'll never be able to succeed in the future."

Victoria Sanville is on the education technology team at LG Business Solutions USA, a leading provider of advanced display solutions for learning environments. For more information, visit www.LGsolutions.com.

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