



PREPARE YOUR DISTRICT FIVE CHALLENGES TO SOLVE FOR TODAY

Honeywell |  K-12 DIVE

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K-12 SCHOOLS HAVE WEATHERED SIGNIFICANT CHALLENGES OVER THE PAST FEW YEARS.

Although many districts have already made great strides, they continue to seek avenues to help advance student and staff well-being and learning outcomes. One way to improve the overall school experience? Facility improvements that contribute to a safer, more sustainable environment.

“Everyone in the ecosystem — students, staff and families — needs to feel safe and valued or learning can suffer,” says Paul Zwickey, Honeywell’s North American education sales leader. “In a healthy, supportive climate, students are engaged and feel confident to take intellectual risks.”

That’s why many districts are exploring solutions that can help optimize the learning environment for all stakeholders. Here are five challenges in K-12 education that district leaders must address today.

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Honeywell’s North American education sales leader





CHALLENGE 1: POOR INDOOR AIR QUALITY

As schools grappled with how to prioritize safety during the pandemic, the U.S. Environmental Protection Agency (EPA) urged schools to consider the role their physical environment plays in academic performance. It's not just a question of potentially preventing the spread of illness; reports have shown that poor indoor air quality (IAQ) can contribute to health problems in youth.

To this end, an October 2022 paper in the Journal of Building Engineering found that “exposure to various air pollutants in school buildings risks severe damage to pupils’ health since they inhale a larger volume of air corresponding to their body weights than do adults.”

Environmental factors can trigger a host of health problems, such as asthma or allergies, all of which can increase absenteeism and potentially diminish the learning environment for students and staff alike. That's especially problematic when chronic absenteeism is at an all-time high.

Zwickey cites five ways schools can create a healthier indoor environment:

- Use IAQ sensors to track pollutants, temperatures, humidity and carbon dioxide
- Open windows to benefit from fresh air
- Enable access to the outdoors, whether at recess or for organized group activities
- Deploy air purifiers
- Upgrade HVAC equipment to support proper ventilation and air quality

Updating equipment and monitoring IAQ can help bolster student achievement by improving brain function and mood, which is a priority for all schools as they strive to address the current mental health crisis affecting today's youth.

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CHALLENGE 2: RISE IN VIOLENT INCIDENTS

Schools can't afford not to address the surge in fights and other disruptive behavior. A [2023 EdWeek Research Center study](#) found that 70% of educators say students in their schools are misbehaving more now than in Fall 2019.

"In the rush to install metal detectors and other barriers, schools have to be mindful of balance or they risk creating an institutional environment," Zwickey says.

The first defense is a positive community culture. This means emphasizing communication and trust with robust support from counselors and mental health professionals. The second step is finding tangible ways to secure school grounds. **Schools must walk a healthy line between sufficiently hardening their campus without sacrificing a positive learning atmosphere** — a delicate balance as [school shootings hit an all-time high](#).

Zwickey works with schools to implement impactful but low-key security measures that don't feel intrusive. One tip is to focus on specific doors and areas. A smart video management software can connect everything into a single "command-and-control center," which brings situational awareness to administrators and first responders.

"It streamlines the ability to manage systems and footage so you can efficiently document events as needed — whether it's a fight that's broken out or an interloper on campus," he says. For added security, teachers and administrators can wear a device or have an app on their phone that allows them to instantly lock the whole school down.

These systems can also help facilitate emergency evacuations spurred by a fire or extreme weather, adding an extra layer of peace of mind.

CHALLENGE 3: UNDER-RESOURCED STAFF

The behavioral and mental health challenges in today's schools are a top reason districts are facing a staffing crisis. Personnel are increasingly spread thin and prone to burnout.

Safer, more sustainable environments can contribute to staff retention, says Terrence Guiry, business development director for Honeywell. "A district that demonstrates a focus on ESG (environmental, social and governance) factors will have an advantage in attracting the best talent who often have their pick of districts."

Schools can also take steps to ease the workloads for their staff, particularly for mundane and repetitive tasks that can be automated, allowing staff to redirect their time.

"Whether it's locking and unlocking doors on a schedule, constantly adjusting lighting and temperature based on occupancy or monitoring and verifying visitors, [staff] appreciate anything that removes a burden," Zwickey points out. "When schools deploy automation to take care of the details, [teachers] can walk in the door and be immediately ready to teach in a comfortable environment."

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CHALLENGE 4: **A DESIRE FOR MORE SUSTAINABLE SOLUTIONS THAT SAVE MONEY**

Sustainability and efficiency are top of mind for districts aiming to balance budgets and address community concerns, notes Guiry. K-12 school districts spend in excess of \$6 billion annually on energy, which is more than they spend on computers and textbooks combined, so it's easy to see why efficiency matters. The EPA estimates that districts use as much as 30% of their total energy inefficiently or unnecessarily. Reducing that waste can provide environmental benefits while also saving money that districts can redirect toward more student-focused efforts or even increased teacher pay.

This is particularly important amid declining budgets. Administrators have a cap on how much tax revenue they can tap, so they may only be able to get a small increase in their operating budgets approved each year. That means they have to take a hard look at all the expenses they incur, most of which are increasing faster than budget parameters.

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“If your energy costs are increasing 10-15%, and your budget is only able to increase by 3% a year, you have to make it up somewhere. Unfortunately, that will involve slashing headcount or programs unless you get creative in finding ways to drive cost reductions without hurting the learning environment. Saving money while increasing energy efficiency is a home run.”

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Business development director for Honeywell

Often, schools are left asking communities to approve bonds and other school budget increases. Implementing energy-efficiency measures could make this easier. “The community will want to be reassured that their district leadership has done everything in their power and pulled every available lever to manage budgets while improving the learning environment — including addressing IAQ and other environmental factors,” says Guiry.

Smart building technology, from hardware to software, plays a key role by dynamically adjusting systems so schools are no longer cooling, heating or lighting unoccupied space.

Through Honeywell’s Energy Savings Performance Contract (ESPC), schools can combine several energy conservation measures within the building and implement necessary infrastructure upgrades with a guaranteed payback period. This cost-effective approach allows districts to demonstrate how energy savings are offsetting the cost of the project, explains Guiry.

For example, while improving IAQ is essential, it won’t offer a noticeable payback and could even increase costs, depending on the type of filtration system used. That can be avoided with advanced software controls that monitor, control and optimize a building’s energy use or even offset with a lighting retrofit. “In that scenario, they’ll see a reduction when we look across their entire portfolio,” Guiry says. “That’s why it’s so critical that we look at the entire footprint holistically to find the most value, versus just one building or project. We can find savings in one area that will cover another crucial fix.”

The support Honeywell’s team provides includes measuring sustainability achievements and carbon reduction, in addition to the financial picture, then reporting back to the district and public via school board presentations. “We validate to the community that the school might have made a \$1 million payment in undertaking a significant program, but because they saved \$1.1 million, it didn’t cost the taxpayers a dime,” he says.

CHALLENGE 5: **UNCERTAINTY ABOUT HOW TO ACCESS NECESSARY FUNDING**

While it might not be easy to pay for these upgrades, Guiry stresses that the funding environment has never been better. Districts can access a plethora of funds offered through local utilities, state and federal government agencies, co-ops and more.

School administrators often aren't experts on the process of applying for this funding — nor should they be, he says. "It's not your core function, which is educating children. Schools aren't in the business of constantly monitoring potential programs, so districts need to rely on a partner who's an expert in this arena. We pay close attention to the ever-changing landscape to maximize the amount of grants that can be secured," Guiry says.

He points to Honeywell's finance team, which can assist schools on applicable programs, help them prepare the right documents and submit them on their behalf. "There is money available, but it's not always easy to navigate. Schools need to find a trusted, knowledgeable expert that can demonstrate past successes in maximizing every possible dollar," Guiry explained.

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READY TO CREATE A MORE RESILIENT, ECO-FRIENDLY CAMPUS?

While the heart of a school is its teachers, staff, students and families, healthy and safer facilities are imperative for a thriving school community. By addressing environmental challenges, districts can help enable a future that's as bright and optimistic as their young students. The time to tackle these upgrades is now, given the favorable economic environment, Guiry urges.

"Right now, we're seeing a 'perfect storm,' given the current social focus on ESG measures, along with tumbling costs for some equipment, like solar panels, supported by the wide variety of grants available and the latitude districts have in using them," he explains.

Would your district like to learn more about how you can create a learning environment that is safer and more sustainable?

[Download our k-12 campus infographic](#) to see how smart building technology can help solve your biggest challenges, or [visit our k-12 education webpage](#) to learn more.

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Honeywell is transforming the way every building operates to help improve the quality of life. We are a leading building controls company with operations in more than 75 countries supported by a global channel partner network. Commercial building owners and operators use our hardware, software and analytics to help create safe, efficient and productive facilities. Our solutions and services are used in more than 10 million buildings worldwide.

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