



Student Health & Safety

EDITOR'S NOTE

Schools have a responsibility to prioritize the health and safety of their students. This Spotlight will help you explore the relationship between regularly replacing air filters and student test scores; gain insights into the many schools lacking carbon monoxide detectors; examine new guidance for schools to better position themselves against the effects of climate change; evaluate how telemedicine services can help reduce absenteeism; and more.

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Air Filters: A Potential Tool to Boost Learning?

Study links Los Angeles schools' use of filters to better test scores

By Sarah D. Sparks

Clearing the air in class may help students think more clearly, too, according to a New York University study.

Los Angeles schools that installed air filters in every classroom and common area following a nearby gas leak saw significant boosts to reading and math achievement—even though the outdoor pollution didn't prove to be a problem.

The findings suggest improving air quality may also help bolster school improvement efforts for disadvantaged students who often live in more polluted areas and attend class in older buildings.

In fact, “given the large test-score increases they generate, installing air filters substantially outperforms other education reforms such as class-size reduction on a cost-benefit basis,” said Michael Gilraine, study author and assistant professor of economics at New York University.

Schools are not required to track their indoor air quality, but the Environmental Protection Agency estimates nearly half of campus buildings contain unhealthy levels of dust, mold, chemicals, carpet fibers, and other pollutants. Moreover, efforts to make older buildings more energy efficient can lead to build-up of carbon dioxide if outside air does not circulate regularly.

“You can actually have pretty good indoor air quality and pretty poor outdoor air quality or vice versa,” Gilraine said.

Natural Experiment

Gilraine used the 2015 Aliso Canyon gas leak, the largest in U.S. history, to explore the effects of air quality on students’ math and reading scores. Over a period of nearly four months, the Southern California Gas Company struggled to contain an inadvertent leak that emitted methane gas and other chemicals into a wealthy Los Angeles neighborhood. The amount released was estimated to equal the yearly emissions of 572,000 cars.

Two schools within two miles of the factory tested as having high levels of methane; they were evacuated and students were relocated to other campuses. But the company also installed significant air quality improvements at 18 other elementary schools located 3½ to five miles from the leak—a distance chosen somewhat



the new air filters, students improved by .18 of a standard deviation in reading and .2 of a standard deviation in math, compared to students’ performance in the schools that did not receive air filters. To put that in perspective, those gains are about equal to the learning benefits from reducing class sizes or providing intensive tutoring. Students sustained those math and reading gains the next year, particularly if they attended the same school or another that had installed new filters in the following year.

Prior studies have found that better air quality can lead to fewer teacher and student absences, particularly for those with chronic asthma or other respiratory illnesses. While schools with the new air filters installed did have lower student absenteeism, Gilraine said attendance alone didn’t seem to be driving the gains in math and reading achievement.

Rather, he said, “you can get a lot just from being able to think clearly while you take a test. And then you also might be learning a bit better because you’re thinking clearer” in class from day to day, he said.

Separate longitudinal studies have found rising average temperatures likewise can increase indoor air pollution and reduce student achievement, particularly if students take tests on hot days. But the current study, which tracked air filter use over four months, found benefits two to five times larger than the benefits found for air quality improvements limited to a specific day when students took a test.

Gilraine estimated the air quality improvements cost about \$1,000 annually per classroom, including installation, electricity, and regularly replacing filters.

Those cost benefits could be even greater in high-poverty areas, where students often live in older homes and neighborhoods with higher pollution, and attend school in older buildings. The Los Angeles study suggests that school and district leaders should start to think about improving their school climate more literally, he said.

“We’ve had a decade or more of research into the effects of lead. There’s been much less research on the effects of air quality, especially on cognition... We’re still in early days,” he said. “I think the main takeaway here is, indoor air pollution is a natural place to start focusing more attention, because most of students’ day is spent indoors.” ■

randomly, based on the furthest distance from which the company had received gas odor complaints. These air improvements included more than 1,700 plug-in air filters, in every classroom, office, and common area, and active-carbon filters in every heating and air conditioning system in each of the schools.

Schools’ air quality was tested repeatedly before and after the filters were installed. It focused on both methane and volatile organic compounds like benzene, toluene, and xylene. Gilraine analyzed both the air quality and the math and reading test scores for students at the 18 schools, as well as a control group of elementary schools just outside the filter zone. Overall, none of the schools showed much contamination from the gas leak; in fact, the outside pollutant concentration in that part of Los Angeles during the four months of the leak was 9.1 grams of fine particles per cubic meter, lower than the average fine-particle concentration of 9.5 in New York City, 9.6 in Chicago, or 10.6 in Houston during the same time, based on EPA sensors. “Fine particles”—defined as having diameters of 2.5 micrometers or less, or about 20 times smaller than the diameter of a human hair—have been shown to penetrate and lodge deep in the tiny air sacs of the lungs, and have been linked to both respiratory damage and concentration problems.

Academic Benefits

But while little outside air pollution seemed to make it into the schools, the filters did seem to make a difference clearing schools’ indoor contaminants, Gilraine found.

After installing the filters, the indoor volatile compound levels dropped 60 percent to 100 percent in schools. And by the end of the 2015-16 school year, in schools that received



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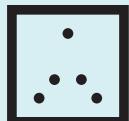
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Published January 20, 2023

Many Schools Don't Have Carbon Monoxide Detectors. Are They Overlooking the Risk?

By Lauraine Langreo

Carbon monoxide is often called the “silent killer.” Inhalng too much of the colorless and odorless gas can cause headaches, nausea, and in severe cases, death.

While most states require carbon monoxide detectors in residential buildings, less than a quarter of states have laws requiring carbon monoxide detectors in school buildings, according to data from the Environmental Law Institute, the National Conference of State Legislatures, and members of the National Council on School Facilities.

Even in those states that have requirements, the law sometimes only applies to newly built school buildings—and the vast majority of schools are not new, according to experts who spoke with Education Week.

That means that potentially thousands of school buildings don't have detectors.

There are no organizations that record how many carbon monoxide leaks happen in schools, experts said. But while these incidents appear to be rare, there were several reported cases of carbon monoxide poisoning in schools and day-care centers in 2022. For example, in October, six students and two adults were taken to a hospital for evaluation after a carbon monoxide leak was detected in a Kansas City, Mo., elementary school.

“This exposure often does not end up causing a large number of deaths, but it shouldn't need that in order for anybody to take steps to address it anyway,” said Jerry Roseman, the director of environmental science and occupational safety and health for the Philadelphia Federation of Teachers.

How does carbon monoxide leak in school buildings?

In schools, carbon monoxide could leak from worn or poorly maintained boilers or furnaces, or a malfunctioning flue (a duct or pipe to transport exhaust gas to the outdoors). It could also come from gas stoves in the cafeteria or in science or culinary arts classrooms. Exhaust from idling cars that enter school windows or doors can also be a source of carbon monoxide.



—iStock/Getty

Why do many schools lack carbon monoxide detectors?

Schools that don't have carbon monoxide detectors are most likely not required by state or local government to have those monitoring systems in place.

For example, Andrew O'Leary, the assistant superintendent of finance and operations for the New Bedford Public Schools in Massachusetts, said his district doesn't currently have “an approach to carbon monoxide detection, and nor do the regulatory requirements we adhere to.”

But the district is reviewing “wearable detector options for custodial staff to ensure they can be deployed next school year.”

Regulations on carbon monoxide detectors are usually written into state building codes and are not enforced by departments of education. Some states—such as Hawaii, Indiana, Kansas, and Missouri—leave it up to local governments to set those regulations.

More states are updating their building codes to require detectors in new and existing school buildings and now at least 10 do so, according to the Environmental Law Institute. In 2018, only five states had those requirements, according to the National Conference of State Legislatures.

One reason why carbon monoxide detectors are frequently required in homes but not in schools could be that homes are smaller, said Hannah Carter, a school district environmen-

tal health project manager for nonprofit U.S. Green Building Council's Center for Green Schools. A leak in the boiler in the basement of a house will quickly travel throughout the whole house. In a school, the boiler room is usually out of the way and has its own exhaust system.

“Ideally, if there was a leak, it would just get exhausted out and it's not going to impact much of the school at all,” Carter said. “We know that's not the case. There are definitely leaks that affect kids. Perhaps, that's a reason for the lack of urgency, the feeling like it's not a big deal. It's not like there's a boiler in every classroom.”

What can schools do to prevent carbon monoxide leaks?

The approaches for preventing carbon monoxide leaks are often simple and inexpensive, according to experts.

Carbon monoxide monitoring equipment is not expensive, Roseman said. “It's definitely not nothing, but it's hundreds of dollars—maybe \$1,000—per school, not millions of dollars.”

For example, in a school district the size of Philadelphia, which has a budget of more than \$3 billion, spending \$1,000 per school for carbon monoxide monitoring “to save one life seems like it's pretty cheap,” he said.

As long as they're installed in the right places—in areas with fuel-burning sources—the detectors will help prevent any severe

cases of carbon monoxide poisoning. Schools will also need to maintain those detectors and ensure they have people who can fix any faulty systems, Roseman said.

District leaders can also ensure the school's furnace or other fuel-burning sources are inspected regularly, said Claire Barnett, executive director for the Healthy Schools Network, a nonprofit that advocates for healthy school environments. Only 16 states and the District of Columbia require safety audits of school facilities, according to an analysis from the Education Commission of the States.

"The cost of monitoring is really like nothing, and the cost of missing something is astounding," Roseman said.

Beyond health, why does this issue matter?

The lack of regulations on carbon monoxide detectors in school buildings is part of the bigger problem of aging school infrastructure, experts said.

Thousands of school buildings are years or decades behind on repairs and upgrades, according to an Education Week analysis. Millions of students are learning in what facilities experts say are unsafe buildings.

Aside from a handful of small grant programs, the federal government hasn't invested in school infrastructure in a major way since 1935. And states invest little in school building improvements, leaving local governments to foot most of the bill.

"The big takeaway is that each of these individual situations and conditions is one that is shameful that it exists in our schools," Roseman said. "[Carbon monoxide] might not be the worst of them. Maybe it is. Maybe it's asbestos. Maybe it's lead in paint. Maybe PCBs. Lack of heat. It goes on and on.

"How can our schools look like this? They are conditions that are known to exist in buildings that we put our children in every day. That can only happen and only does happen because people don't know about all of these risks." ■

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Published March 28, 2022

Data: Does Your State Have Enough School Psychologists and Counselors?

By Maya Riser-Kositsky

School psychologists and counselors are crucial to supporting the mental health and well-being of students in school. This is especially true as kids' mental health needs continue to rise and survey data show that students are asking for more school-based mental health services.

But an original analysis of federal data by Education Week finds that many school districts fall way below recommended staffing levels for both professions.

What do school psychologists do? What do school counselors do?

While there is often some overlap in the roles psychologists and counselors play in schools, the National Center for Education Statistics' Common Core of Data provides definitions of the roles of school psychologists and counselors that include these responsibilities:

School Counselors/Directors are professional staff assigned specific duties and school time for:

- counseling students and parents,
- addressing learning problems,
- evaluating students' abilities, and
- assisting students in career and personal development.

School Psychologists are professional staff members who provide direct and indirect support, including prevention and intervention, to evaluate and address:

- students' intellectual development,
- academic success,
- social-emotional learning, and
- mental and behavioral health.



iStock/Getty Images Plus

How many students have no access to school psychologists or counselors?

While most schools do have school psychologists and counselors, some do not have any.

More than **5.4 million public school students (12%)** attend districts with no psychologists.

Almost **half a million students (1%)** attend districts with no school counselors.

What percent of students have adequate access to psychologists and counselors at school?

The National Association of School Psychologists recommends a ratio of one psychologist to 500 students and the American School Counselor Association recommends a ratio of one school counselor to 250 students.

Only **8% of districts** meet the recommended ratio of school psychologists to students.

Just **14% of districts** meet the ideal student-to-counselor ratio.

Is a district's demographic makeup correlated with meeting the psychologist or counselor ratios?

In general, districts with a higher percentage of white students more often meet the

recommended mental health support staff-to-student ratios.

Six percent of districts where less than half of students are white met the psychologist ratio, compared with over **9% of districts** where more than half of students are white.

Ten percent of districts where white students make up less than half of enrollment met the recommended counselor-to-student ratio, while **16% of districts** where white students make up 50% or more of their enrollment met the recommended ratio.

What percentage of students in your state have access to the recommended ratios of school psychologists and counselors?

Only in **Maine, North Carolina, and the District of Columbia** do more than half of students have adequate access to school psychologists. And only in **New Hampshire and Vermont** do more than half of students have adequate access to school counselors. ■

Additional Resource

To view the charts that accompany this article, click [here](#).

Published March 6, 2023

Schools Aren't Ready for the Climate Crisis. A New Report Lays Out How to Change That

By Caitlynn Peetz

On a Friday in September 2019, Jonathan Klein's daughter asked him to go with her to a climate strike in San Francisco.

The weather was mild, but the planet was warming, and young people were taking notice. That day, thousands of students marched through the city's streets, protesting officials' lack of urgency in responding to the climate crisis.

That day changed the trajectory of Klein's life.

"Hearing their urgency around this issue and their frustration with the adults in their lives who were both not preparing them for what was ahead and ... weren't making the decisions now that needed to be made, it had a big impact on me," Klein said.

Soon after the protest, Klein left his job as CEO of an education nonprofit to start UndauntedK12, a national nonprofit that focuses on schools' response to the climate crisis.

He is one of 50 authors on a new report released March 2 that paints a dismal picture of California schools' preparedness for the impacts of climate change, from extreme heat and wildfires to poor air quality and drought.

Two of every five public school buildings in California are at least 50 years old, built before the climate crisis came into clear view. Plus, those schools rely on antiquated technologies that may be contributing to the problems, rather than solving them, the report says.

A report UndauntedK12 published in January concluded that U.S. schools **emit roughly the equivalent** of 5 million gas-powered cars each year through fossil fuel-powered HVAC systems, and that more than 70 percent of schools rely on gas or oil for heat.

Without immediate intervention, it's likely that schools poorly equipped to keep children safe from the effects of climate change will close intermittently, leading to academic consequences, the report's authors concluded.

"This is not a tomorrow thing. It's happening now," Klein said. "All of us have to see ourselves as leaders because a rapidly changing climate will continue to shape our children's lives like almost no other issue in the coming decades."

While the study focused on California schools, its authors said districts across the coun-



—John Bazemore/AP

Newly installed solar panels in front of Dublin High School are shown on June 18, 2013, in Dublin, Ga.

“

All of us have to see ourselves as leaders because a rapidly changing climate will continue to shape our children's lives like almost no other issue in the coming decades.”

JONATHAN KLEIN
Undaunted K12 Founder,
San Francisco, CA

try should take note and make the recommended adjustments, as well. Climate change, they said, is not unique to the Golden State, and will affect—or is already affecting—every corner of the country.

“If kids are in school 180 days a year, at least, and one in six Americans are on a school campus every day, there’s no path forward without making sure that our schools are sustainable and resilient and safeguard students’ learning opportunities,” Klein said.

Schools need a comprehensive response

The report calls for a 10-year, \$150 billion investment “to ensure K-12 public schools can remain open and provide safe and healthy places for California’s children to learn and grow.”

It includes 14 recommendations in three categories: facilities, community, and curriculum. The bulk of the recommendations relate to school campuses and include adopting sustainable construction practices, using solar technology to power schools, creating regenerative schoolyard gardens, electrifying school bus fleets, and upgrading HVAC systems to electric heat pumps.

It also acknowledged that more students are anxious about climate change and recommended staffing schools with mental health professionals who are equipped to help them navigate their feelings, and connecting them with community groups they can participate in.

A nationally representative EdWeek Research Center survey last year found that 37 percent of teenagers feel anxious when they think about climate change and its effects, and more than a third feel afraid. Many also said they feel helpless and overwhelmed.

The report recommends taking a proactive approach to climate education, incorporating it into curriculum, and increasing teachers’ professional development on the topic.

“To fulfill their mission, our schools must also prepare students to live and lead in a world that is being fundamentally re-shaped by climate change,” the report says.

But schools are doing that inconsistently. Recent surveys—both from the EdWeek Research Center and the North American Association for Environmental Education—have shown that teachers want to teach about climate change but don’t feel equipped to do so, even as students are bringing up the topic on their own.

That’s not to mention the effects climate change could have on children’s health.

Smoky air and exposure to extreme heat can cause serious asthma-related complications. Breathing in wildfire smoke can lead to a higher risk of cancer among children, the report says.

“Children are particularly vulnerable to these threats because their bodies are more sensitive to environmental hazards and have developed less ability to adapt,” it says.

Schools critical to combatting, responding to the climate crisis

The report argues that schools play one of the most important roles in combatting climate change. It estimates that California schools account for nearly 10 percent of the state’s carbon pollution. Thus, more environmentally friendly technologies—like electric buses and power systems that don’t rely on fossil fuels—could play a major role in slowing the climate crisis.

Schools—and students—also have a lot to lose from climate change’s effects.

Heatwaves can cause power outages, which can result in school closures if buildings, particularly those that are older, do not have adequate air conditioning or backup power sources like solar panels. Electric utilities sometimes opt to shut off power in areas when there is elevated fire risk.

Those disruptions prevent students from going to school and can have long-term consequences for academic achievement and future opportunities, and even their mental health.

“School districts throughout California are expected to see an increase in the number of hot days per school year that could require closing schools that do not have air conditioning or place a demand on the energy grid as more air conditioning is placed in schools, contributing to regional blackouts, which could be avoided for schools running on solar to battery storage backup,” the report said.

“...Old as many of them are, California’s public school buildings were designed to operate in a cooler, milder climate where extreme events, such as 100-degree heat and massive wildfires, were much rarer than they are today—and still rarer than they will be.”

Even if schools remain open in extreme heat, the heat can impair children’s ability to focus on their schoolwork. Students of color, who more often attend older schools, are the most likely to be affected, according to the report.

Schools are often considered the nucleus of a community, so it makes sense to make concerted investments in their sustainability, Klein said.

In an emergency, schools can serve as cooling centers or emergency shelters. To serve that purpose, they need the infrastructure to stay powered and running.

“It can sort of support community resilience,” he said, “because we need places for people to be able to escape the effects of things like heat and fire.” ■

Panther Valley Elementary School Makes the Grade

Armstrong has led the way in creating healthy and sustainable ceiling solutions over several decades and understands the critical importance of the educational spaces where learners spend most of their time. Recognizing an exciting opportunity to partner with Awair and their indoor environmental quality (IEQ) sensor products, the Armstrong + Awair IEQ Monitoring Program was created. Using reliable and tested technology to understand what the school environment is composed of allows us to track the invisible, identify opportunities for improvement and change the way spaces enable learning.

Panther Valley Elementary School in Nesquehoning, PA was eager to participate in the IEQ Monitoring Program and agreed to placement of Awair sensors within their school. The sensors measure seven key IEQ factors: temperature, humidity, CO₂, volatile organic compounds (VOCs), particulate matter (PM2.5), noise, and light and provide a weighted numerical score to the user.

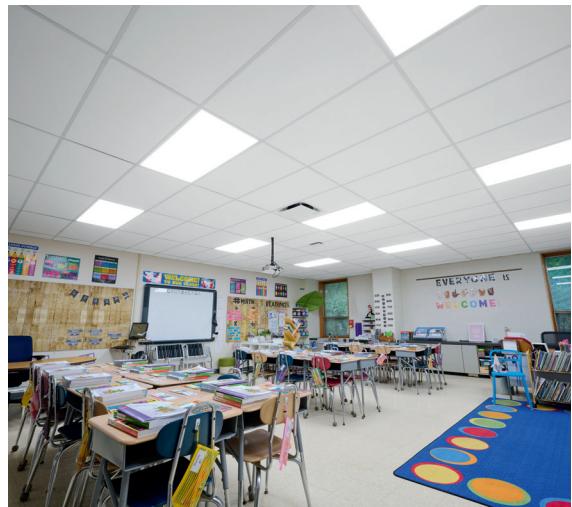
During initial monitoring, the overall Awair scores moved between fair and good, averaging in the low 80s. Primary areas of concern identified were air quality (ventilation rates and CO₂ thresholds), noise, and light levels. To help address these concerns, the school replaced the ceilings and lights in a 780-square-foot third-grade classroom. In-ceiling air-cleaning solutions were added to the classroom and a 450-square-foot nurse's office. Post renovation Awair scores improved roughly 10 points to the low 90's indicating great environmental quality, and noticeable improvement in IEQ factors.

The Classroom: Air Filtration, Light, and Acoustics

Built in the 1980s, the classroom houses 27-32 students and is in use nearly eight hours a day. An in-ceiling Armstrong [StrataClean IQ™](#) air filtration system was installed in the classroom to improve indoor air quality. The system captures and removes 90% of airborne contaminants, allergens, and other particulates using proven MERV 13 filtration. Like many schools in the northern part of the country, Panther Valley Elementary has a limited HVAC system. As a result, air changes per hour (ACH) in the classroom were only .5 ACH. Following installation of the [StrataClean IQ™](#) unit, ACH increased to 1.5 ACH. Increasing ACH helped reduce exposure to airborne contaminants. In addition, particulate matter and CO₂ levels decreased.



Before ▶ Panther Valley Elementary classroom pre-renovation.



After ▶ The same classroom with Ultima AirAssure panels, LED lights, and the StrataClean IQ Air Filtration System.

I know how important indoor air quality is for both myself and my students. I'm a severe asthmatic and I haven't had any episodes since the start of school and the room renovation.

- Tori Koerbler, 3rd Grade Teacher



Before ▶ Panther Valley Elementary nurse's office pre-renovation.



After ▶ The same nurse's office with Ultima AirAssure panels and VidaShield UV24 Air Purification System.

Ultima® high light-reflective ceiling panels from Armstrong Ceiling Solutions were installed. The smooth textured panels with a non-directional visual are both washable and impact-and scratch-resistant. Improved light reflectance brightens spaces, maximizes light, and enhances visual comfort by reducing eye strain and glare. The acoustic environment also improved. The Noise Reduction Coefficient (NRC) of the ceiling increased from .55 to .75, meaning the new panels absorb 75% of the sound that strikes them. The new ceiling panels also provide Armstrong Total Acoustics® performance, meaning they not only absorb sound but also block it from entering adjacent spaces.

Improved indoor air quality is especially important since we have no full-blown HVAC system in the building. The cleaner, brighter environment definitely has an effect on how kids learn.

- Scott Fisher, Director of Buildings & Grounds

The Nurse's Office: Air Purification, Light, and Acoustics

In addition, a VidaShield UV24™ air purification system was installed in the nurse's office. This unit operates by continuously drawing air into a self-contained chamber in the ceiling plenum where the air is treated safely with ultraviolet light air-cleaning technology. Third-party testing shows this system neutralizes 97 percent of bacteria, viruses and allergens on the first pass of air through the system. This contributes to healthier spaces by minimizing allergy and asthma triggers.

The same Ultima® high light reflectance ceilings were used in the nurses office, providing the same great visual and acoustical benefits as seen in the classroom.

ARMSTRONG + AWAIR IEQ MONITORING PROGRAM

So how do you assess a problem that you can't see? Partner with a trusted building solutions company, Armstrong Ceiling Solutions, to create a healthy building environment for your students and staff. Armstrong has a 160-year history of delivering quality designs, acoustics, and lighting integration. Now we're partnering with scientific experts and other companies to provide comprehensive building solutions that help improve your indoor environmental quality (IEQ).

Make the invisible – visible. Use the Armstrong + Awair IEQ Monitoring Program to understand and manage your school's IEQ.

Track the invisible. We can't see most of the factors that effect IEQ – like air quality and acoustics. But what if we could show you the "health level" of your building through monitoring? Let's make the invisible, visible with our partner Awair. With Awair air quality monitoring, it's easy to understand and manage IEQ – ensuring that people can breathe safely where they spend time indoors. Learn more at armstrongceilings.com/awair.

Let's work together to help you measure and improve the indoor environmental quality at your school. It is crucial to take these measurements while your school is occupied and make recommendations before the summer renovation window. So let's get started.

TRACK THE INVISIBLE



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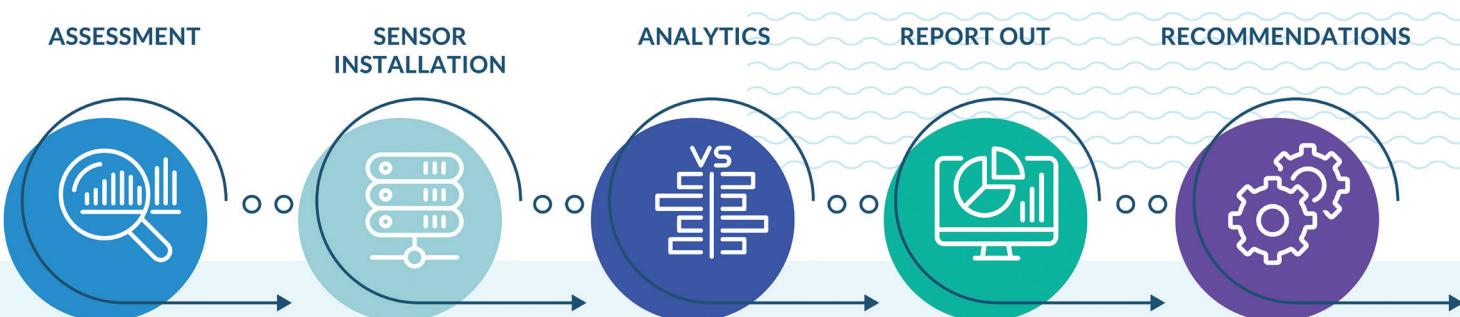


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Published January 23, 2023

Gone to the Dogs? Schools Use Therapy Animals to Boost Mental Health, Academics

By Evie Blad

Sometimes students say few words to school counselor Kelli Baker as they walk into her office, making a beeline for Kalani, a golden retriever/poodle mix that has been trained to work as a school therapy dog.

Morris, Okla., elementary school students who are stressed, struggling to manage big emotions, or dealing with crises at home bury their faces in Kalani's golden fur and slow their breathing to match her relaxed presence.

It's not uncommon for schools to teach children breathing exercises and calm-down techniques. In M "They work through those emotions and say, 'Hey, Ms. Baker, I'm ready to go back to class,'" she said.

For others, the dogs provide a sense of safety that helps them gather the courage to ask adults for help.

"Kids will come in closed-off and reserved," Baker said. "I don't ask anything. They are just on the floor playing with the dog and they start sharing with me."

Facing a worsening youth mental health crisis, more schools have brought therapy dogs on board to help students cope. Some integrate the animals into academic work, using them in interventions for students with disabilities or as part of classroom engagement strategies.

Morris having two therapy dogs causes some students to do those things intuitively, said Baker.

"Particularly if a student loves animals, we see some wonderful growth," said Jennifer VonLintel, a school counselor at B.F. Kitchen Elementary School in Loveland, Colo.

It's clear that the pandemic has contributed to a growing interest in bringing therapy dogs into schools. Districts in states including Colorado, Michigan, Oklahoma, and Virginia have even used portions of the \$123 billion in K-12 relief funding provided through the American Rescue Plan to pay for specialized therapy dog training, which can cost thousands of dollars.

More than just classroom pets

Formal therapy dog work dates back to use in hospitals in the 1970s, but it has become more



Shadow, a therapy dog at Morris Elementary School in Morris, Okla., greets students after an assembly Jan. 17.

—Michael Noble Jr. for Education Week

prevalent in recent decades, especially in educational settings. And as more academic research emerges on the benefits of the human-animal bond, schools are working with canine companions in more sophisticated ways.

School therapy dogs are not just classroom pets, said VonLintel. Rather, school social workers, counselors, physical therapists, behavior interventionists, and special education teachers integrate them into specific tasks with students, she said.

For example, students with developmental disabilities may learn improved communication skills by directing the animals to sit or stay. Some children practice behavioral management by studying the signs that a dog is feeling relaxed—like ears that hang loosely rather than laying flatly against the head.

"When people approach me and say that they want to bring a dog to school, my first question is, 'What is your goal?'" said VonLintel, who has worked with researchers to publish papers on different approaches to school therapy dogs.

Therapy dogs are trained to provide support in a community environment. They differ from service dogs, which are trained to assist individuals with specific tasks related to physical disabilities.

When VonLintel and a golden retriever named Copper started her school's therapy dog program 14 years ago, she couldn't find specific training locally, so she worked with a Colorado trainer to adapt service dog training to fit the needs of a school environment.

The program grew from there. This year, six teams of volunteer handlers will bring dogs ranging from a chihuahua to a Bernese mountain dog into the Loveland district's schools.

In addition to monitoring the dogs' interactions with students, the handlers have learned a bit about academic skills, like reading, so they can ask follow-up questions to guide students' comprehension as their dogs sit with small groups during read-aloud sessions.

"I'll say, 'I don't think Toby understood what was going on on those last two pages,'" VonLintel said, referring to her current therapy dog, a small brown cavalier King Charles spaniel mix. "Can you tell him what was happening in the story?"

Sit, stay, and study

A private Facebook page VonLintel started to share her experiences in founding the therapy dog program now has 9,000 members who trade tips on training, school board policies, in-

surance, and how to incorporate animals into therapy and instruction.

Interest in the Loveland district's use of therapy dogs has grown to the point that it now offers an on-site, evening training program, where interested staff members can bring their own dogs to learn in a school environment.

The dogs practice everything from basic commands to remaining calm and quiet in the unpredictable situation of a classroom lockdown drill. They must pass an evaluation before they can work in a school, and they must be regularly reevaluated to continue that work in future years.

Training is also key for handlers, who must learn to recognize when a dog is tired or stressed and monitor its interactions with students, said Helen Holmquist-Johnson, director of Human-Animal Bond in Colorado, a research center at Colorado State University that helps train and screen volunteer handlers to work in 30 schools in the region. Researchers there also study the effects of animal-assisted interventions, and develop approaches for students with specific conditions like autism.

Holmquist-Johnson recommends vetted, well-developed training programs like those offered by Pet Partners, a nonprofit organization for volunteer handlers.

Launching a school therapy dog program with community support

Access to training was a big concern for Baker, the counselor in the Morris, Okla., district, where the therapy dog program is still in its infancy.

The rural school system had not had an elementary school counselor in over 20 years when Baker started there in 2021, her position funded by a state grant.

In her first few weeks on the job, she noticed that students were struggling with behavior and emotions after months of COVID disruptions—part of a national trend. The American Academy of Pediatrics and the U.S. Surgeon General have sounded the alarm about a youth mental health crisis worsened by the pandemic.

In Morris, some children had lost family members—and some were just uncomfortable in the school environment. Those students seemed to be “frozen in time,” still in the place they were developmentally at the beginning of the pandemic, she said.

Baker had experience working with therapy dogs in her previous role in the juvenile justice system and thought they might be a good fit for Morris.

She was early in her research when she got a call from a breeder about the dog she later named Kalani. She was the one puppy left in a litter of what are commonly known as goldendoodles—a mix of golden retriever and a poodle bred with the intention of creating a lower-shedding coat. Unlike the other puppies, Kalani wasn’t born with a curly coat, and people were less interested in buying her.

The breeder offered to donate Kalani to the district for use as a therapy dog. Later, another breeder donated Shadow, a black goldendoodle who is handled by the elementary school’s librarian and occasionally works in the district’s high school.

Morris schools designated the dogs as property of the district, and not the employees who handle them at school and care for them at home. That allowed Baker, librarian Lisa Merrill, and Principal Becky Alexander to add the animals to the district’s insurance plan and to raise money that helped pay for training.

The \$10,000 in private donations covered an intensive boarding program that allowed the dogs to learn on-site at a training facility for several two-week sessions, and additional handler training for Baker and Merrill that worked with their schedules.

That training prepared the dogs to remain calm and disciplined in unfamiliar environments. They went to Wal-Mart and Sams Club to get exposed to crowds and noises, like shopping carts and fork lifts, so that they’d be comfortable around mobility aids like wheelchairs and students with various visible disabilities.

The community quickly recognized the benefits of the dogs, whose harnesses bear the logos of some businesses that helped cover training costs, Alexander said.

“So many schools are in the same boat as us,” she said. “They say, ‘I want to do it. We’ve got our team, but we don’t know the steps to do it,’” she said.

Answering logistical questions about school therapy dogs

VonLintel, the Loveland counselor, recommends coordinating with trained volunteer handlers who bring in their own dogs and manage things like training, certification, and insurance. Such a model is less expensive and challenging than building a program from scratch.

Schools can contact local volunteer handler groups or consult organizations like Pet Partners or the American Kennel Club to locate teams, she said.

Whatever model a school uses, dogs should be given plenty of days off and time to rest on-site so they don’t burn out in a high sensory environment, VonLintel said.

Toby, who was rescued as part of an animal welfare investigation, comes to school one day a week. He spins in excited circles when he sees VonLintel pick up the backpack that contains the gear he needs to go to work. If he ever looked tired or hesitant, she would leave him at home.

Among other common logistical questions:

- Insurance for on-site dogs—which covers the cost of liability in the event the animals injure a person—may come through a professional organization, like a school social workers organization, through the school’s existing insurance plan, through a handler’s homeowner’s insurance, or through a supplemental plan, depending on various state and local laws.
- Schools with therapy dogs must send forms home to parents to identify students with allergies or aversions to dogs. They should do the same for staff, and handlers work to avoid classrooms or spaces where people may be uncomfortable.

As would-be handlers select dogs to train for therapy work, Holmquist-Johnson, of Colorado State University, said the individual animal’s personality matters far more than the breed. School handlers should look for an animal—whether a purebred puppy or a mixed-breed shelter dog—that is friendly and eager to engage, she said.

“Our number-one qualifier is that they have to love people,” she said.

Building on that foundation, well-trained dogs can serve a variety of purposes in schools, handlers said. Some may greet kindergartners anxious about leaving their parents on the first day of school. Some may play fetch with a student as a reward for improved behavior in the classroom. Some may sit and listen as two students talk through a conflict with their school counselor, serving as both a living mascot and a comforting bit of familiarity.

Sometimes, teachers even stop to center themselves with Shadow after a stressful day, Merrill said.

“Everybody is carrying a lot of extra weight these days,” she said. “Having them provides an outlet for everyone.” ■



John P. Cleary/The Herald-Bulletin via AP

School nurse Heather Gordon checks the throat of 4th grader Isaac Vehikite, 10, at Elwood Intermediate School in Elwood, Ind., in 2016. Her camera relays the images and information to a doctor who makes the diagnosis.

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Telemedicine Could Help Keep Kids in Class

By Sarah D. Sparks

Schools' use of telehealth services expanded during the pandemic, and emerging research suggests it could help reduce chronic absenteeism.

Researchers from Duke University and the University of North Carolina-Chapel Hill tracked student absenteeism in three rural school districts—McDowell, Mitchell, and Yancey County Schools—in North Carolina as the nonprofit Center for Rural Health Innovation rolled out 22 school-based telehealth clinics, serving students, from 2011-12 to 2017-18. Through the clinics, school nurses partnered with physicians via live video appointments to help students with both physical and mental health issues. The doctors could review test results and call in prescriptions.

Before implementing telehealth clinics, the schools chosen for the program had higher rates of chronic absenteeism than demographically matched schools, 3.8 percentage points versus 1.9 percentage points, and their students missed

more days of school on average, 1.18 days a year versus .98 days in the comparison schools.

After telemedicine was implemented, the researchers found that students in grades 3-8 who had access to telemedicine at school missed on average 10 percent fewer days of school (.8 days in a typical school year) and were 29 percent less likely to become chronically absent, than before the schools implemented telehealth. In practice, that meant students who used the telehealth clinics missed on average 20 fewer days of school than they would have if the telemedicine had not been available. Prior studies have found telemedicine can be particularly useful in monitoring and treating some chronic diseases such as asthma, which often contributes to chronic school absenteeism.

"The use of telemedicine in schools has really grown, and the ways schools use telemedicine have grown during the pandemic," said Sarah Komisarow, the lead author of the study and an assistant professor in public policy and economics at Duke University. "This really layers over the existing role of the school nurse," she added. "Thoughtfully bringing this sort of nonprofit

capacity into schools is key to making this work. And the evidence says that this really helps students miss less school."

Access to telemedicine seemed particularly helpful for boys, who also had higher initial absenteeism than girls. Komisarow said it's not clear why, but noted that boys in the study were more likely to have asthma.

The study did not break down the specific kinds of care the telehealth doctors provided, but Komisarow said improved school attendance likely was the result of both more frequent preventative care and quicker responses to illnesses and outbreaks.

"Part of the reason care in the school makes sense is that ... if you have to get picked up from school, you're not coming back that day," said Amanda Martin, the executive director of the Center for Rural Health Innovation, which developed the school telemedicine initiative, in an online discussion of the program. Martin noted that more than 86 percent of telehealth visits resulted in the student staying in school after the appointment. Many students who had to be sent home for infectious diseases were able to return to school the next day.

"If a child presents at the nurse's office, straight off the bus, and already feeling poorly [because of] strep throat or their pink-eye—which would otherwise get them ejected from school appropriately—if we are able to diagnose that at 8 a.m. via telehealth from the school nurse's office, and the parent gets there promptly to pick them up and get them the first dose of an antibiotic, they can come back to school the next day," Martin said. By contrast, students who are simply sent home sick may take a few days to get diagnosed, treated, and deemed safe to return to class, she said.

The Duke study did not include school years during the pandemic. However, a separate study by the National Institutes of Health found that school-based telehealth clinics could help schools respond to infectious disease outbreaks through faster testing and contact tracing.

While telemedicine access was not associated with improved math or reading scores, the study found students in schools using telehealth services were also 2 percentage points more likely to at least participate in standardized testing.

While the current study focused on rural schools, Komisarow said, "the results are really promising that this model could work in many settings, because students deal with chronic absenteeism for health-related reasons in rural settings, in urban settings, in suburban settings. And so, I think there's a lot more potential here that could be explored." ■



Laura Baker/Education Week and Stock/Gett

OPINION

Published September 12, 2022

A World With Truly Safe Schools Is Possible

By Rebecca Stephens

April 20, 1999. Columbine. It was the birth of a tragic new era that we never could have imagined before: an age of increasingly regular mass shootings perpetrated by students. Even after that first shooting, I could not have imagined a day when the call to arm teachers would be seen as a logical response to keep children safe in schools or when parents would be restrained by police as they attempted to rush into a school in Texas to save elementary-aged children from an active shooter.

I could not have imagined that schools would traumatize students with active-shooter simulation drills, lockdowns, and metal detectors. I could not have imagined the fear that accompanies parents as we drop our children off at school or stand in front of the classroom to teach.

All of this is our new reality. As teachers, parents, and citizens, we must respond by paving the way for a different future—a future without school shootings. Before you dismiss this call as

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What gives me hope, however, is the knowledge that we have fought against seemingly impossible injustices in the past.”

REBECCA STEPHENS

A World With Truly Safe Schools is Possible

naive or overly idealistic, let us look at historic examples of change.

When we are traumatized, as we all are in the wake of this seemingly endless stream of mass shootings, it is sometimes difficult to imagine a better world. There is a sense of fatalism. Or worse, a tendency to just blindly react. What

gives me hope, however, is the knowledge that we have fought against seemingly impossible injustices in the past because visionaries dared to imagine a different future.

Before 1954, when Thurgood Marshall argued in *Brown v. Board of Education* that separate schools were not equal, many people could not have imagined integrated schools. Before 1920, when the 19th Amendment to the U.S. Constitution was ratified, many people could not have imagined a world where women could vote.

These and other landmark shifts in the public imagination were preceded by acts considered revolutionary at the time, such as when Vivian Malone and James Hood entered the University of Alabama despite the vitriolic objections of George Wallace, then governor of Alabama, and armed state troopers. Because of their bravery, it is harder to imagine that level of publicly sanctioned bigotry than it is to imagine integrated schools, though of course we still have important strides to make toward education equity.

Or consider the vision of suffragettes like Alice Paul and Inez Milholland who in March 1913 led over 5,000 women on a march on Washington to demand that women be granted the right to vote and continued the parade despite over 100 women being assaulted by violent bystanders and later hospitalized. Because of their courage and willingness to act, it is harder to imagine a time when women would be attacked for wanting to be a part of our democracy than it is to imagine women fully participating in civic discourse, though we still have important strides to make toward equality for all Americans.

If we can make progress against these historic grave injustices through a new vision and sustained action, then surely we can turn our collective will toward imagining a world without school shootings. A world where our students and teachers are all protected, both mentally and physically.

What would it take, then, to imagine that the students we are entrusted with teaching are not the same ones we are asked to assess as potential threats? How do we get there?

As a former 7th grade English teacher and now program manager for human-rights education at the advocacy organization Robert F. Kennedy Human Rights, I have personally witnessed two powerful interventions that will help bring us to this better world: 1) creating a culture of human rights within schools that encourages empathy and 2) empowering students to speak up against injustices. Empathy is not an inherent character trait but a learned skill that must be taught and modeled.

Many schools have already recognized this and have invested significant time and resources into integrating social-emotional learning into the school day. For example, 27 states have officially adopted the Collaborative for Academic, Social, and Emotional Learning (CASEL) K-12 SEL competencies. Promising research into the efficacy of SEL shows that teaching students empathy, self-control, and problem-solving skills leads to reduced violence in schools and less hate speech. SEL is one part of a strategic approach to helping students develop the skills they need to moderate emotions and resolve conflicts.

When taught within a human-rights framework, SEL not only teaches students emotional regulation but explicitly encourages them to take transformative action resulting from their improved sense of empathy, efficacy, and agency. This framework uses the stories of human-rights defenders as part of the curriculum to help students understand that change is possible. These lessons, coupled with classroom discussions that guide students toward imagining a more hopeful future and activities that help them to become engaged in their communities, discourage isolation and despair that have led to so much violence and self-harm.

Common-sense safety measures like gun control are part of the solution to stopping the violence in our schools, but they aren't the full solution. When we focus solely on gun control, we miss the larger, foundational issue at hand—that we need to fundamentally reimagine how we teach our students to relate to one another and the world around them.

To get to the imagined future where we have eradicated the plague of school shootings, we need to arm educators not with guns but with the tools to teach empathy and empower students. We need to invest in high-quality mental health care in schools and reduce class sizes so that teachers can focus on teaching the whole student, an arrangement that is better for both teachers and students.

Human-rights education, which includes SEL, is the bridge between the reality of the present and our imagined future where the dignity and worth of all people (including teachers) is taught and protected. While this might seem revolutionary or idealistic, someday human-rights education will be seen as simply a matter of fact—like the end of *de jure* segregation and female disenfranchisement. We can do this. We have done it before. I have hope. ■

Rebecca Stephens is a former teacher and currently the human-rights-education capacity-building program manager at Robert F. Kennedy Human Rights advocacy organization.

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Bethesda, MD, 20814
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