

Poor classroom air quality endangers students and educators in Australia

Kaye Tucker
8 August 2025

Classroom air quality in Australia is a growing concern. Studies indicate that many classrooms have inadequate ventilation and exceed recommended levels of carbon dioxide (CO₂) and other toxic substances.

Governments, state and federal, are overseeing a situation in which classrooms have become dangerous vectors responsible for likely poor health outcomes for teachers, students and their families.

In an article entitled, “Australian classrooms have worse air quality protections than many pet shelters and greenhouses,” scientists in THRIVE, a national research group, are calling for governments to improve the “terrible” ventilation.

THRIVE is part of a research centre based at Queensland University of Technology, funded by the Australian Research Council. It is a training centre for advanced building systems against airborne infection transmission.

Pointing out that animal shelters and greenhouses have more advanced air filtration systems than classrooms, Professor Lidia Morawska and her co-researchers wrote: “Surely, what is good enough for dogs, cats and plants, is good enough for our kids.”

Indoor air quality is a glaring gap in Australia’s approach to public health, the authors stated. People spend 90 percent of their lives indoors, so air quality inside buildings can have a significant impact on health. The researchers called for a national, coordinated process of reform to ensure that all children receive the benefits of cleaner indoor air.

Current state government interventions such as the Victorian Labor government’s Air Purifier Program and the New South Wales (NSW) Labor government’s Clean Air schools program, have proved to be inadequate. In Victoria, some filters have been installed in classrooms, yet there is little oversight of their use or maintenance, and no encouragement given for teachers to even switch them on. In NSW, the program is limited to data collection.

For historical and economic reasons, most Australian schools rely on the opening of windows to bring in fresh air. In winter, when windows and doors are shut, the air becomes thick with airborne particles carrying infectious viruses, bacteria and mould spores.

Everything that children exhale, including viruses and bacteria, is recirculated for others to inhale. For those who are

immunocompromised or have a chronic illness, winter outbreaks can become life threatening.

Without ventilation, children can be exposed to high levels of fine particulate matter, for example formaldehyde and nitrogen dioxide from unflued gas heaters. High levels of CO₂ in classrooms can induce headaches, fatigue, difficulty concentrating and impaired cognitive function. In more severe cases, this can cause dizziness and nausea, and even affect heart rate and blood pressure.

Anyone who has worked or studied in the education sector knows, often through bitter experience, how schools and childcare centres are notorious settings for infectious disease outbreaks. Experts have said this is not surprising, given the limited monitoring, ventilation and filtration of the inside air.

In Australia there are no requirements for sensors to monitor air quality and ventilation. Consequently, enforceable performance standards are lacking in schools, as is investment in ventilation and air purification.

Geoff Hanmer, an adjunct professor of architecture at University of Technology Sydney, and a THRIVE member, proposed installing HVAC (heating, ventilation and air conditioning) systems because they provide fresh air as well as temperature control. This would cost, he estimated, around \$2 billion a year over five years—a total of \$10 billion.

In 1998, the federal government mandated national standards for outdoor air quality, but not for indoor air quality. The National Construction Code specifies that all buildings must include some kind of ventilation, mechanical or natural (via windows or doors), but the only specification is that the ventilating area (windows and doors) must not be less than 5 percent of a room’s floor area.

For this “natural ventilation” to be effective, windows or doors have to be open. Hanmer said 98 percent of NSW schools are naturally ventilated and the situation in other states appears to be similar. A recent study of 60 NSW public schools found that if windows were shut, classroom CO₂ levels easily exceeded 2,500 parts per million (ppm), which was “really bad ventilation.”

Hanmer said that when CO₂ goes above 1,200 ppm, it starts to impair people’s cognition. “When we’ve measured schools, we find often that the quality of indoor air is pretty terrible,” he

stated. “It starts to affect [students'] capacity to understand things, and consequently, their capacity to learn and participate in class. Afternoon rattiness [at school] is another by-product of this.”

High CO2 levels indoors usually indicated an issue with ventilation, making it difficult to prevent the spread of disease. Hamner said that during the COVID pandemic, “schools that were open, if they had poor ventilation, they tended to have super-spreader events.”

In 2024, Morowska led a number of scientists around the world in calling for mandated indoor air quality. They recommended monitoring three pollutants—CO2, particulate matter and carbon monoxide. All these, she said, could be monitored with low-cost sensors.

“We had a meeting with the Prime Minister (Anthony Albanese) in the middle of August [2024] to present him with the blueprint,” she said. While a Department of Health spokesman said the government was examining policies for improving indoor air quality, to date no changes had been foreshadowed.

Governments, Labor and Liberal alike, and the teacher union leaderships are well aware of the dangers of poor air quality in classrooms, yet they have done nothing to ensure the safety of students and staff in their schools. This indifference to public health is starkly revealed in the record of the ongoing COVID pandemic.

When COVID hit in 2020, the Liberal-National Coalition government led by Scott Morrison and the state and territory leaders, mostly Labor, were initially forced by working-class demands, to adopt basic public health measures, such as lockdowns, quarantining, tracking and tracing, and mask and vaccine mandates.

Over the following 18 months, all these governments worked intensively to wind back these protections as soon as politically possible, in order to push people back to work for the sake of corporate profit. The union leaderships, particularly in the teacher unions, helped police the reopening of schools, forcing teachers and students back into unsafe classrooms to ensure parents could get back to work.

The dismantling of essential precautions was completed by the Albanese government after it took office in May 2022. Whereas 2,239 people died from COVID in 2020 and 2021, that figure was exceeded sixfold in the first year of the Labor government.

The situation teachers and students face now is one of continual reinfections, not just with COVID, but RSV and influenza. This is compounded by ageing schools.

Willyama High School, for example, one of two high schools in Broken Hill, was closed after the discovery of a toxic mould outbreak. More than 600 students had to be relocated to alternate schools in January 2024. An independent hygienist report found that the mould infestation was so extreme that the building would have to be stripped down to its bricks to be safe

again. Over a year on since the initial closure, demolition work has only just begun.

Many more Australian schools, especially those in working-class areas, are stricken by crumbling infrastructure. A massive school building program is required, with the installation of proper air filtration systems to ensure that educators and their students are able to work and study in safe environments.

While the Albanese government finds hundreds of billions of dollars to fund war armaments, nuclear submarines and other weapons of mass destruction, school children continue to be exposed to dangerous air pollutants, disease and mould.

Classroom air quality is not just a concern in Australia. Studies by the US Environmental Protection Agency (EPA), for example, indicate that indoor pollutant levels in the US are five times higher than outdoor air levels, and that indoor air pollution is one of the five major environmental risks to public health.

While exact figures are not known, according to the National Center for Education Statistics there are almost 99,000 public K-12 schools in America, and the average school building is at least 42 years old. Of these, 30 percent reported heating systems, air conditioning systems and ventilation/filtration systems that were rated as being in fair to poor condition.

The Committee for Public Education urges educators to contact us if they have any information regarding classroom air quality and related health issues at your school. Only an independent movement of the working class, based on a socialist program that prioritises social need over profit and the austerity imperatives of capitalist governments, can end these public health dangers.

Contact the CFPE:

Email: cfpe.aus@gmail.com

Facebook: facebook.com/commforpubliceducation

Twitter: [CFPE_Australia](https://twitter.com/CFPE_Australia)

Facebook: facebook.com/groups/opposeaeusellout



To contact the WSWs and the Socialist Equality Party visit:

[wsws.org/contact](https://www.wsws.org/contact)