

AC Admin Block vs Non-AC Classroom: Cooling as a Status Line Item

Teachers and students sweat in the same school where administration is air-conditioned.

At a Glance

Three people. One thermostat. They have three different thermal comfort setpoints. Two will be uncomfortable. All three will blame the building. [1]

Summary

Thermal comfort is not a single temperature. Research on thermal sensation shows variation in comfort setpoint across a population with standard deviation of approximately 0.5 degrees Celsius. In a group of 200 people, the range of comfort temperatures spans 3 to 4 degrees. Someone's 23°C comfort is someone else's cold shock. [1]

The physiological basis includes sex, age, body composition, metabolic rate, and acclimatisation status. Women, on average, have lower metabolic rates than men and lower threshold temperatures for shivering thermogenesis, shifting their comfort setpoint downward by approximately 0.5 degrees. Age also shifts setpoint: people over 65 have higher basal metabolic rates and prefer slightly higher operative temperatures. Individuals acclimatised to March-to-November heat prefer temperatures higher than their non-acclimatised counterparts. [2]

Central thermostats force a compromise setpoint that satisfies none of these groups. Research on worker productivity shows thermal discomfort reduces output by 3 to 5 percent. Heated thermostat conflicts between staff reduce productivity further. Open-floor complaints about temperature dominate facilities requests. [3]

Biothermal Microconditioning solves this through distributed person-level control. Each seating cluster gets its own Thermopod arrangement, operated on its own cycle. No shared thermostat, no forced compromise. A person sitting near a cluster wants cooling, and the system provides it. A person who prefers less cooling moves their seating. The building stops enforcing a single comfort fiction and instead provides local choice. One day to deploy. Thermostat wars end. Productivity returns. [4]